

European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure

Project⁹ Number: 654225

Project Acronym: MAGIC



Deliverable D1.1

Interim Progress Report (M1-M6)

Part B

Period covered by the report: from 01/05/2015 to 31/10/2015

Periodic report: 1st

⁹The term 'project' used in this template equates to an 'action' in certain other Horizon 2020 documentation

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

The Workpackage on Mobility (WP2) focused first on preparing a roadmap for the work of deploying Identity Federations in the different project regions: Arab Countries, South and East Africa, West Africa, Central Asia, the Caribbean, Asia-Pacific and Latin America identifying the NRENs which were interested and building a list of training needs. The roadmap led to the planning of training workshops. Two workshops on Identity Federations and eduroam were carried out during this period: one for the Arab States region on September 8-10, 2015 in Amman and the second one for the Caribbean region held in Kingston, Jamaica.

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

In Workpackage 3 the work has been focused on two activities: a) the improvement and deployment of the Colaboratorio collaboration tool for the use of different NREN partners and b) the analysis of the groupware standards available for group collaboration.

In the deployment of shared collaboration tools we can report that a personalized version of the Colaboratorio has been deployed for the use of Nigeria in Africa as well as CEDIA in Ecuador and several other NRENs are already in several stages of use and/or deployment of this tool. The tool has also been deployed for the use of WACREN and TANDEM is using it for group collaboration

In the Groupware standards, the WP has found that 5 middleware technologies that can be used for the purpose of applications integration with working groups: OPENCONEXT, PERUN, SYMPA, SCIM and UNITY. The WP is now working on completing a set of basic minimum set of inter-operation requirements and then will move into the testing and construction of a testbed for the integration of several tools requiring Group Management into the Colaboratorio portal.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such

as those proposed by the Global CEO Forum to promote the creation of a worldwide environment for these applications.

In Workpackage 4 the activities have been centered around the adoption of NRENum. For this, training was conducted at the TICAL2015 meeting in Viña del Mar, Chile. In this training workshop participated 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Perú. The material developed for this workshop was then uploaded to RedCLARA's e.Learning website and translated in to English and French where the material is ready for use in the implementation of NRENum around the World.

The other key activity of WP4 has been the support to the adoption of NRENum. We can report that Three (3) new NRENs has become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015). Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is underway to include them in the coming months as NRENum delegated areas.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

In Workpackage 5 the focus of the activities has been the identification of the common areas of interest among different world regions. After a survey among different partners, in October 2015 it was agreed to concentrate the work in the following areas: Biodiversity, Environment, e-Health and Remote Instrumentation on nanostructure materials. The basic idea is to start using as a basis the user communities promoted during the ELCIRA Project and expand from there to the other World regions. A workshop on user communities is planned to be held during the UbuntuNet conference in Maputo. The WP did also a lot of work on the expansion of the "Fund Alerts database" from Latin America to Africa, Arab Countries, Asia Pacific and the Caribbean as well as generating user training material for the use of the Colaboratorio, the collaboration tool promoted by ELCIRA and MAGIC.

Finally, the Dissemination and Training activities have been extensive. The MAGIC project has been present in the following Meetings: IST Africa 2015 in Maputo, Mozambique; TNC2015 in Porto; TICAL2015 in Viña del Mar, Chile; RNP Forum in Brasilia, Brazil and ICT 2015 in Lisbon, Portugal. Also training has been organized for the WP2 on Federated Access and eduroam in Amman, Jordan; and Kingston, Jamaica. For WP4 on NRENum and mobility in Viña del Mar, Chile.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- To organise the Kick-off Meeting in Paris and make sure that all Work Packages organised themselves and their work progress. As reported, the Kick-off took place in Paris on June

11-12, 2015, and was attended by representatives of 19 out of the 20 partners. Only SURFNet excused its attendance.

- To agree on and sign a Consortium Agreement. Issues which required discussed for the Consortium Agreement included the treatment of Intellectual Property Rights, the level of distribution of the applications and other matters such as the distribution of the funding and the mechanisms to include and exclude partners. The Consortium Agreement, modeled upon the DESCA Model (www.desca.-2020.eu) was signed by all partners as of August 18, 2015.
- To distribute the funding from the European Commission as agreed in the Consortium Agreement. This was done between July 01, 2015 and August 20, 2015.
- To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place by Videoconference, with the exception of the Kick-off Meeting which was a face-to-face meeting. Steering Committee Meetings were held on the following dates:
 - June 11-12, 2015 (The Kick-off Meeting)
 - July 23, 2015
 - September 24, 2015

The minutes of the Meetings are available in the wiki of the MAGIC Community maintained in the Colaboratorio Portal.

- To oversee the Deliverables and Milestones.
 - All deliverables have been submitted to the EC through the H2020 Project Management System.
- The milestones have the following status:
 - MS1 completed
 - Kick off Meeting Minutes; Project Website
 - Event participation plan
 - MS2 has been completed as of October 2015, i.e., Month 6 instead of Month 4 because of changes in the procedures to sign MoUs internally in GÉANT due to its internal restructuring.
 - The agreement itself
 - MS3 has been completed by September 29, 2015
 - The pilot portal itself deployed in Ecuador (CEDIA), Costa Rica (CONARE) and Nigeria (NgREN).
 - MS4 was planned to be the Global Science Community Opening Conference. This Conference has been postponed due to the difficulty of coordinating the right timing and attendance from several regions. The original idea was to hold it during the UbuntuNet Conference, but that was not possible, instead a Meeting of WP5 is scheduled there.
 - MS5 Assesment of group management platforms has been successfully completed on Octoner 30, 2015 as described in D3.2
 - MS6 has been successfully completed as NRENum.net has been deployed in 3 countries in Latin America: RAICES, CEDIA and CUDI.
- No major problems have occurred during this period, the project has run smoothly, except for the delays that have already been reported. There are three principle reasons for these delays:

- A slow start affecting above all the time needed to reach agreements between European and Latin American Projects.
 - The difficulty to identify user communities willing to become test communities and the time-consuming work of collecting information on researchers and research groups.
 - The difficulty in creating Identity Federations. As in other countries this is a slow process. Nevertheless, it can be seen that there is a lot of interest and it is expected that there will be four Identity Federations by the end of the project, though it is possible that additional time may be needed for the project to achieve all of its goals.
- No changes in the consortium yet, but UNAM has asked to change status from Third Party to Full Partner without funding. This request has been approved by the Steering Committee and is being processed through the Project Officer.

1.2.2 Work Package 2: Platforms for Mobility

During this first semester were centered in training. The activities were carried on by RNP.

Two workshops on Joining eduroam and Identity Federation were carried out:

The first workshop was realized at Arab States Research and Education Network office at Talal Abu-Ghazaleh University (TAGI-UNI) on 8 to 10 September 2015 in conjunction with the 1st International Conference on Open Source Software Computing (OSSCOM 2015). There were 11 participants from 6 countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia

The second workshop was coordinated by Caribbean Knowledge and Learning Network, from 7 to 9 October 2015. The Jamaica Research and Education Network, JREN, along with the UWI, hosted the workshop and saw participation from Jamaican tertiary institutions, as well as representatives from institutions and NRENs in Grenada, Mexico and the Dominican Republic. 16 technicians attended the workshop.

The other major activity was the planning phase for the delivery and deployment of eduroam, National AAs and Federations in the different World regions. As a result, the roadmap for this work was delivered as Deliverable D2.1.

In the area of eduroam Uruguay was the first country to sign the eduroam statement after the MAGIC project launch.

The work in WP2 has been lead by RNP with contributions from ASREN, CEDIA, CESNET, CKLN, CUDI, GÉANT, GRNET, NIIFI, NITC, RENATER, TEIN*CC and WACREN

1.2.3 Work Package 3: Cloud Provisioning and Groupware Standards

For the reporting period, the Work Package 3 team has worked on the new implementations of the Colaboratorio applications, and the evaluation of group management in federations (GMF) solutions. The Colaboratorio was implemented in the NRENs from Costa Rica (CONARE), Ecuador (CEDIA) and Nigeria (NgREN). It is worth mentioning that the total number of users in the Colaboratorio has increased by more than 80% since 2014. As it was mentioned in the deliverable "D3.1 Collaboration portal implemented in 3 new NRENs", one of the NRENs that contributed considerably in this respect was RENATA from Colombia with a total of 2441 users. Also, Ecuador, Costa Rica, WACREN, CKLN and Argentina that contributed with 1118 users. The services in the Colaboratorio for the new NRENs included: a) Communities management, b) Wiki, c) Filesender, d) Webconference, e) fund notifications, f) Events

management (Indico). The following screen from NgNREN shows the typical Colaboratorio implementation:

The other work advance that have been done was in the assessment on the group management technologies and standards, reported on the deliverable “D3.2 Assessment of the existing group management standards, NREN tools and value services for the global communities”. In this deliverable, the working group identified technologies like Openconext, Perun, SICM, Sympa, HEXAA and UNITY. The document contains a description of aspects like sustainability model, core functionality, interfaces of API, delegated administration among other elements that were identified as crucial for the Group Management in Federations (GMF). The group found that solutions like Openconext contains a complete set of components to handle all authentication and authorization process in a federated market. Solutions like Perun focused in group management from its core, or Sympa that fuses a mailing list manager with a group management application, and could be easier to integrate in an existing environment. The protocols VOOT and Grouper are the tools that various solutions use to share information across domains. The package 3 team also identified potential applications for the pilot as: a) Colaboratorio, b) Webconference (Jit/MCONF), c) Shared Cloud Storage, Zimbra, Wikies, and eLearning. These applications have a high components in groups management that could be applied to the work pilot.

Workpackage 3 has been lead by RedCLARA with significant contributions from ASREN, CEDIA, CESNET, CKLN, CSIR, CUDI, GÉANT, GRNET, NIIFI, NITC, RENATER, REUNA, RNP, SURFNet, TEIN*CC and WACREN

1.2.4 Work Package 4: Agreements for Real Time Collaboration

The work of this WP, lead by RENATA has focused during this period on NRENum training and implementantion as well as setting the necessary agreements for the implementation of interoperation of real time applications.

In particular, an agreement of MAGIC with GÉANT to work on RTC standards has been developed and signed. Also, agreements are under way with APAN (Asia Pacific) and AARnet (Australia), who have extensive experience in RTC applications and are leading the Global CEO working group on RTC.

The first NRENum.net training activity was caried out during the TICAL 2015 conference held in Viña del Mar - Chile, in July 2015 where 11 participants from different countries in Latin America were trained on how to implement NRENum.net. People who attended this event were contacted by RENATA to start working on the implementation of NRENum.net in their countries.

An Online training course was also developed to ease training in the different world regions. The course is available on line in English, French and Spanish The course is intended to guide NRENs on delegation and technical issues related to establishing an NRENum.net service. RedCLARA has offered its Moodle Platform to host these training courses and RENATA deployed documentation about the use and implementation of NRENum.net service. This course is oriented to systems administrators of NRENs in charge of running this service for their users and institutions.

Online training material is On line in the following links:

Spanish: <http://cursos.redclara.net/course/view.php?id=47>

English: <http://cursos.redclara.net/course/view.php?id=48>

French: <http://cursos.redclara.net/course/view.php?id=49>

Invitations to participate on NRENum.net service offering RENATA's support were sent to all NRENs in Latin America as well as, through the different world regional leaders, to the other participating regions. A special emphasis has been put to invite NRENs from Asia Pacific and Africa.

In Latin America, RAICES from El Salvador and RAU from Uruguay showed immediate interest on the service. A meeting has been done with each of them to explain information, benefits and to schedule a work plan for delegation of the NRENum.net zone to the NREN itself.

Following this effort, three (3) new NRENs have already become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015).

With RedCLARA support, CEDIA has been guided in their delegation process of the NRENum.net zone (+593). CEDIA did a very fast step with configurations and proceedings so they were the first delegated country.

RAICES the Salvadorian NREN did a very good job and RENATA supported every step in the configuration of the DNS zone for the country code (+503), they had to overcome technical issues because their DNS haven't had reverse domains registered but finally zone was fully delegated.

CUDI from Mexico did a very good job on installation of DNS servers and the configuration of the NRENum.net zone (+52) on them. They had the same problem because their DNS servers haven't had reverse domains registered, after these problems were solved and configurations were set the zone it is now delegated.

WP4 has been lead by RENATA with contributions from CEDIA, CUDI, NIIFI, RedCLARA, RENATER, REUNA, RNP, and WACREN

1.2.5 Work Package 5: Global Science Communities

During the reported period, one of the main activities was centered in the definition of the priorities areas that will be taken to the creation of global science communities. After looking at several considerations, the partners decided to adopt the results of the ELCIRA project "Report on Key Research Communities", because even though it represents the information provided in Latin America, it also has similarities with the situation of other regions. For example, a report from CKLN showed that the Caribbean region had the following priority areas: Health, Earth Sciences, Security, Agriculture, Forestry & Fisheries and Education.

The areas presented in ELCIRA are: Biodiversity, Environment, e-Health and High Energy Physics. Having looked at feedback coming from the regions, partners decided not to include High Energy Physics for this moment, but to continue with a proposal from Mexico to create a Community on Remote Instrumentation on nanostructure materials.

WP5 send out a call to regional partners to submit names and contact details of potential participants from all MAGIC regions to join the Global Science Communities in the identified priorities. The opening meeting with the communities is scheduled for mid-December 2015.

Another important activity was the work on the identification of open calls to feed the Information System on Worldwide Funding Opportunities and Partner Search database, which is accessible through Colaboratorio. To follow up the activity, a report system was developed that allows access to calls published in a specific period. The report of the publication is available online and can be seen in (link for internal use, not for dissemination):

http://dev1.redclara.net/joomla4_new/joomla4/reporte_fondos/

For the development of worldwide virtual days to foster collaboration, the partners are working on an informative day on Open Access to be held on December 15th, intended to present the situation in different regions of the world for the African researchers and academics related to the topic.

Training materials in form of a tutorial that shows the how to use the main tools of the Colaboratorio (eNVIO, Partner Finder, VC Espresso, Communities and Wiki) have been developed. The document explains how a new user can configure his/her profile and explain the main parts that integrate the platform. The first version of the document is in English. The following version will be Spanish and French. The document will be published on the web side of the project. This has partly fulfilled MS9, which is due in Month 10.

It was decided in the follow up meetings that take place every Tuesday to develop a face to face meeting on November 17, 2015 in Maputo, Mozambique, in the context of the activities of the Ubuntunet Connect Conference that will be held on November 19 and 20. During the meeting the partners will have an agenda of work about the deliverables and milestones that should be completed and deliver in the following months as well as the activities carried out according to the task of the Work Package.

This WP has been lead by UbuntuNet and RedCLARA with significant contributions from: ASREN, CKLN, CSIR, CUDI, GÉANT, NIIFI, NITC, RNP, TEIN*CC and WACREN.

1.2.6 Work Package 6: Dissemination and Training

Training in Latin America, Arab countries and The Caribbean:

Within the reported period three face-to-face training sessions were carried out:

- **Federated Access and eduroam workshop in the Caribbean**
Date: October 7 to 9, 2015
Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica
Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).
Note from CKLN: “Attendees are expected to deploy the pilot and implementation in their respective NRENs/Institutions on the subsequent phases of the project”.
- **Workshop on Joining eduroam and Identity Federation**
Date: September 8 to 10, 2015
Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan
Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.
Note from ASREN: “Participants should start immediately working on eduroam then idp”.
- **Mobility Federated Services and Nrenum.net**
Date: July 8, 2015

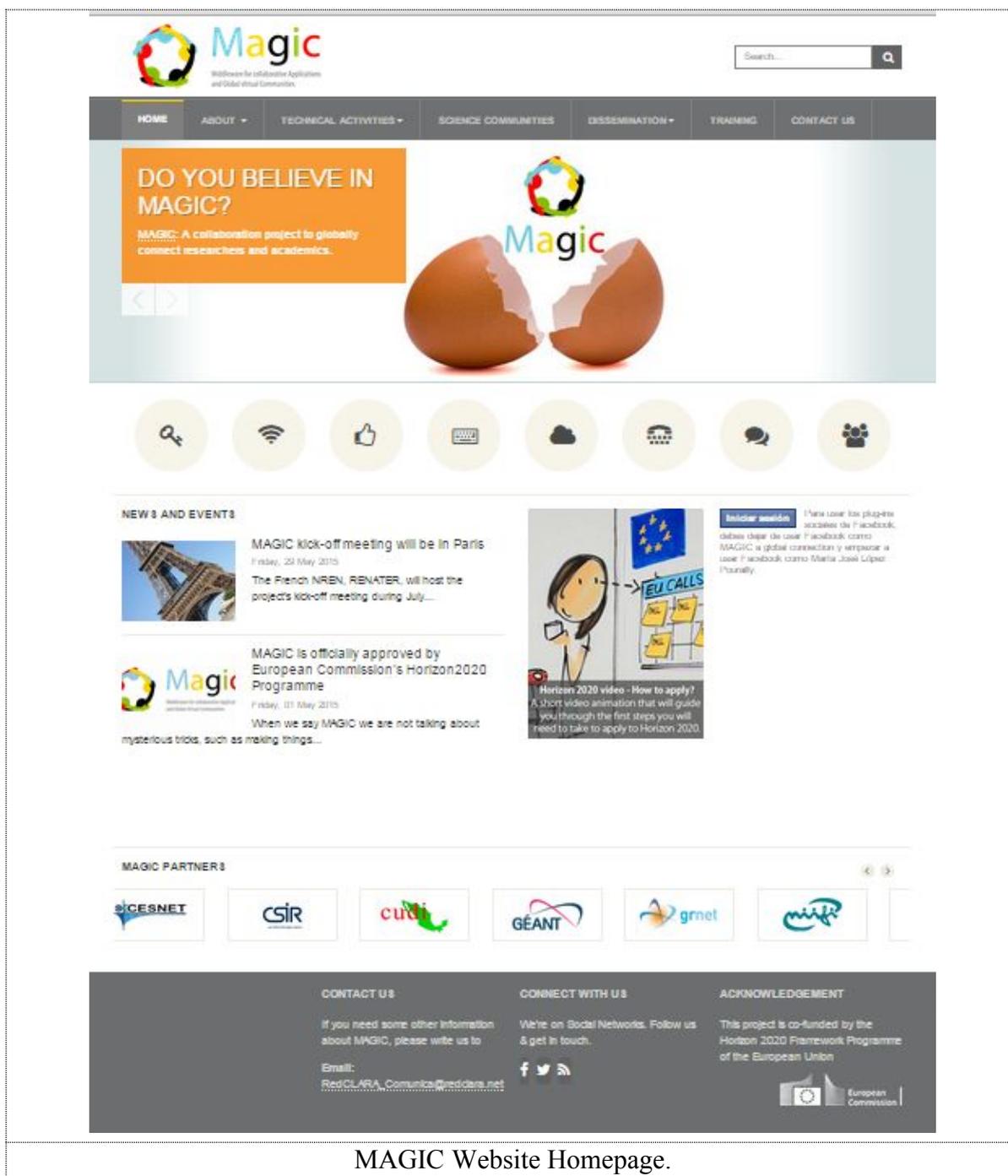
Venue: Viña del Mar, Chile. Enjoy Conference Center

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

On-line presence:

MAGIC's on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social interphases and its by-monthly Newsletter.

Regarding its Intranet, it is extensively used by the project partners for all its internal communications and for the different WP interaction.



MAGIC Website Homepage.

The MAGIC website was developed during M01 and M02, and delivered on-line on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was delivered on the same date.

The success of the website and the social network pages, has been statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and inform on how to disseminate the project more effectively. The website usage is measured using the Piwik open-source tool which started taking website statistics on 16 June 2015, and the main numbers are the following ones:

	6/21/2015	6/28/2015	7/5/2015	7/12/2015	7/19/2015	7/26/2015	8/2/2015	8/9/2015	8/16/2015	8/23/2015	8/30/2015	9/6/2015	9/13/2015	9/20/2015	9/27/2015	10/4/2015	10/11/2015	10/18/2015	
Number of unique visitors	54	177	74	37	42	58	101	46	56	61	76	79	74	92	83	105	111	109	
Number of page views	174	577	232	73	108	197	319	116	120	174	176	168	215	214	278	243	226	233	
Number of single pages viewed	139	434	172	64	85	167	245	101	99	149	149	146	154	172	206	208	199	185	
Average length of visit	4min45s	4min35s	4min1s	1min49s	4min53s	3min1s	6min30s	3min9s	2min41s	52s	1min59s	1min18s		3min2s	4min38s	3min48s	1min38s	1min58s	2min
Continents of visitors origin																			
Central and South America	20	55	25	20	14	28	50	12	30	27	35	25	36	34	31	41	40	37	
North America	2	54	19	4	4	6	8	11	6	4	7	8	14	16	6	16	11	22	
Central America		25	4	2	9	7	1	12	8	1	1	5	4	6	7	15	17	2	
Europe	12	30	23	9	6	9	24	7	5	21	14	23	12	5	24	12	22	27	
Unknown	3	2	2		2	1	1			1	5	4		3		4	4	5	
Asia	1	5		2	4	3	8	2	1	4	4	7	5	27	10	12	12	9	
Oceania	5												1				1	1	
Africa	11	6	1		3	4	9	2	6	3	10	7	2	1	5	5	4	6	

MAGIC Website main statistics of usage

In October 27th 2015, “MAGIC a global connection” had 66 likes (Facebook) and “@MAGIC_our_voice” had 30 followers (Twitter).

Regarding the project’s newsletter, under the name of “MAGIC TIME” three editions were delivered to all the project members, in July and September and with the third edition in preparation while this document was under writing process, all the editions can be checked out at <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.

First edition of the MAGIC TIME, July 2015.

The following table shows the statistics of the first two newsletters:

Issue	eMails sent	Opened eMails	Number of clicks within the newsletter contents
Nº1 - July	90	53	59
Nº12 - September	98	53	219

Brochures and promotional material done

In order to serve the different dissemination needs, project brochures were printed in Spanish (1000 copies), English (1500 copies), and Portuguese (1000 copies) and also translated into French. All these brochures have been published in the website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format, and most of them were distributed in those international events where MAGIC had representation by means of a booth .

Regarding the branded promotional goodies, within the reported period we did the following pieces for its distribution in the international events in where MAGIC had representation within a booth:

- 400 umbrellas
- 1000 speakears for mobile devices
- 1500 vintage puzzles

The distribution of these material will be explained in the following paragraphs.

Participation in international events

Within the reported period, the MAGIC project was disseminated within three major international events, the first two of them in Latin America and the third in Europe. In all these events MAGIC had space in a stand where it distributed brochures and branded promotional goodies among the attendees.

July 6th to 8th, TICAL2015, Viña del Mar, Chile:

MAGIC had an exhibition booth at TICAL2015 where brochures in Spanish and umbrellas with MAGIC's logo were delivered. A video explaining MAGIC in Spanish was generated for the occasion MAGIC and also published in MAGIC's Facebook interphase. In addition, videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts. Training sessions within TICAL's Conference framework were coordinated.

August 25th to 27th, RNP2015 Forum, Brasilia, Brazil:

MAGIC had a space at RNP stand. Brochures of the project were translated into Portuguese and distributed among the attendees. In addition promotional MAGIC umbrellas were given away between those who requested more information about our project. Videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

October 20 to 20nd, ICT2015, Lisbon, Portugal:

In a common effort with TANDEM and Sci-GaIA, under the name of GIISC (Global ICT Infrastructures for International Scientific Collaboration), the MAGIC project had a shared exhibition booth at the INCO Village, and a Networking Sessions in ICT2015. Within the stand MAGIC delivered brochures with the Project information in English, Spanish and Portuguese, and branded goodies: vintage puzzles and speakers for the mobile devices.

The following table shows the number of dissemination and promotion pieces given away in all these three events.

	Number of pieces delivered in each international event		
Pieces	TICAL2015	RNP2015 Forum	ICT2015
Brochures in Spanish	600 (the Ecuadorian and the Chilean NRENs asked for brochures to send to their members)		100

Brohures in Portuguese		300	130
Brochures in English			500
Umbrellas	257	60	
Speakers			500
Puzzles			700

Also, within the reported period MAGIC's participation in two international events was under preparation: UbuntuNet Connect2015 and e-AGE2015. MAGIC will have a stand and a presentation in both events, but this will be reported in the Second Progress Report.

WP6 has been lead by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, NITC, RNP, TEIN*CC and WACREN,.

1.3 Impact

As the information on expected impacts is relevant as was proposed in the DoA, we will go one by one analysing the advances in the Indicators and expected dates to reach its full achievement.

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoA): *Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.*

Advances in the Indicator:

Training in the Arab Countries carried on *Number of trained engineers* 15
Training in The Caribbean carried on in *Number of trained engineers* 16

- b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENs and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries having signed eduroam agreements with MAGIC
4 new pilot federations

Advances in the Indicator:

Too soon to show advances, but Uruguay was the first country to sign the eduroam statement after MAGIC's project launch.

Pilot federations are expected to be created in the Caribbean, ASREN, UbuntuNet and WACREN regions.

- c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

Too soon to show advances, results are expected in April 2016. Nevertheless, as the testbed will be the Colaboratorio platform, at least Latin America (Ecuador, Colombia, Costa Rica, Mexico), Africa (WACREN, UbuntuNet) and the Arab Countries (ASREN) will be included in the test.

- d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: 6 countries in 2 regions having incorporated NRENum.net for Global dialing

Advances in the Indicator:

3 countries in LA already joined NRENum.net, 3 more are in the process Countries in Africa and the Arab Countries are working on it.

- e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

5 NRENs using applications built and deployed/hosted by another.

2 NRENs with a pilot cloud applications portal implemented

The number of applications deployed in the pilot test will be at least 2

The Directory of the applications provided by NRENs available for use of other NRENs contains at least 10 applications

Advances in the Indicator:

Colaboratorio, where applications developed by UNINET and RedCLARA are being used by CEDIA (Ecuador), CONARE (Costa Rica), NgREN/WACREN (Nigeria). The above result is added to the existing Colaboratorio implementations in RENATA (Colombia), CKLN (Caribbean), CUDI (Mexico) and the undergoing work with INNOVARED (Argentina) that is on testing phase.

Applications to be shared include FileSender (already in use), Zimbra (e-mail and calendar), MCONF (already in use) and JITSY (proposed by RENATER) and several others. The number of applications will clearly be well over 5 or more.

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

Too soon to show advances in the Global communities, but communities are being worked on in the areas of: Biodiversity, Environment, e-Health and Remote Instrumentation on nanostructure materials

The information days are being planned for this year 1.

The Database of funding is in completion and the application is being improved for the Global scale

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

No review yet

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

The only task that has been delayed in two months is the Workshop of User Communities. This was due to two factors: 1) the slow start in UbuntuNet and 2) the longer than expected time needed to define the areas of interest common to all world regions.

5.2 Use of resources

The following table shows the amount of resources spent which amounts to € 390,893 and is requesting reimbursement for € 269,046.

Participant	Country	(A) Direct personnel costs	(B) Other direct costs	(C) Direct costs of subcontracting	(F) Indirect costs (=0.25*(A+B+E))	(H) Total eligible costs (=A+B+C+D+F+G)	(K) Requested reimbursement
CLARA	UY	€ 71,438	€ 16,722	€ 12,358	€ 22,040	€ 122,557	€ 122,557
DANTE	UK	€ 2,658	€ 821	€ 0	€ 870	€ 4,349	€ 4,278
TERENA	NL	€ 6,470	€ 6,657	€ 0	€ 3,282	€ 16,409	€ 16,409
RNP	BR	€ 11,175	€ 8,680	€ 0	€ 4,964	€ 24,819	€ 0
RENATA	CO	€ 11,238	€ 1,072	€ 0	€ 3,078	€ 15,388	€ 15,388
REUNA	CL	€ 3,361	€ 5,305	€ 0	€ 2,167	€ 10,833	€ 7,493
CEDIA	EC	€ 4,640	€ 3,270	€ 0	€ 1,978	€ 9,888	€ 4,088
CUDI	MX	€ 48,156	€ 8,378	€ 0	€ 14,134	€ 70,668	€ 0
UbuntuNet	NL	€ 7,244	€ 735	€ 0	€ 1,995	€ 9,973	€ 9,973
WACREN	GH	€ 14,522	€ 5,545	€ 0	€ 5,017	€ 25,083	€ 25,083
ASREN	DE	€ 16,800	€ 2,092	€ 0	€ 4,723	€ 23,615	€ 23,615
CESNET	CZ	€ 3,378	€ 1,632	€ 0	€ 1,253	€ 6,263	€ 6,263
GRNET	EL	€ 6,200	€ 898	€ 0	€ 1,774	€ 8,872	€ 8,872
SURFNET	NL	€ 1,078	€ 0	€ 0	€ 269	€ 1,347	€ 0
CSIR(SANREN)	ZA	€ 2,152	€ 1,926	€ 0	€ 1,020	€ 5,098	€ 0
RENATER	FR	€ 4,885	€ 1,035	€ 0	€ 1,480	€ 7,400	€ 7,400
NIFI	HU	€ 3,864	€ 1,606	€ 0	€ 1,367	€ 6,837	€ 6,837
CKLN	GD	€ 5,445	€ 1,237	€ 0	€ 1,671	€ 8,353	€ 8,353
CAREN NOC	HK	€ 1,250	€ 700	€ 0	€ 488	€ 2,438	€ 2,438
TEIN*CC	KG	€ 2,810	€ 5,754	€ 0	€ 2,141	€ 10,705	€ 0
TOTAL		€ 228,763	€ 74,065	€ 12,358	€ 75,707	€ 390,893	€ 269,046

In general, the use of resources is in line with the planning, the only deviations to underline are:

UbuntuNet Whose slow start explain the low use of manpower during the first months. Now that additional personnel has been hired, they will invest more time to catch up with their activities, specially in WP5.

CEDIA. Whose activities are planned to be centered in WP4 and WP3 having carried out a large part of its activities in this period. They maintain their commitment of continuing their support to the project adding more manpower if needed at their own expenses.

CESNET, SURFNet, GRNet, RENATER. Whose activities will be more centered in the coming months with their participation in WP3 and WP4.

In terms of manpower, the partners have spent a total of 66.94 PMs, i.e., 22% of the total manpower committed which is in line with the time elapsed which corresponds to 25% of the total time. The variation can be explained mainly by the Northern Hemisphere Summer that has included in this period. The following is the detail of PMs spent by partner:

	WP1	WP2	WP3	WP4	WP5	WP6	Total Person/ Months per Participant
CLARA	4.56	0.04	7.16	1.06	4.56	4.20	21.58
DANTE	0.32	0.02	0.04	0.02	0.02	0.09	0.51
TERENA	0.20	0.33	0.24	0.00	0.02	0.00	0.78
RNP	0.25	1.88	0.36	0.36	0.50	0.50	3.85
RENATA	0.00	0.00	0.00	4.00	0.00	0.00	4.00
REUNA	0.40	0.04	0.24	0.46	0.00	0.00	1.14
CEDIA	0.00	0.45	0.36	0.56	0.00	0.00	1.38
CUDI	0.00	6.94	2.19	3.84	1.77	2.38	17.12
UbuntuNet	0.56	0.02	0.01	0.01	0.71	0.04	1.35
WACREN	0.13	0.75	0.38	0.63	0.75	0.25	2.88
ASREN	0.20	3.20	0.20	0.00	0.70	0.50	4.80
CESNET	0.00	0.30	1.10	0.00	0.00	0.00	1.40
GRNET	0.00	0.37	0.74	0.00	0.00	0.00	1.11
SURFNET	0.05	0.00	0.06	0.00	0.00	0.00	0.11
CSIR(SANREN)	0.15	0.00	0.05	0.00	0.05	0.00	0.25
RENATER	0.28	0.09	0.36	0.09	0.00	0.00	0.82
NIIFI	0.17	0.03	0.09	0.15	0.37	0.00	0.81
CKLN	0.24	0.20	0.05	0.00	0.13	0.00	0.62
CAREN NOC	0.50	0.25	0.25	0.00	0.25	0.50	1.75
TEIN*CC	0.10	0.25	0.10	0.00	0.08	0.16	0.69
Total Person/Months	8.11	15.16	13.97	11.17	9.90	8.62	66.94

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D1.1

Interim Progress Report (M1-M6)

Publishable Summery

Period covered by the report: from 01/05/2015 to 31/10/2015

Periodic report: 1st

1.- MAGIC, FIRST REPORTING PERIOD PUBLISHABLE SUMMARY (M1-M6)

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities. Its objectives are:

I. To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

II. To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

III. To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the Global CEO Forum to promote the creation of a worldwide environment for these applications.

IV. To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

The project began in May 2015. The first official activity of the project was the participation in the IST Africa Conference, on May 6-8, 2015 where the project participated in the Workshop "Synergy for Global Collaboration in Science Powered by R&E Networks" where SciGAIA, TANDEM and MAGIC presented their views and discussed about synergy between them to improve results and maximize impact. This work on Synergy continued on May 11 in a meeting where the three Project Coordinators met at RENATER's Office in Paris to plan the joint work.

As a result of these meetings, the dissemination activities planned by the 3 projects have been going hand in hand, sharing booths at TNC2015 and ICT 2015 conferences. Also as a result of the agreements, joint listings of meetings by the 3 projects have been built and ICT tools are being shared. Further more, the work of user communities will also be enhanced by this collaboration. A meeting on this matter is planned for the UbuntuNet Conference in Maputo, this November 2015.

The Kick Off Meeting of MAGIC took place at the RENATER Offices in Paris, on June 11-12, 2015, the week before the TNC2015 Meeting in order to take advantage of the travel plans of partners traveling from outside Europe. The meeting was attended by 29 participants coming from 19 out of the 20 partners. The meeting was developed around careful planning of the activities, the bonding of the working group, the tools to be used for the work, the planning of meetings and the synergies to be created with other projects such as SciGaIA and TANDEM.



The Kick Off Meeting in Paris

The Workpackage on Mobility (WP2) focused first on preparing a roadmap for the work of deploying Identity Federations in the different project regions: Arab Countries, South and East Africa, West Africa, Central Asia, the Caribbean, Asia-Pacific and Latin America identifying the NRENs which were interested and building a list of training needs. The roadmap led to the planning of training workshops. Two workshops on Identity Federations and eduroam were carried out during this period: one for the Arab States region on September 8-10, 2015 in Amman, Jordan and the second one for the Caribbean region held in Kingston, Jamaica.

In Workpackage 3 the work has been focused on two activities: a) the improvement and deployment of the *Colaboratorio* collaboration tool for the use of different NREN partners and b) the analysis of the groupware standards available for group collaboration. In the deployment of shared collaboration tools we can report that a personalized version of the *Colaboratorio* has been deployed for the use of Nigeria in Africa as well as CEDIA in Ecuador and several other NRENs are already in several stages of use and/or deployment of this tool. The tool has also been deployed for the use of WACREN and TANDEM is using it for group collaboration; in the second activity, the WP members have analyzed 5 different standards and is now starting to work on the interoperation possibilities of these tools.

In Workpackage 4 the activities have been centered around the adoption of NRENum. For this, training was conducted at the TICAL2015 meeting in Viña del Mar, Chile. This training workshop had 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru. The material developed for this workshop was then uploaded to RedCLARA's e.Learning website and also translated in to English and French and then published in the same platform where the material is ready for use in the implementation of NRENum around the world.



Mobility Federated Services and Nrenum.net, Viña del Mar, Chile, July 2015

The other key activity of WP4 has been the support to the adoption of NRENum. We can report that three (3) new NRENs has become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015). Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is underway to include them in the coming months as NRENum delegated areas.

In Workpackage 5 the focus of the activities has been the identification of the common areas of interest among different world regions. After a survey among different partners, in October 2015 it was agreed to concentrate the work in the following areas: Biodiversity, Environment, e-Health and Remote Instrumentation on nanostructure materials. The basic idea is to start using as a basis the user communities promoted during the ELCIRA Project and expand from there to the other world regions. A workshop on user communities is planned to be held during the UbuntuNet conference in Maputo. The WP did also a lot of work on the expansion of the "Fund Alerts database" from Latin America to Africa, Arab Countries, Asia Pacific and the Caribbean as well as generating user training material for the use of the Colaboratorio, the collaboration tool promoted by ELCIRA and MAGIC.

The Dissemination and Training activities have been extensive. The MAGIC project has been present in the following Meetings: IST Africa 2015 in Maputo, Mozambique; TNC2015 in Porto; TICAL2015 in Viña del Mar, Chile; RNP Forum in Brasilia, Brazil and ICT 2015 in Porto, Portugal. Also training has been organized for the WP2 on Federated Access and eduroam in Amman, Jordan; and Kingston, Jamaica, and for WP4 on NRENum and mobility in Viña del Mar, Chile.



MAGIC-SciGaia-TANDEM Booth at ICT 2015

The Project website can be found at:

<http://www.magic-project.eu>

Executive Summary

This deliverable reports the work and achievements of the MAGIC Project during its first year of implementation. The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

To reach this objective the project has established four specific objectives:

- a) to promote the adoption of a set of technologies that facilitate the access and use of services for people who work in a global environment. This implies that they have to travel and access networks when abroad, hence the need for eduroam; they need to access services requiring identification and authorisation mechanisms working worldwide, hence the need for AAI and eduGAIN, and they need to do this in a secure environment, hence the need for security awareness.

In this first year the project has been able to carry out several dissemination and training activities in the Middle East (ASREN region) and the Caribbean (CKLN region). Furthermore, the training material has been translated into French and Russian in preparation of the training in the WACREN and CAREN (Central Asia) regions.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN. In this way we already have pilots in 3 regions covered by the project.

- b) To agree on a standard for Group Management and develop a model for inter-operation between NREN cloud application markets of participating world regions. A test pilot must be deployed and services provided by different regions will be integrated into the pilot.

The project started from the Colaboratorio developed during the ELCIRA Project and developed an improved version capable of being deployed in different World regions as it can be adapted to different languages, stand alone or cloud implementations, with federated access and most of all, capable of implementing the GroupWare technologies selected. This pilot infrastructure (Colaboratorio) has already been implemented in several Latin American countries, in WACREN, to serve the West and Central Africa and is already in the process of deployment in several Arab and African countries.

As for the Group Management technology, the project adopted the VOOT technology as a basic protocol to exchange information about groups, designed the interoperation schemes and is currently in the implementation phase of the pilot using this technology. This will allow that groups of users (user communities) access applications on different NRENs and service providers in a transparent way, similarly to the use of AAI technology for the identification of a person.

- c) To seek consensus among participating world regions on the importance of interoperability of real-time applications.

The work during this period has been focused on promoting the adoption of NRENum, the technology allowing to assign a global numbers to different devices (videoconference equipment, phones, etc) and manage the operation using the DNS servers already in operation by all NRENs. Training and dissemination has been carried out in Chile, the Asia Pacific and other regions.

We can report that five (5) new NRENs have already implement NRENum.net and became part of the worldwide service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of carrying out their internal decision processes.

- d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and developing joint activities.

The activity of the prior has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Another key activity has been the virtual days on the Horizon 2020 calls and on worldwide priority fields.

An important achievement of this period has also been the development and implementation of the new Funding and partners system, changes on the feed, usability and management were made with respect to the pre-existing system developed during the ELCIRA Project. Training material for the use of the collaboration tools has been developed and published in the project website.

The project has carried out intensive dissemination of the project goals and results in key meetings where the NRENs meet, such as TNC, the UbuntuNet Conference, TICAI, the WACREN Meeting, the eAGE Conference and others. The project maintains a website and spreads the news of its activities using social networking tools.

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

The Work package on Mobility (WP2) focused first on preparing a roadmap for the work of deploying Identity Federations in the different project regions: Arab Countries, South and East Africa, West Africa, Central Asia, the Caribbean, Asia-Pacific and Latin America, identifying in those regions by focal points, NRENs or institutions, which were interested in AAI and eduroam. Besides this an on-line training to implement an Identity federation was developed and translated into French, Spanish and Russian in order to spread even more the amount of technicians trained. Two workshops on Identity Federations and eduroam were carried out during this period: one for the Arab States region on September, 2015 in Amman and the second one for the Caribbean region hold on October 2015 in Kingston, Jamaica.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN.

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

In Work-package 3 the work has been focused on two activities: a) the improvement and deployment of the Colaboratorio collaboration tool for the use of different NREN partners and b) the analysis of the group-ware standards available for group collaboration.

In the deployment of shared collaboration tools we can report that a personalized version of the Colaboratorio has been deployed for the use of Nigeria in Africa for the use of WACREN (in synergy with TANDEM) as well as CEDIA in Ecuador and several other NRENs are already in several stages of use and/or deployment of this tool. Also several applications are being added to the portal in order to increase the number of applications provided to the users of different regions around the World.

In the Group-ware standards, the WP has found that 5 middle-ware technologies that can be used for the purpose of applications integration with working groups: OPENCONEXT, PERUN, SYMPA, SCIM and UNITY. The WP is now working on completing a set of basic minimum set of inter-operation requirements and then will move into the testing and construction of a test-bed for the integration of several tools requiring Group Management into the Colaboratorio portal.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the

Global CEO Forum to promote the creation of a worldwide environment for these applications.

In Work-package 4 the activities have been centred around the adoption of NRENum. For this, training was conducted at the TICAL2015 meeting in Viña del Mar, Chile. In this training workshop participated 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru. The material developed for this workshop was then uploaded to RedCLARA's e-Learning website and translated in to English and French where the material is ready for use in the implementation of NRENum around the World. A training Workshop was also conducted in Manila, The Philippines during the APAN meeting in January 2016.

The other key activity of WP4 has been the support to the adoption of NRENum. We can report that five (5) new NRENs has become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of making decisions.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

For WP5 the first period has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Referred to the Alert funding system, the WP was been involved in activities for a new version of the service with changes on the feed, usability and management. Training material for the promotion and enhance of the Colaboratorio has been developed and published in the project website. Another key activity has being the virtual days on the Horizon 2020 calls and on worldwide priority fields.

Finally, the Dissemination and Training activities have been extensive. The MAGIC project has been present in the following Meetings: IST Africa 2015 in Maputo, Mozambique; TNC2015 in Porto; TICAL2015 in Viña del Mar, Chile; RNP Forum in Brasilia, Brazil, ICT 2015 in Lisbon, Portugal; APAN41, Manila, The Philippines, Asia; UbuntuNet Connect 2015 Conference and e-AGE 2015, Casablanca, Morocco, Arab States. During these events brochures and give-aways have been distributed to position the project and the projects' ideas among the researchers, policy makers and technicians of NRENs around the World.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- To organise the Kick-off Meeting in Paris and make sure that all Work Packages organised themselves and their work progress. As reported, the Kick-off took place in Paris on June 11-12, 2015, and was attended by representatives of 19 out of the 20 partners. Only SURFNet excused its attendance.
- To agree on and sign a Consortium Agreement. Issues which required discussion for the Consortium Agreement included the treatment of Intellectual Property Rights, the level of distribution of the applications and other matters such as the distribution of the funding and the mechanisms to include

and exclude partners. The Consortium Agreement, modelled upon the DESCA Model (www.desca.-2020.eu) was signed by all partners as of August 18, 2015.

- To distribute the funding from the European Commission as agreed in the Consortium Agreement. This was done between July 01, 2015 and August 20, 2015.
- To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place by Video-conference, with the exception of the Kick-off Meeting which was a face-to-face meeting. Steering Committee Meetings were held on the following dates:
 - June 11-12, 2015 (The Kick-off Meeting)
 - July 23, 2015
 - September 24, 2015
 - November 25, 2015
 - January 25, 2016
 - April 27, 2016

The minutes of the Meetings are available in the wiki of the MAGIC Community maintained in the Colaboratorio Portal.

- To oversee the Deliverables and Milestones.
 - All deliverables have been submitted to the EC through the H2020 Project Management System.
- The milestones have the following status:
 - MS1 completed
 - Kick off Meeting Minutes; Project Website
 - Event participation plan
 - MS2 has been completed as of October 2015, i.e., Month 6 instead of Month 4 because of changes in the procedures to sign MoUs internally in GÉANT due to its internal restructuring.
 - The agreement itself
 - MS3 has been completed by September 29, 2015
 - The pilot portal itself has already been deployed in Latin America: Ecuador (CEDIA), Costa Rica (CONARE) and Mexico (CUDI) and in Africa where jointly with TANDEM we have deployed the portal in Nigeria (NgREN) for the service of WACREN. Further implementations are under way.
 - MS4 has been completed as of February 25, 2016, after completing the launch events of 4 User Global User Communities:
 - e-Health: February 2nd, 2016 <https://eventos.redclara.net/indico/event/634/>
 - Biodiversity: February 11th, 2016, <https://eventos.redclara.net/indico/event/639/>
 - Environment: February 18th, 2016, <https://eventos.redclara.net/indico/event/640/>
 - Remote Instrumentation: February 25th, 2016, <https://eventos.redclara.net/indico/event/641/>
 - MS5 Assessment of group management platforms has been successfully completed on October 30, 2015 as described in D3.2
 - MS6 has been successfully completed as NRENum.net has been deployed in 5 countries in Latin America: El Salvador (RAICES), Ecuador (CEDIA), Chile (REUNA), Uruguay (RAU) and Mexico (CUDI).
 - MS7 Four Communities established (each with a thematic Champion) in December 2015: e-Health, Environment, Biodiversity, Remote Instrumentation
 - MS8 Training in AAI has already been completed for The Caribbean, the Arab Countries (ASREN), West Africa (WACREN) and East and Southern Africa (UbuntuNet). eduroam training is complete in CKLN, ASREN and WACREN. Planned workshops will complete training for the remaining regions during 2016 (See. D2.4).
 - MS9 Completed by April 29, 2012. The training material in PDF available at the website.
 - MS10 The information system on funding opportunities is available since April 6, 2016. It is available through the Colaboratorio portal.

- MS11 This Milestone is yet to be completed, only one Asian NREN, Sri Lankan NREN. More candidates are studying their possibilities to join. We are very confident that we will reach the target of at least 3 Asian NRENs joining NRENnum.
- MS12 All dissemination activities have been completed. See D6.4.
- No major problems have occurred during this period, the project has run smoothly, except for the delays that have already been reported. There are three main reasons for these delays:
 - A slow start affecting above all the time needed to reach agreements between European and Latin American Projects.
 - The difficulty to identify user communities willing to become test communities and the time-consuming work of collecting information on researchers and research groups.
 - The difficulty in creating Identity Federations. As in other countries this is a slow process. Nevertheless, it can be seen that there is a lot of interest and it is expected that there will be four Identity Federations by the end of the project, though it is possible that additional time may be needed for the project to achieve all of its goals.
 - The delay in the beginning of the CAREN II Project that is intended to foster the development of NRENs in the Central Asia region, a pre-requisite for eduGAIN and eduroam deployment.
 - The difficulty to convince Asian NRENs to adopt NRENnum as planned. We are certain that we will be overcome this difficulty in the coming period with the active support of TEIN and APAN.
- No changes in the consortium, except for the merge of DANTE and TERENA into GEANT. Nevertheless the 2 organisations keep separate names, namely GEANT Ltd. And GEANT Association.

1.2.2 Work Package 2: Platforms for Mobility

During this first year, the activities were focused on planning, dissemination and training. The activities were coordinated by RNP.

In the Arab Region, ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organised in cooperation with the MAGIC and EUMEDCONNECT3¹ projects, and was designed for staff of National Research and Education Networks (NRENs) and Universities.

The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN. There were eleven (11) participants from six (6) countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia.

AAI is successfully implemented during MAGIC Project at: MARWAN (Morocco), ARN (Algeria); pilot status in AUB (Lebanon), JUNet, (Jordan) and planning to implement in Palestine and Egypt

Regarding eduroam, it is successfully implemented in Saudi Arabia, United Arab Emirates, Lebanon, Algeria, Morocco and ASREN. It is important to be noted that it was in operation in Saudi Arabia and the United Arab Emirates, as well as in Morocco, before the start of MAGIC. Eduroam is successfully at pilot level in Jordan, Tunisia and Oman and is starting in Egypt and Palestine.

In the South Africa region, a Federated Applications (FedApps) Training session was held on 26-28 April 2016 in Dar es Salaam as part of UbuntuNet Alliance’s strategy for deployment of AAI in the region. The training - supported by the MAGIC project - was facilitated by UbuntuNet Alliance and SANReN, South Africa. The training was attended by 22 engineers from 14 NRENs.

Concerning eduroam, the Research and Education Network for Uganda (RENU) in January 2016 became

¹ www.eumedconnect3.net

the 4th NREN in Eastern and Southern Africa to deploy and join eduroam after SANREN (South Africa), KENET (Kenya) and ZAMREN (Zambia). UbuntuNet Alliance continues to promote deployment of the service in the region. During the Federated Applications training in Dar es Salaam in April 2016, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training. With the eduroam experts from SANREN, UbuntuNet Alliance is currently looking into the possibility to provide this training in the coming months.

All other regions were investing effort in planning and trying to create the commitment of institutions or NRENs to join the project. The result of this work will support the implementation of new federations and new national roaming operators of eduroam.

1.2.3 Work Package 3: Cloud Provisioning and Group-ware Standards

During the reporting period, the work package team has worked in three tasks:

- 1) The preparation of the beta portal that will contain the applications and implement the groupware standards,
- 2) The assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation, and
- 3) The planning and design of a framework for group inter-operations and service catalogue implementation between cloud infrastructures

In the first task we started from the Colaboratorio tool built during the ELCIRA Project, and perform the following changes necessary to for the task of becoming a prototype for a global portal:

Modifications to the Registration System (SSO and Federated access)

- Upgrade of the registration system for using a modular approach and remove external software dependencies, graphic improvements

- Responsive design to fit mobile and desktop interfaces on registration system

Preparation for multiple languages including the use of extended characters set

- Multi-language adjustments (encoding and visualization) on registration system

- Multi-language adjustments (encoding and visualization) on communities system

- Multilanguage for academic breaking news, global agenda

Modification for multiple instances deployment

- Graphical user interface (GUI) enhancement and securing

- VCEspresso access modifications to allow personalization (NREN logo, and moderation key)

Communities system changes

- Registration system graphical user interface (GUI) enhancement and securing

- Responsive design to fit mobile and desktop interfaces on communities system

- Usability improvements in the communities system

- Modularization of modules for news and agenda to multiple sources

- Allow the NREN to define its own sources for news and agenda

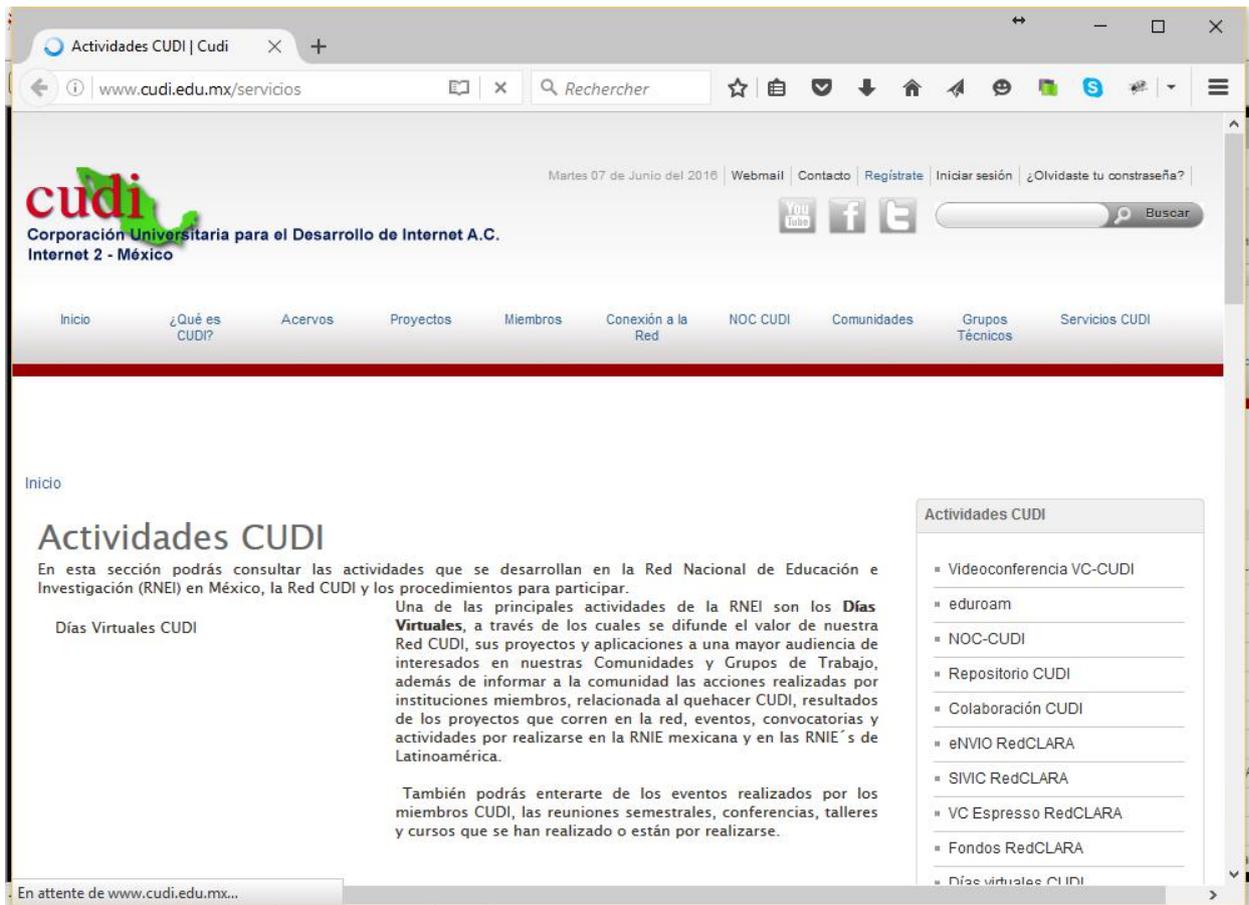
- Allow NRENadmin to define information sources from the NRENs

In order to deploy the pilot infrastructure (Colaboratorio), after initial contacts with the candidate RREN/NREN at management level, the work package team usually works directly with service and technical leaders of the RREN/NREN to work on the Colaboratorio pilot service implementation. Decisions like service look and feel, federated access deployment and which services to integrate are taken into account within the deployment process.

There are still some challenges in trying to convince some NRENs not to start every service from zero. NRENs seems to think that they need to install every service in their own premises to achieve a proper knowledge transfer. Thanks to the promotion, and a close work with each NREN, several of them have changed this mindset and understood that it is better to join forces in a federated effort, and learn together in the process. Colaboratorio promotion and dissemination has been done through several activities well

described in the work package 5 report in this document.

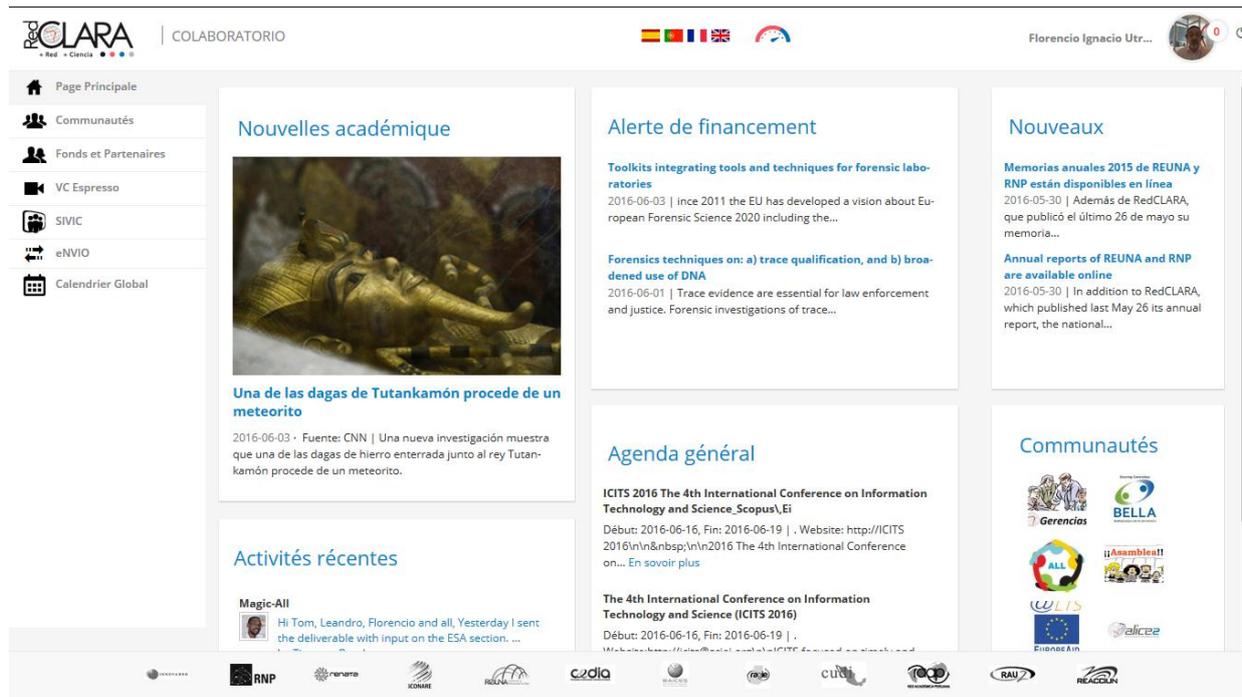
During this first year Colaboratorio has been implemented for the Ecuadorian NREN (CEDIA) that passed Colaboratorio in production on November 22/2015 and Mexico (CUDI). Colaboratorio is implemented in different flavours to fit the NREN requirements. For instance, in CUDI's case, the integration used the services VCEspresso, eNVIO, SIVIC, and the Funding systems from Colaboratorio, but in WACREN (deployed in the context of the TANDEM Project) and CKLN's cases, they use the entire system and localize some services like VCEspresso and mailing-lists for service convenience.



The Colaboratorio Portal in the Mexican NREN deployment

There is an undergoing work with South Africa (SANREN), Middle East (ASREN), and Ethiopia (EtherNet), to deploy Colaboratorio, and it is foreseen that to have at least 4 new deployments by the end of the project.

Collaboration with RENATER (France), WACREN and the TANDEM project resulted in Colaboratorio's translation to French language.



The Colaboratorio Portal in French

For the second task, the assessment of the existing group management standards, NRENs tools and value services for the global communities, the WP carried out the following tasks:

Group Management Standards

- Research study and testing of group management tools
- Testing on demonstrative and development platforms

Applications and tools

Research of Open Source tools to be included

- Etherpad
- Open edX
- CNC (Virtual storage)

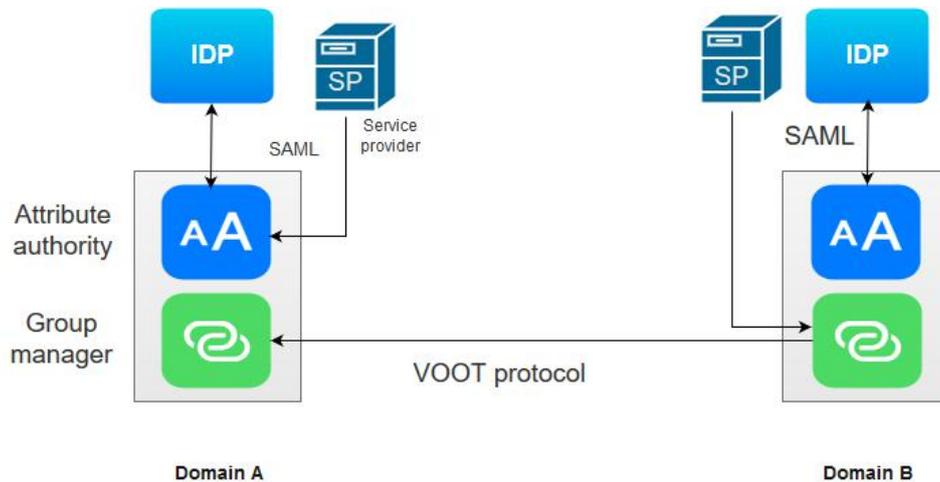
VCEspresso System

- Allow multiple recording servers and allow moderation access

Open repositories service

- Upgrade of the DSPACE repositories system to the latest version
- Connect the repositories system to the federated environment
- DSPACE graphical user interface (GUI) modifications

To decide on the standards to be chosen and the pilot implementation strategy for the groupware the working group had a face to face meeting in March 10 to 11 of 2016 in Vienna (AT) with representatives from the NRENs from Middle East (ASREN), France (RENATER), Czech republic (CESNET), Greece (GRNET), Caribbean (CKLN), Mexico (CUDI) and Latin-America (RedCLARA). In this meeting, the main objective was agree on how to deploy the group management feature between federations. The subject was discussed in previous meetings and from the result from the Vienna work it was established an architecture using a Group Management entity attached to an SAML attribute authority (AA). The architecture can be summarized as in the following picture:



The group agreed that the group managers can be a separate entities that reside in the attribute authority, so no additional trust relation would have to be set up. The only connection that still must be agreed between providers is between group managers through the VOOT protocol. The main agreements achieved were:

- a) The group management deployment shall be formed by three components: a) an SAML attribute authority (AA), b) a group manager (GM) application, and c) a group management proxy (GMP).
- b) The protocol to exchange group information will be VOOT. VOOT is an adaptation of the SCIM protocol, for the NREN needs.
- c) The group membership would be validated using standard SAML attributes.

For the third task, the planning and design requirements for the federated group management pilot was done. The work involved the definition of the services (FileSender, Colaboratorio, Docuwiki), the use cases, and the protocols for the implementation. This work required a high level of interaction among the partners, and the provisioning of resources by various of them. RENATER offered Sympa, and a service instance of the FileSender; RedCLARA provided Colaboratorio, and CESNET provided PERUN and Docuwiki. The integration of these applications using the VOOT protocol was designed and defined in several meeting, including the presence meeting at Vienna (Austria) in March 10-11. The result from this interactions was to use a service implementation integration a SAML Attribute Authority, the VOOT protocol and the group manager, as shown in the following picture:

The working group decided that the following will be the minimum applications for the pilot integration between regions:

- Sympa-FileSender,
- Colaboratorio
- PERUN-Dokuwiki

At the date of this report, the working group is advancing in the pilot set up, and is testing the PERUN, and SYMPA service instances created for this purpose.

In the fourth task, the activities have been focused on the definitions for the pilot implementation, i.e.

- a) Service authorization based on group information,
- b) Group members action, and
- c) Group mailing list action.

The first case, service authorization based on group information, allows to provide access to a privileged resource based on the group membership available in the network; the second case, group

members action, allow to do a get operation of the group members that the user belongs to, and do some action with it; and the last case, group mailing list action, allows to use a mailing list associated to a group to invite its members without disclosing members information. Some of the characteristics worth highlighting in the pilot are the integration to eduGAIN, and that groups' information will be shared used a direct agreement between parties. With regard to the service catalogue, the group did the evaluation of the GÉANT catalogue, how it works, and was agree to carry out the installation for the MAGIC applications. The directory application will be installed to feed applications when the report have being delivered.

1.2.4 Work Package 4: Agreements for Real Time Collaboration

The work of this WP, led by RENATA has focused during this period on NRENum training and implementation as well as setting the necessary agreements for the implementation of interoperation of real time applications.

In particular, an agreement of MAGIC with GÉANT to work on RTC standards has been developed and signed. Also, agreements are under way with APAN (Asia Pacific) and AARnet (Australia), who have extensive experience in RTC applications and are leading the Global CEO working group on RTC.

The first NRENum.net training activity was carried out during the TICAL 2015 conference held in Viña del Mar - Chile, in July 2015 where 11 participants from different countries in Latin America were trained on how to implement NRENum.net. People who attended this event were contacted by RENATA to start working on the implementation of NRENum.net in their countries.

An On line training course was also developed to ease training in the different world regions. The course is available on line in English, French and Spanish. The course is intended to guide NRENs on delegation and technical issues related to establishing an NRENum.net service. RedCLARA has offered its Moodle Platform to host these training courses and RENATA deployed documentation about the use and implementation of NRENum.net service. This course is oriented to systems administrators of NRENs in charge of running this service for their users and institutions.

Online training material is On line in the following links:

- Spanish: <http://cursos.redclara.net/course/view.php?id=47>
- English: <http://cursos.redclara.net/course/view.php?id=48>
- French: <http://cursos.redclara.net/course/view.php?id=49>

Invitations to participate on NRENum.net service offering RENATA's support were sent to all NRENs in Latin America as well as, through the different world regional leaders, to the other participating regions. A special emphasis has been put to invite NRENs from Asia Pacific and Africa.

In Latin America, RAICES from El Salvador and RAU from Uruguay showed immediate interest on this service. A meeting has been done with each of them to explain information, benefits and to schedule a work plan for delegation of the NRENum.net zone to the NREN itself.

Following this effort, three (3) new NRENs have already become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015). This information has been taken from NRENum.net news on <https://nrenum.net>.

With RedCLARA support, CEDIA has been guided in their delegation process of the NRENum.net zone (+593). CEDIA did a very fast step with configurations and proceedings so they were the first delegated country.

RAICES the Salvadorian NREN did a very good job and RENATA supported every step in the configuration of the DNS zone for the country code (+503), they had to overcome technical issues because their DNS haven't had reverse domains registered but finally zone was fully delegated.

CUDI from Mexico did a very good job on installation of DNS servers and the configuration of the NRENum.net zone (+52) on them. They had the same problem because their DNS servers haven't had reverse domains registered, after these problems were solved and configurations were set the zone it is now delegated.

A work plan has been made in order to break down necessary steps to implement NRENum.net by an NREN and we have been using it with newly delegated countries to accomplish the Deliverable 4.2. "NRENum.net deployed in 3 new NRENs" with deadline month 12th. These are the newly delegated country codes to NRENs (chronologically added):

- RAU from Uruguay (27 November 2015)
- LEARN from Sri Lanka (14 December 2015),
- REUNA from Chile (7 January 2016).

This information has been taken from NRENum.net news on <https://nrenum.net>.

RAU from Uruguay had a great expertise in DNS set up, thus the process ended very fast and finally the zone "8.9.5.nrenum.net" was delegated according to the +598 E.164 country code.

LEARN the Sri Lanka NREN created the zone for +94 country code and after fulfilling delegation requirements they made it, LEARN did a great job becoming our first member of APAN joining to NRENum.net service.

REUNA Chilean NREN after completed the zone creation for the +56 country code in their two DNS servers zone was delegated with no complications on the way.

Unfortunately, we were not able to achieve the goals of Milestone 11, i.e. to incorporate three (3) Asia Pacific countries to the NRENum.net service, we have sent many invitations in collaboration with TEIN*CC, but we did not have the impact we expected. Nevertheless, we have recently made advances and we are very confident that we will be able to complete this MS by the end of the next period.

NRENum.net service had a great acceptance in Latin America and now we want to spread this service in other regions.

We consider these are the main reasons we found in the adoption of NRENum.net service: lack of promotion in order to understand how works this service, what are the benefits for NRENs and in some cases technical issues.

We have moved forward on DNSSEC activities related to the Deliverable D.4.3, currently we have RENATA from Colombia and RAICES from El Salvador that has secured their respective zones using DNSSEC technology.

WP4 has been led by RENATA with contributions from CEDIA, CUDI, NIIFI, RedCLARA, RENATER, REUNA, RNP, and WACREN

1.2.5 Work Package 5: Global Science Communities

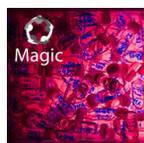
During the reported period, one of the main activities was centred in the definition of the priority areas that will be taken to the creation of global science communities. After looking at several considerations, that include a direct consultation to the partner NRENs and RRENs, the partners decided to adopt the results of the ELCIRA project "Report on Key Research Communities", because even though it represents the information provided in Latin America, it also has similarities with the situation of other regions. For example, a report from CKLN showed that the Caribbean region had the following priority areas: Health, Earth Sciences, Security, Agriculture, Forestry & Fisheries and Education.

The areas presented in ELCIRA are: Biodiversity, Environment, e-Health and High Energy Physics. Having looked at feedback coming from the regions, partners decided not to include High Energy Physics at present, but to continue with a proposal from Mexico to create a Community on Remote Instrumentation on nano-structured materials.

The overall goal for these MAGIC Global Science Communities is to enable thematic experts and people with same interests from different parts of the world to interact and share experiences with each other with the aim of advancing knowledge and tackling global challenges.

With this objective as a guide, it was sent a call to regional partners to submit names and contact details of potential participants from all MAGIC regions to join the Global Science Communities in the identified priorities, efforts were directed at identifying champions for each community. The champions are a crucial figure in the work of the communities, especially because the communities being academic/scientific in nature require someone who is an insider in the field to guide and coordinate the work with fellow specialists.

Opening Conferences for the four Global Science Communities were held during the month of February 2016. The following was the format and presentations for the opening meetings for each community.



Global Science Community on E-Health

Objective: The Global Science Community on eHealth aims to increase engagement of practitioners, researchers, academics and students of eHealth from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 2 February 2016 (<https://eventos.redclara.net/indico/event/634/>)

Members: 58

Countries: Belize, Brazil, Canada, Colombia, Chile, Germany, Dominican Republic, Etiopia, France, Jamaica, Mexico, Malawi, Nigeria, South Africa, Uganda.

Community Champion: Prof Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>

First virtual meeting of the Global Science Community on e-Health



Global Science Community on Biodiversity

Objective: The Biodiversity Community aims to increase engagement of practitioners, researchers, academics and students of biodiversity from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 11 February 2016

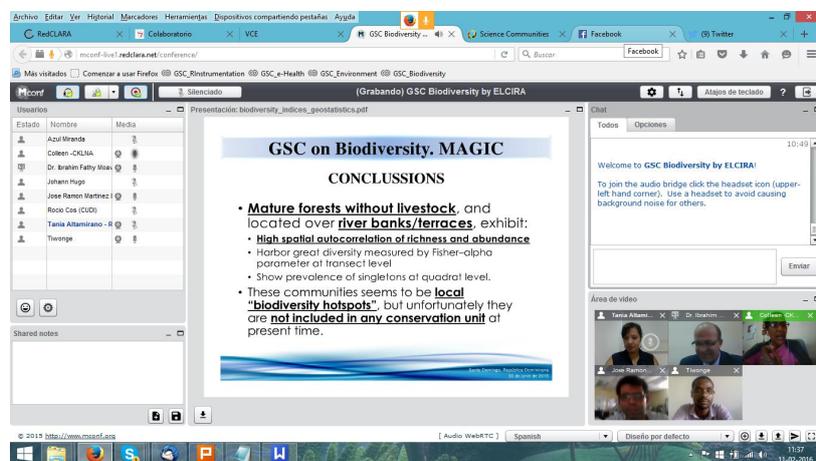
(<https://eventos.redclara.net/indico/event/639/>)

Members: 31

Countries: Argentina, Colombia, Chile, Dominican Republic, France, Ghana, Jordan, Libano, Malawi, Mexico, South Africa.

Community Champion: Prof José Ramón Martínez Professor and researcher of the Universidad Autónoma de santo Domingo (UASD), Dominic Republic.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>



First virtual meeting of the Global Science Community on Biodiversity



Global Science Community on Environment

Objective: The Environment community aims to increase engagement of practitioners, researchers, academics and students of the environment from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 18 February 2016

(<https://eventos.redclara.net/indico/event/640/>)

Members: 28

Countries: Argentina, Chile, Dominican Republic, France, Ghana, Jamaica, Malawi, Mexico, Nigeria.

Community Champion: Dr David C. Smith, Coordinator Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-environment>



First virtual meeting of the Global Science Community on Environment



Global Science Community on Remote Instrumentation

Objective: The Remote Instrumentation community aims to increase engagement of practitioners, researchers, academics and students involved or interested in remote instrumentation from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

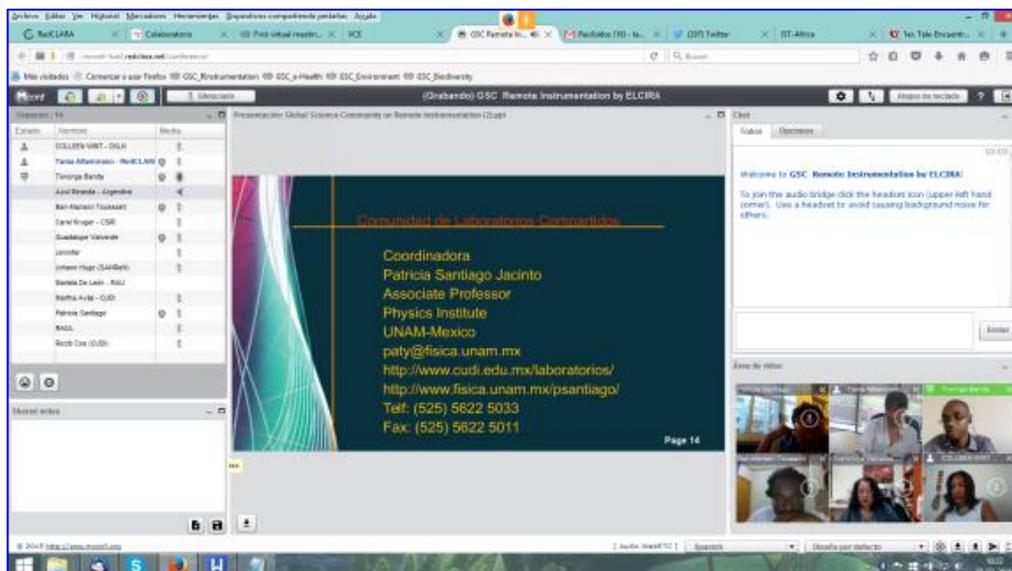
Opening Conference: 25 February 2016 (<https://eventos.redclara.net/indico/event/641/>)

Members: 16

Countries: Chile, Colombia, Dominican Republic, Malawi, Mexico, South Africa, Uganda.

Community Champion: Prof Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-remote-instrumentation>



First virtual meeting of the Global Science Community on Remote Instrumentation

The results of the opening meetings provide a sense of the diversity of the communities. In the e-Health GSC, one output was the development of a survey among the members to identify themes of interest and current activities of the participants. The results showed that the main areas are: Cardiology, Child and Adolescent Health, Standards for Telemedicine, and Health Informatics. The next steps include a grand round about this topics in the month of July, 2016, coordinated and led by the champion, Luiz Messina, from RUTE, RNP, Brasil.

The Biodiversity community scheduled a second activity on May 5th, 2016 entitled “Experiences from around the World” with the participation of representatives from Egypt, Brazil, Trinidad & Tobago and Dominican Republic.

<https://eventos.redclara.net/indico/event/661/>



The Biodiversity community call to join

For the Remote instrumentation the next steps include an informative session scheduled for June 16, 2016, on “Nanoparticles for Drug Delivery in Parkinson”.

Another topic that was thought to be very useful for communities is Science Communication, simplifying research studies and findings for various audiences (policy makers, end users, founders etc).

Information System on Worldwide Funding Opportunities

Another important activity was the work on the identification of open calls to feed the Information System on Worldwide Funding Opportunities and Partner Search database, which is accessible through Colaboratorio. To follow up the activity, a report system was developed that allows access to calls published in a specific period. The report of the publication is available on line and can be seen in (link for internal use, not for dissemination):

http://dev1.redclara.net/joomla4_new/joomla4/reporte_fondos/

Besides, the system had a process of improvement that included:

- ❖ Adjustment of the form used to feed the data base - September 15th, 2015.
- ❖ Report system about the calls uploaded in the system - October 20th , 2015.
- ❖ Adjustments of the information display on the public page - January 29th, 2016.
- ❖ Implementation of the options to edit and eliminate entries published on the system - March 3rd, 2016.
- ❖ Weekly dispatch to the Colaboratorio user’s email with information about open calls according of their area of interest specified on their profile - March 8th, 2016.
- ❖ Enable the option of publishing a calls in different language (Spanish, English and Portuguese) when available - April 6th, 2016.

Global virtual days on Horizon 2020 calls

A three day session dedicated to Latin America and the Caribbean titled: “Segundo Ciclo Virtual para América Latina y el Caribe sobre Horizonte 2020” (Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020)² was developed. It took place on June 17-24, 2015 and was developed jointly with the Argentine Bureau for Enhancing Cooperation with the European Union (ABEST III), the Latin America, Caribbean and European Union Network on Research and Innovation (ALCUENET) and the Ministry of Education and Culture of Uruguay.

For the organization of the activity, a web page was created (See: <https://eventos.redclara.net/indico/event/495/overview>) on the event manager of the collaborative platform, Colaboratorio (See image below).



Webpage of the Virtual Information day on H2020

The dissemination activities included news, a newsletter and invitation by email to potential participants from the region (See image). The event was hosted using H323 videoconference, therefore those interested had to register their videoconference rooms through the form available on the website and had take part in the test session to guarantee the quality of the transmission during the actual event.

The impact of the activity was shown in the elevated number of videoconference rooms registered to participate in the cycle: 56 in total. Additionally, the event was streamed live through the Internet, with a peak of 120 users connected at the same time and a total of 290 participants by streaming on the three days (See image below).

² This was a second version of a previous activity developed; the information is available here: <https://eventos.redclara.net/indico/event/435/>



H2020 Virtual Information Day

Global virtual days on priority worldwide fields

Another activity planned with the communities is the development of global virtual days on priority worldwide fields. In this context, on December 15th, 2015 a virtual day on Politics and models of implementation of Open Access in the world. took place

For the coordination of the event, a web page was created (see: <https://eventos.redclara.net/indico/event/623/>)

The activity was mainly directed to the African region, thence all the presentations and the material generated (available for download from the home page of the web site) was in English. The agenda included the participation of representatives from Latin America, Africa and Europe who presented their respective experiences.

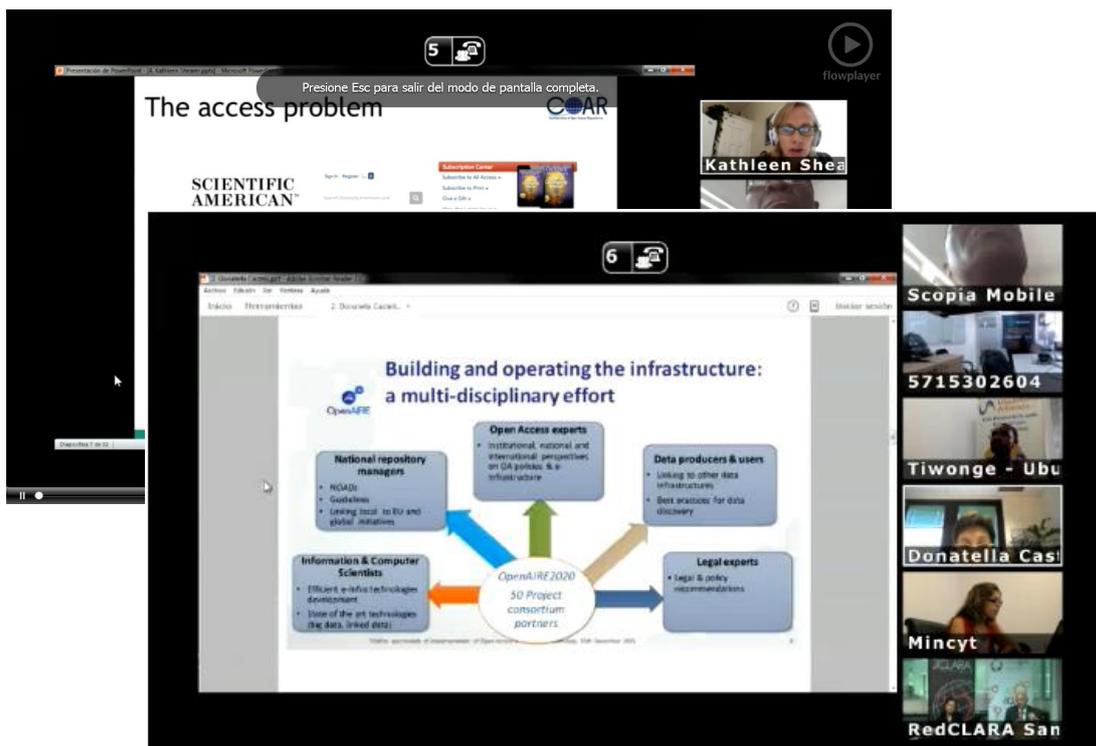


Virtual day on Politics and models of implementation of Open Access

For the dissemination of the activity, an informative article was generated and published in the web pages of the RedCLARA, MAGIC and was also included in the informative material of the partners institutions (See image below).

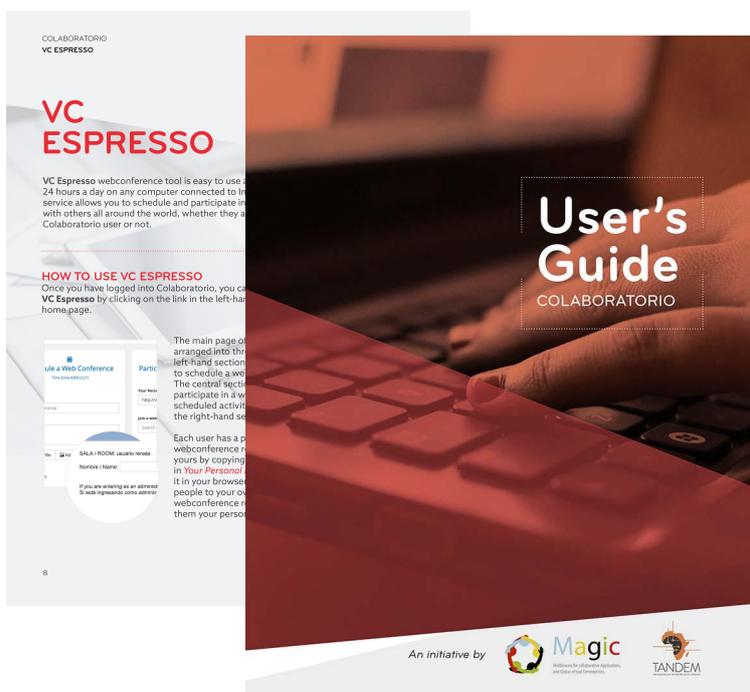


The event was conducted using a H323 videoconference system with a streaming transmission. The participation included 22 videoconference rooms registered and a peak of 20 participants by Internet. For those connected remotely, there was the option of sending their comments and questions using the Skype account: dias.virtuales to interact with the speakers.



Training materials to show the uses and benefits of the global collaborative tools

To enhance and support the work of the Global Science Communities, a User Guide on the Colaboratorio was developed. It presents an easy and friendly explanation on the main elements of the platform and how to take advantage of them in daily work. The material is available in English and Spanish from the MAGIC website: <http://magic-project.eu/index.php/training>



The User Guide to the Colaboratorio

1.2.6 Work Package 6: Dissemination and Training

Training in Latin America, Arab countries and The Caribbean:

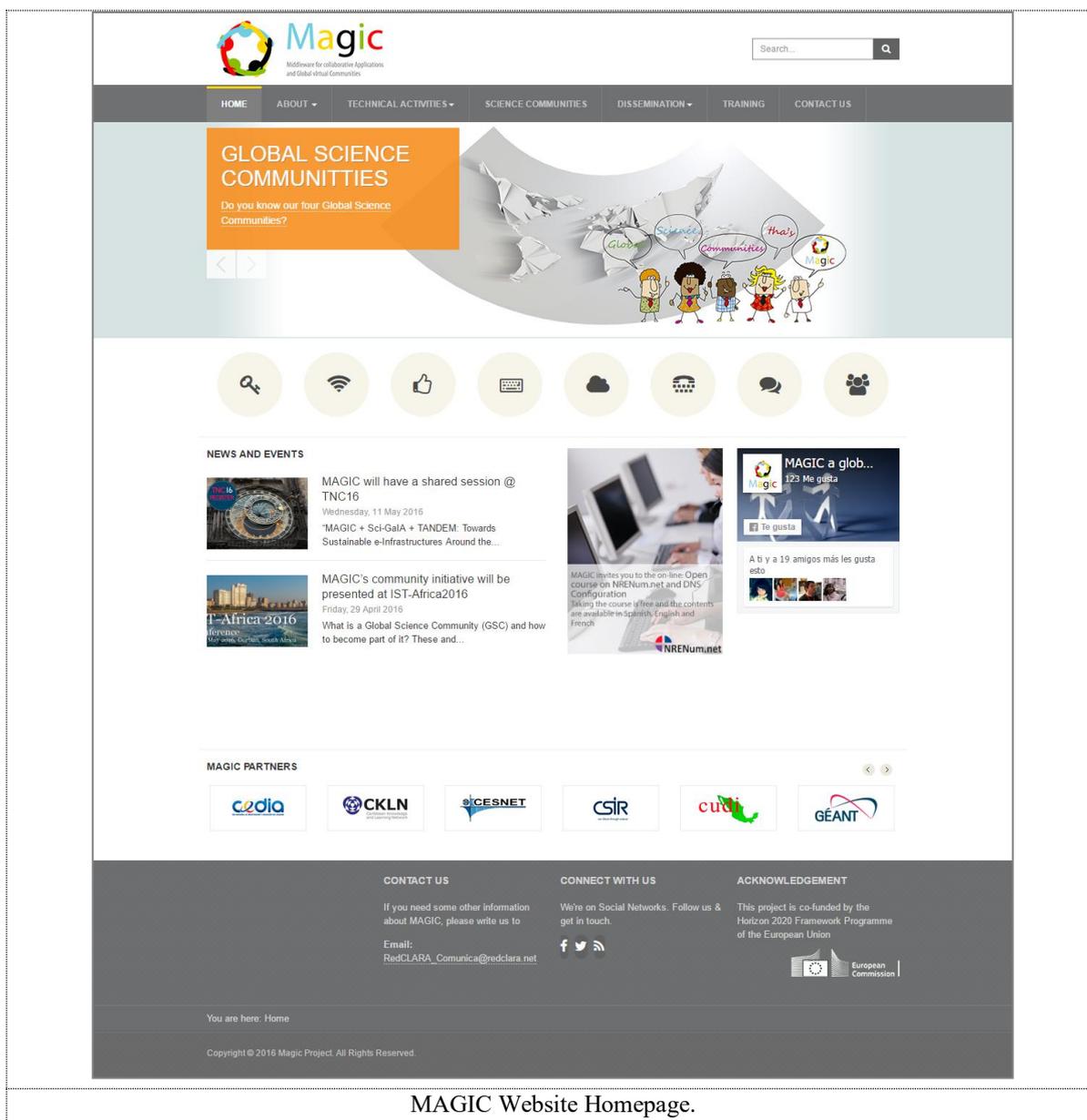
Within the reported period three face-to-face training sessions were carried out:

- **Federated Applications (FedApps) Training**
Date: 26-28 April 2016
Venue: Ramada Resort, Dar es Salaam, Tanzania
Attendees: 22 engineers from 14 NRENs members of the UbuntuNet Alliance
- **Federated Access and eduroam workshop in the Caribbean**
Date: October 7 to 9, 2015
Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica
Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).
Note from CKLN: “Attendees are expected to deploy the pilot and implementation in their respective NRENs/Institutions on the subsequent phases of the project”.
- **Workshop on Joining eduroam and Identity Federation**
Date: September 8 to 10, 2015
Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan
Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.
Note from ASREN: “Participants should start immediately working on eduroam then idp”.
- **Mobility Federated Services and Nrenum.net**
Date: July 8, 2015
Venue: Viña del Mar, Chile. Enjoy Conference Center
Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

Intense dissemination to the on-line open course on NRENum.net and DNS - was carried out by means of the MAGIC communication channels and of those of its partners as well.

On-line presence:

MAGIC’s on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social interphases and its by-monthly Newsletter.
Regarding its Intranet, it is extensively used by the project partners for all its internal communications and for the different WP interaction.



MAGIC Website Homepage.

The MAGIC website was developed during M01 and M02, and delivered on-line on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was delivered on the same date in Facebook and Twitter.

The success of the website and the social network pages, has been statistically measured by WP6. The website usage is measured using the Piwik open-source tool which started taking website statistics on 16 June 2015, and the main numbers are the following ones:

	Jun.'15	Jul.'15	Aug.'15	Sep.'15	Oct.'15	Nov.'15	Dec.'15	Jan.'16	Feb.'16	Mar.'16	Apr.'16	May '16
MAGIC Project												
Number of unique visitors	231	211	340	328	427	849	412	563	408	378	417	261
Number of pages seen	751	610	905	875	943	2062	887	1102	876	821	779	622

MAGIC Website main statistics of usage

On May 2016, “MAGIC a global connection” (Facebook) and “@MAGIC_our_voice” (Twitter)

showed a growth of more than 200% each in its outreach.

Regarding the project’s newsletter, under the name of “MAGIC TIME” five editions were delivered to all the project members, three in 2015 and 2 in 2016 (January and May), all of them can be checked out at <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.



First edition of the MAGIC TIME, July 2015.

The following table show the statistics of the five newsletters:

	July	September	November	January	May
Opened emails	42	42	38	44	78
Recipients	73	78	78	83	184
Total recipients clicks	15	9	5	9	7
Total clicks	48	10	6	42	10

Brochures and promotional material done

In order to serve the different dissemination needs, project brochures were printed in Spanish (1000 copies), English (1500 copies), and Portuguese (1000 copies) and also translated into French. All these brochures have been published in the website under Dissemination section, tab >>> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format, and most of them were distributed in those international events where MAGIC had representation.

Regarding the branded promotional goodies, within the reported period we did the following pieces for its distribution in the international events in where MAGIC had representation within a booth:

- 400 umbrellas
- 1000 speakers for mobile devices
- 1500 vintage puzzles
- 150 pen-drives and key holders

The distribution of these material will be explained in the following paragraphs.

Participation in international events

Within the reported period, the MAGIC project was disseminated within three major international events, the first two of them in Latin America and the third in Europe. In all these events MAGIC had space in a stand where it distributed brochures and branded promotional goodies among the attendees.

July 6th to 8th, TICAL2015, Viña del Mar, Chile, Latin America:

MAGIC had an exhibition booth at TICAL2015 where brochures in Spanish and umbrellas with MAGIC's logo were delivered. A video explaining MAGIC in Spanish was generated for the occasion MAGIC and also published in MAGIC's Facebook interphase. In addition, videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts. Training sessions within TICAL's Conference framework were coordinated.

August 25th to 27th, RNP2015 Forum, Brasilia, Brazil, Latin America:

MAGIC had a space at RNP stand. Brochures of the project were translated into Portuguese and distributed among the attendees. In addition promotional MAGIC umbrellas were given away between those who requested more information about our project. Videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

October 20 to 20nd, ICT2015, Lisbon, Portugal, Europe:

In a common effort with TANDEM and Sci-GaIA, under the name of GIISC (Global ICT Infrastructures for International Scientific Collaboration), the MAGIC project had a shared exhibition booth at the INCO Village, and a Networking Sessions in ICT2015. Within the stand MAGIC delivered brochures with the Project information in English, Spanish and Portuguese, and branded goodies: vintage puzzles and speakers for the mobile devices.

November 16th to 20th , Maputo, Mozambique, Africa:

MAGIC had a relevant participation in **Sci-GaIA Workshop on Open Science**, by means of the presentations made by representatives of GRNET and RedCLARA

During November 18th and 19th, MAGIC was introduced to the attendees of the **UbuntuNet Connect 2015 Conference**, throughout three presentations made by representatives of RedCLARA and GRNET.

e-AGE 2015, December 7 and 8, 2015, Casablanca, Morocco, Arab States:

With a stand shared with TEIN*CC where the MAGIC project information and promotional material was distributed and its participation in the Conference third session, entitled as "Evolving Services for Science, Research, and Education Communities", by means of the presentations of representatives of GRNET and RedCLARA, the global collaboration project could share in a face-to-face fashion the importance of the participation of the Arab research and education community in the project.

APAN41, January 24 - 29, Manila, The Philippines, Asia:

At the 41st Asia Pacific Advanced Network Meeting - Manila Revisited: Enabling Connectivity for an Integrated World, MAGIC was represented by RedCLARA through a presentation entitled as "MAGIC Project and NREnum Service Middleware for collaborative Applications and Global Virtual Communities".

The following table shows the number of dissemination and promotion pieces given away in all these events.

Pieces	Number of pieces delivered in each international event				
	TICAL2015	RNP2015 Forum	ICT2015	UbuntuNet Connect 2015	e-AGE 2015
Brochures in Spanish	600 (the Ecuadorian and the Chilean NRENs asked for brochures to send to their members)		100		
Brochures in Portuguese		300	130	100	
Brochures in English			500	200	300
Umbrellas	257	60		60	
Speakers			500	250	
Puzzles			700	300	
Pendrives-key holders					200

Also, within the reported period MAGIC's participation in two international events was under preparation: IST-Africa 2016 and TNC16. This will be reported in the upcoming Progress Report.

WP6 has been lead by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, NITC, RNP, TEIN*CC and WACREN.

1.3 Impact

As the information on expected impacts is relevant as was proposed in the DoW, we will go one by one analysing the advances in the Indicators and expected dates to reach its full achievement.

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoW): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:

Training in the Arab Countries

Number of trained engineers 11

Training in The Caribbean

Number of trained engineers 15

Training in the East and South African countries

Number of trained engineers 22

Total so far

Number of trained engineers 48

b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENs and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries having signed eduroam agreements with MAGIC
4 new pilot federations

Advances in the Indicator:

Number of countries committed to eduroam so far: 10

Latin America

Caribbean 1 (Jamaica)

Arab Countries (ASREN) 5 (Algeria, Lebanon, Jordan, Tunisia and Oman

East and South Africa (UbuntuNet) 2 (Uganda, Malawi)

West Africa (WACREN) 3 (Senegal, Ghana, Nigeria)

Pilot federations already created and in process of becoming eduGAIN members

Morocco

Algeria

Lebanon

Jordan

South Africa: SAFIRE

Malawi

Uganda

WACREN eduID

c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

The regions committed are: Europe, Arab Countries, The Caribbean and Latin America. It is expected that West Africa and East/Southern Africa will also join the pilot.

d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: *6 countries in 2 regions having incorporated NRENum.net for Global dialling*

Advances in the Indicator:

*5 countries in LA already joined NRENum.net
1 Countries in Asia has already joined*

Conversations are under way to include several Asian countries in NRENum. Our estimate is that over three more countries will join in the next reporting period.

e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

*5 NRENs using applications built and deployed/hosted by another.
2 NRENs with a pilot cloud applications portal implemented
The number of applications deployed in the pilot test will be at least 2
The Directory of the applications provided by NRENs available for use of other NRENs contains at least 10 applications*

Advances in the Indicator:

Within the Colaboratorio container developed by RedCLARA, the following applications are contained:

*Filesender, developed by UNINET and modified by RENATER is hosted in RedCLARA
MCONF, an Open Source WebConference System modified by RNP and RedCLARA, is hosted in RedCLARA, RNP and soon RENATA, ASREN and NgREN*

The Funding & Partners funding database hosted in RedCLARA

These applications are being used by CEDIA (Ecuador), CONARE (Costa Rica), NgREN/WACREN (Nigeria), ASREN, EtherNet and others are coming. The above result is added to the existing Colaboratorio implementations in RENATA (Colombia), CKLN (Caribbean), CUDI (Mexico) and the undergoing work with INNOVARED (Argentina) that is on testing phase.

Currently, the following applications are being implemented as shared applications

Docuwiki, a wiki system to be hosted in CESNET

JITSI, a webconference system implemented at RENATER

Etherpad, a collaborative editing system hosted in RENATER

CNC, a cloud storage system developed and hosted in RNP

Other applications are being studied to be included.

Thus, we currently already have over 5 NRENs using shared applications

*Over 4 NRENs with the applications portal implemented
The number of new test applications in the pilot will exceed 4
The Directory of applications is currently under development but it will certainly contain well over 10 applications.*

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

2 information days have been organised in Year 1, 4 more are planned for Year 2.

The Database of funding is complete and providing information on a global at a Global scale

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

No review yet

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

Two tasks that has been delayed:

A) The Workshop of User Communities was delayed in two months. This was due to two factors: 1) the slow start in UbuntuNet and 2) the longer than expected time needed to define the areas of interest common to all world regions.

B) The Pilot on AAI and the Completion if the Training in AAI. This is delayed to October 2016 due to the delay in the start of CAREN2, necessary for Central Asia to organise their NRENS.

5.2 Use of resources

The following table shows the amount of resources spent which amounts to € 765,955 and is requesting reimbursement for € 575,356. This amounts to 42% of the foreseen claims in manpower and 38% in travel expenses. This deviation is mainly due to the fact that the second project meeting has taken place in Month 13 and another conference is planned for March 2017.

Participant	(A) Direct personnel costs	(B) Other direct costs	(C) Direct costs of subcontracting	(F) Indirect costs (=0.25* (A+B+E))	(H) Total eligible costs (=A+B+C+D+F+G)	(K) Requested Reimbursement
CLARA	152.882 €	42.580 €	16.146 €	€ 48.866	€ 260.475	260.475 €
GEANT Ltd.	4.024 €	1.889 €	0 €	€ 1.478	€ 7.392	7.392 €
GEANT Association	9.466 €	10.225 €	0 €	€ 4.923	€ 24.614	24.614 €
RNP	22.350 €	8.680 €	0 €	€ 7.757	€ 38.787	0 €
RENATA	10.983 €	1.124 €	0 €	€ 3.027	€ 15.134	15.134 €
REUNA	9.473 €	2.633 €	0 €	€ 3.027	€ 15.133	15.133 €
CEDIA	1.310 €	3.270 €	0 €	€ 1.145	€ 5.725	5.725 €
CUDI	90.043 €	12.450 €	0 €	€ 25.623	€ 128.116	0 €
UbuntuNet	23.434 €	6.540 €	0 €	€ 7.493	€ 37.467	37.467 €
WACREN	29.044 €	5.545 €	0 €	€ 8.647	€ 43.236	43.236 €
ASREN	35.525 €	4.407 €	0 €	€ 9.983	€ 49.915	49.915 €
CESNET	8.199 €	1.930 €	0 €	€ 2.532	€ 12.662	12.662 €
GRNET	18.898 €	7.246 €	0 €	€ 6.536	€ 32.680	32.679 €
SURFNET	1.221 €	0 €	0 €	€ 305	€ 1.526	0 €
CSIR(SANREN)	6.160 €	2.880 €	0 €	€ 2.260	€ 11.301	0 €
RENATER	20.422 €	1.970 €	0 €	€ 5.598	€ 27.989	27.989 €
NIIFI	8.116 €	3.203 €	0 €	€ 2.830	€ 14.148	14.148 €
CKLN	11.439 €	8.584 €	0 €	€ 5.006	€ 25.028	25.028 €
CAREN NOC	700 €	2.307 €	0 €	€ 752	€ 3.759	3.759 €
TEIN*CC	2.304 €	5.754 €	0 €	€ 2.015	€ 10.073	0 €
Total	€ 465.994	€ 133.216	€ 16.146	€ 149.803	€ 765.159	€ 575.356

In general, the use of resources is in line with the planning, the only deviations to underline are:

UbuntuNet Whose slow start explain the low use of manpower during the first months. Now that additional personnel has been hired, they will invest more time to catch up with their activities, specially in WP5.

RENATA That went through internal reorganisation which forced them to concentrate their participation in WP4 only. The efforts committed in the other packages will be done during Year 2.

CESNET, SURFNet, GRNET, RENATER. Whose activities will be more centred in the coming months with their participation in WP2, WP3 and WP4.

In terms of manpower, the partners have spent a total of 141 PMs, i.e., 47% of the total manpower committed which is in line with the time elapsed which corresponds as average to 50% of the total time. The following is the detail of PMs spent by partner:

	WP1	WP2	WP3	WP4	WP5	WP6	Total Person/ Months per Participant
CLARA	8,4	0,3	18,2	2,4	11,7	9,5	50,7
GEANT Ltd.	0,4	0,0	0,1	0,0	0,1	0,1	0,7
GEANT Associati	0,3	0,8	0,1	0,0	0,0	0,0	1,1
RNP	0,5	3,5	0,7	0,7	1,0	1,0	7,4
RENATA	0,3	0,0	0,0	7,0	0,0	0,0	7,3
REUNA	0,5	0,3	0,6	1,9	0,0	0,0	3,2
CEDIA	0,2	0,3	0,4	0,0	0,0	0,0	0,9
CUDI	1,5	12,7	5,1	7,1	3,4	3,1	32,9
UbuntuNet	1,1	1,1	0,0	0,0	2,2	0,6	5,1
WACREN	0,3	1,5	0,8	1,3	1,5	0,5	5,8
ASREN	0,4	5,3	0,8	0,1	1,6	1,0	9,2
CESNET	0,2	0,5	2,5	0,0	0,0	0,0	3,2
GRNET	0,2	1,7	1,7	0,0	0,0	0,0	3,5
SURFNET	0,1	0,0	0,1	0,0	0,0	0,0	0,1
CSIR(SANREN)	0,5	0,0	0,1	0,0	0,5	0,3	1,3
RENATER	1,2	0,6	1,3	0,4	0,0	0,0	3,5
NIIFI	0,3	0,0	0,2	0,3	0,9	0,0	1,7
CKLN	0,4	0,2	0,2	0,0	0,7	0,0	1,5
CAREN NOC	0,3	0,2	0,2	0,0	0,0	0,0	0,7
TEIN*CC	0,2	0,4	0,2	0,0	0,2	0,3	1,3
Total Person/Months	17,2	29,4	33,0	21,2	23,8	16,4	141,0

As requested by the reviewers, we hereby detail the expense of partners per task in each Workpackage.

Workpackage 1: Management

The following table shows the separation by task in WP1 of PMs reported by the partners.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	6,00 PM	2,43 PM
GEANT Ltd.		0,44 PM
GEANT Association	0,13 PM	0,13 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	
REUNA	0,40 PM	0,05 PM
CEDIA	0,09 PM	0,10 PM
CUDI	0,70 PM	0,78 PM
UbuntuNet	1,12 PM	0,00 PM
WACREN	0,25 PM	
ASREN	0,20 PM	0,20 PM
CESNET	0,24 PM	
GRNET	0,09 PM	0,10 PM
SURFNET		0,06 PM
CSIR(SANREN)	0,25 PM	0,25 PM
RENATER	0,60 PM	0,60 PM
NIIFI	0,29 PM	
CKLN	0,43 PM	
CAREN NOC	0,30 PM	0,00 PM
TEIN*CC	0,20 PM	
Total per Task	11,79 PM	5,39 PM
Total per WP	17,17 PM	

Reported PMs for WP1 per partner for Year 1

The following table shows the originally planned expenses in PMs for Year 1.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	5,00 PM	2,70 PM
GEANT Ltd.		0,25 PM
GEANT Association	0,25 PM	0,25 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	0,25 PM
REUNA	0,13 PM	0,13 PM
CEDIA	0,13 PM	0,13 PM
CUDI	1,00 PM	1,00 PM
UbuntuNet	0,03 PM	0,00 PM
WACREN	0,13 PM	0,13 PM
ASREN	0,20 PM	0,20 PM
CESNET	0,25 PM	
GRNET	0,1 PM	0,1 PM
SURFNET		0,125 PM
CSIR(SANREN)	0,55 PM	0,55 PM
RENATER	0,13 PM	0,13 PM
NIIFI		
CKLN	0,13 PM	0,13 PM
CAREN NOC	0,25 PM	0,00 PM
TEIN*CC	0,13 PM	0,13 PM
Total per Task	8,9 PM	6,4 PM
Total per WP	15,3 PM	

Planned PMs for WP1 in Year 1

The difference between the planning and the actual PMs spent is a consequence of the larger effort that had to be done in coordination, specially by the Coordinator. In all the expense differs in only 12.2% from the original plan.

Workpackage 2: Platforms for Mobility

The table of reported PMs divided by task is:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	0,03 PM	0,00 PM	0,11 PM		0,14 PM
GEANT Ltd.	0,03 PM				
GEANT Association	0,19 PM		0,30 PM		0,30 PM
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA					
REUNA	0,20 PM		0,10 PM		
CEDIA	0,25 PM			0,08 PM	
CUDI	7,22 PM	0,98 PM	1,38 PM	2,15 PM	0,99 PM
UbuntuNet	0,02 PM	0,34 PM	0,00 PM	0,00 PM	0,74 PM
WACREN			1,00 PM	0,50 PM	
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		0,46 PM			
GRNET			0,80 PM		0,87 PM
SURFNET					
CSIR(SANREN)					
RENATER				0,58 PM	
NIIFI			0,03 PM		
CKLN					0,20 PM
CAREN NOC	0,00 PM	0,00 PM	0,20 PM	0,00 PM	0,00 PM
TEIN*CC			0,20 PM		0,20 PM
Total per Task	9,24 PM	3,48 PM	5,82 PM	4,21 PM	6,64 PM
Total per WP	29,40 PM				

Reported PMs by task in WP2, Year 1

The planned distribution by task was:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	2,00 PM	0,50 PM	1,25 PM		0,60 PM
GEANT Ltd.	0,15 PM				
GEANT Association	0,13 PM	0,13 PM			
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA	0,25 PM		0,25 PM		
REUNA	0,13 PM		0,13 PM		
CEDIA			0,25 PM		
CUDI	2,50 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,50 PM	0,25 PM	0,75 PM
WACREN			1,00 PM		0,50 PM
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		1,00 PM			
GRNET			0,8 PM		0,8 PM
SURFNET					
CSIR(SANREN)			0,13 PM		0,13 PM
RENATER		0,50 PM	0,50 PM	0,25 PM	0,50 PM
NIIFI	0,4 PM				0,6 PM
CKLN			0,50 PM		0,50 PM
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM
TEIN*CC			0,13 PM		0,13 PM
Total per Task	7,1 PM	5,1 PM	8,3 PM	2,4 PM	8,7 PM
Total per WP	31,5 PM				

Planned distribution per task WP2 for Year 1.

As can be seen, individually there are some deviations from the planning, but in all the deviation is only 2.1 PMs representing 6.7% of the original plan. This is mainly due to the late start of the activities in some regions harder to coordinate.

Workpackage 3: Cloud Provisioning and Groupware Standards

The following is the table of reported PMs per task

Partner	T3.1. Implement applications portal for 2 new NRENs	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security,
CLARA	4,73 PM	6,80 PM	3,40 PM	3,30 PM		
GEANT Ltd.		0,05 PM				
GEANT Association		0,06 PM				
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA		0,40 PM	0,06 PM	0,05 PM		0,05 PM
CEDIA		0,15 PM	0,20 PM			
CUDI	1,04 PM	1,03 PM	1,38 PM	1,34 PM	0,33 PM	0,00 PM
UbuntuNet	0,00 PM	0,00 PM	0,03 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,25 PM	0,50 PM				
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,44 PM	0,04 PM			
GRNET		0,73 PM	0,73 PM	0,20 PM		
SURFNET		0,03 PM	0,03 PM			
CSIR(SANREN)		0,05 PM				
RENATER		0,60 PM	0,70 PM			
NIIFI		0,19 PM				
CKLN						0,19 PM
CAREN NOC	0,00 PM	0,00 PM	0,10 PM	0,00 PM	0,00 PM	0,10 PM
TEIN ^{CC}		0,20 PM	0,00 PM			
Total per Task	6,54 PM	13,40 PM	6,84 PM	5,21 PM	0,50 PM	0,52 PM
Total per WP	33,00 PM					

Reported PMs per task, WP3, Year 1

The corresponding planned PMs per task is the following

Partner	T3.1. Implement applications portal for 2 new NRENS	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security, continuity, confidentiality, communication, billing and technical requirements.
CLARA	3,00 PM	2,00 PM	1,00 PM	3,50 PM		
GEANT Ltd.		0,15 PM				
GEANT Association		0,13 PM	0,13 PM			
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA	1,00 PM	0,50 PM	0,50 PM	0,50 PM		
CEDIA	0,13 PM	0,13 PM				
CUDI	1,00 PM	1,00 PM	1,50 PM	1,50 PM	1,50 PM	0,75 PM
UbuntuNet	0,00 PM	0,50 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,75 PM					
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,70 PM	0,30 PM			
GRNET		0,7 PM	0,7 PM	0,2 PM		
SURFNET		0,063 PM	0,063 PM			
CSIR(SANREN)	0,10 PM	0,10 PM	0,06 PM			
RENATER		0,50 PM	0,50 PM			
NIIFI		0,2 PM				
CKLN	0,05 PM	0,10 PM	0,10 PM			
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC		0,13 PM		0,13 PM		
Total per Task	6,5 PM	9,1 PM	5,4 PM	6,4 PM	1,7 PM	0,9 PM
Total per WP	30,0 PM					

Planned PMs per task WP3, Year 1

The difference of 3 PMs equivalent to 10% of the total is explained by the effort in the preparation of the Pilot platform to become a tool easy to deploy in different regions of the World, the tasks described in full in &1.2.3 were necessary to make the platform a multilingual, group-ware ready platform as was requested by the partners during the development of the project. This extra effort was done mainly by RedCLARA which duplicated the effort with respect to the original plan. This major larger effort will be compensated by changing PMs from other WPs and using larger non-funded resources if required.

Workpackage 4: Agreements for Real Time Collaboration

The table of PMs per task for this WP are as follows:

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,22 PM	0,88 PM	1,33 PM	0,00 PM	
GEANT Ltd.		0,02 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	4,00 PM	3,00 PM			
REUNA	1,60 PM	0,25 PM			
CEDIA	0,02 PM				
CUDI	4,06 PM	1,92 PM	0,00 PM	0,00 PM	1,13 PM
UbuntuNet	0,01 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)					
RENATER	0,09 PM			0,30 PM	
NIIFI		0,32 PM			
CKLN					
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	10,89 PM	7,08 PM	1,48 PM	0,45 PM	1,28 PM
Total per WP	21,18 PM				

Reported PMs per task WP4

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,50 PM	0,00 PM	1,00 PM	0,00 PM	0,00 PM
GEANT Ltd.		0,15 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	3,00 PM	2,50 PM			
REUNA	1,25 PM				
CEDIA					
CUDI	2,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)	0,13 PM	0,13 PM			
RENATER	0,50 PM	0,50 PM			
NIIFI					
CKLN	0,13 PM	0,13 PM			
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	8,6 PM	5,3 PM	2,4 PM	1,2 PM	1,2 PM
Total per WP	18,7 PM				

Planned PMs per task WP4

The larger effort of 2.48PMs, essentially concentrated by RENATA amounts to almost a 50% extra by RENATA, but in all the extra effort amounts to 13.3% of the total.

Workpackage 5. Global Science Communities

The reported PMs per tasks in this WP is as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	2,70 PM	4,51 PM	1,26 PM	0,85 PM	1,42 PM	1,00 PM
GEANT Ltd.	0,02 PM				0,02 PM	0,02 PM
GEANT Association	0,02 PM					
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,86 PM	0,55 PM	0,31 PM	0,50 PM	0,36 PM	0,81 PM
UbuntuNet	1,17 PM	0,00 PM	0,14 PM	0,00 PM	0,31 PM	0,62 PM
WACREN	0,50 PM		0,50 PM			0,50 PM
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,30 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,20 PM	0,20 PM	0,05 PM			
RENATER						
NIIFI	0,43 PM		0,10 PM			0,35 PM
CKLN						0,73 PM
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,18 PM					
Total per Task	7,25 PM	5,43 PM	2,63 PM	1,62 PM	2,39 PM	4,48 PM
Total per WP	23,79 PM					

Reported PMs per task WP5

The planned PMs per task was as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	1,0 PM	3,0 PM	3,0 PM	1,0 PM	2,0 PM	1,0 PM
GEANT Ltd.	0,05 PM				0,05 PM	0,05 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA	0,50 PM		0,50 PM			0,50 PM
REUNA						
CEDIA						
CUDI	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	1,00 PM	0,50 PM	0,75 PM	1,00 PM	0,50 PM	1,00 PM
WACREN	0,50 PM	0,50 PM			0,50 PM	
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,20 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,10 PM	0,05 PM		0,05 PM		0,1 PM
RENATER						
NIIFI						
CKLN	0,05 PM	0,00 PM	0,05 PM	0,05 PM		0,10 PM
CAREN NOC	0,13 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,13 PM		0,13 PM			
Total per Task	5,6 PM	5,2 PM	5,8 PM	3,4 PM	4,3 PM	4,1 PM
Total per WP	28,4 PM					

Planned PMs per task WP5

The difference of 4.61PMs, equivalent to minus 16.23% is explained by the slow start of the WP due to the difficulty to assign manpower in the leader of the WP (UbuntuNet) and consequent the delay in the planning of the virtual and face to face meetings. This difference is being solved during year 2.

Workpackage 6. Dissemination and Training

The reported PMs per task can be seen in the following table:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co- ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with	T6.6 Support to WP5 activities.
CLARA	2,50 PM	1,54 PM	2,00 PM	0,50 PM	2,00 PM	1,00 PM
GEANT Ltd.		0,03 PM	0,03 PM	0,03 PM		0,03 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,14 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,31 PM	0,32 PM	0,13 PM	0,97 PM	0,60 PM	0,75 PM
UbuntuNet	0,61 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)					0,30 PM	
RENATER						
NIIFI						
CKLN						
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,15 PM				0,15 PM	
Total per Task	3,94 PM	2,26 PM	2,43 PM	1,77 PM	4,02 PM	2,02 PM
Total per WP	16,44 PM					

Reported PMs per partner WP6

The planned expense in PMs was:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co-ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development, advances, achievements, training activities,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with training activities.	T6.6 Support to WP5 activities.
CLARA	2,25 PM	1,00 PM	3,00 PM	2,00 PM	2,00 PM	2,00 PM
GEANT Ltd.		0,05 PM	0,05 PM	0,05 PM		
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,50 PM	0,50 PM	0,50 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,75 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,50 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)						
RENATER					0,50 PM	0,50 PM
NIIFI						
CKLN	0,05 PM	0,10 PM			0,10 PM	
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,13 PM				0,13 PM	
Total per Task	4,0 PM	2,0 PM	3,8 PM	3,3 PM	4,7 PM	4,3 PM
Total per WP	22,2 PM					

Planned PMs per partner WP6

The difference is an expenditure of 5.46 PMs less than foreseen that is explained by the change in the year of execution of some of the Dissemination activities, such as TNC 2016 and other events. This difference will be caught in Year 2.

Summarizing, the following table shows the difference between planned and reported PMs for each WP.

	WP1	WP2	WP3	WP4	WP5	WP6	Total
Planned	15,30 PM	31,54 PM	29,99 PM	18,69 PM	28,41 PM	22,15 PM	146,06 PM
Reported	17,17 PM	29,40 PM	33,00 PM	21,18 PM	23,79 PM	16,44 PM	140,98 PM
Difference	1,87 PM	-2,14 PM	3,02 PM	2,49 PM	-4,61 PM	-5,71 PM	-5,08 PM
Percentage	12%	-7%	10%	13%	-16%	-26%	-3%

Thus, in average, despite the ups and downs of the different WPs the resources have shown to be appropriate for the first year and correspond roughly to 50% of the total PMs budgeted.

Other Direct Costs

The reviewers requested that we explain the Subcontracts which are indeed the direct costs associated with printed material, give-aways, room rental and other services related to the organisation of training and workshops. We have spent €16.146 as detailed in the following Table. The expenses are necessary for the dissemination and training tasks.

Dissemination material	€7.583
Facility rentals	€1.419
Give-aways	€3.872
Refreshments	€1.838
Registration in conferences	€1.435
	€16.146

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

Executive Summary

This deliverable reports the work and achievements of the MAGIC Project during its first year of implementation. The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

To reach this objective the project has established four specific objectives:

- a) to promote the adoption of a set of technologies that facilitate the access and use of services for people who work in a global environment. This implies that they have to travel and access networks when abroad, hence the need for eduroam; they need to access services requiring identification and authorisation mechanisms working worldwide, hence the need for AAI and eduGAIN, and they need to do this in a secure environment, hence the need for security awareness.

In this first year the project has been able to carry out several dissemination and training activities in the Middle East (ASREN region) and the Caribbean (CKLN region). Furthermore, the training material has been translated into French and Russian in preparation of the training in the WACREN and CAREN (Central Asia) regions.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN. In this way we already have pilots in 3 regions covered by the project.

- b) To agree on a standard for Group Management and develop a model for inter-operation between NREN cloud application markets of participating world regions. A test pilot must be deployed and services provided by different regions will be integrated into the pilot.

The project started from the Colaboratorio developed during the ELCIRA Project and developed an improved version capable of being deployed in different World regions as it can be adapted to different languages, stand alone or cloud implementations, with federated access and most of all, capable of implementing the GroupWare technologies selected. This pilot infrastructure (Colaboratorio) has already been implemented in several Latin American countries, in WACREN, to serve the West and Central Africa and is already in the process of deployment in several Arab and African countries.

As for the Group Management technology, the project adopted the VOOT technology as a basic protocol to exchange information about groups, designed the interoperation schemes and is currently in the implementation phase of the pilot using this technology. This will allow that groups of users (user communities) access applications on different NRENs and service providers in a transparent way, similarly to the use of AAI technology for the identification of a person.

- c) To seek consensus among participating world regions on the importance of interoperability of real-time applications.

The work during this period has been focused on promoting the adoption of NRENum, the technology allowing to assign a global numbers to different devices (videoconference equipment, phones, etc) and manage the operation using the DNS servers already in operation by all NRENs. Training and dissemination has been carried out in Chile, the Asia Pacific and other regions.

We can report that five (5) new NRENs have already implement NRENum.net and became part of the worldwide service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of carrying out their internal decision processes.

- d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and developing joint activities.

The activity of the prior has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Another key activity has been the virtual days on the Horizon 2020 calls and on worldwide priority fields.

An important achievement of this period has also been the development and implementation of the new Funding and partners system, changes on the feed, usability and management were made with respect to the pre-existing system developed during the ELCIRA Project. Training material for the use of the collaboration tools has been developed and published in the project website.

The project has carried out intensive dissemination of the project goals and results in key meetings where the NRENs meet, such as TNC, the UbuntuNet Conference, TICAI, the WACREN Meeting, the eAGE Conference and others. The project maintains a website and spreads the news of its activities using social networking tools.

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

The Work package on Mobility (WP2) focused first on preparing a roadmap for the work of deploying Identity Federations in the different project regions: Arab Countries, South and East Africa, West Africa, Central Asia, the Caribbean, Asia-Pacific and Latin America, identifying in those regions by focal points, NRENs or institutions, which were interested in AAI and eduroam. Besides this an on-line training to implement an Identity federation was developed and translated into French, Spanish and Russian in order to spread even more the amount of technicians trained. Two workshops on Identity Federations and eduroam were carried out during this period: one for the Arab States region on September, 2015 in Amman and the second one for the Caribbean region hold on October 2015 in Kingston, Jamaica.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN.

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

In Work-package 3 the work has been focused on two activities: a) the improvement and deployment of the Colaboratorio collaboration tool for the use of different NREN partners and b) the analysis of the group-ware standards available for group collaboration.

In the deployment of shared collaboration tools we can report that a personalized version of the Colaboratorio has been deployed for the use of Nigeria in Africa for the use of WACREN (in synergy with TANDEM) as well as CEDIA in Ecuador and several other NRENs are already in several stages of use and/or deployment of this tool. Also several applications are being added to the portal in order to increase the number of applications provided to the users of different regions around the World.

In the Group-ware standards, the WP has found that 5 middle-ware technologies that can be used for the purpose of applications integration with working groups: OPENCONEXT, PERUN, SYMPA, SCIM and UNITY. The WP is now working on completing a set of basic minimum set of inter-operation requirements and then will move into the testing and construction of a test-bed for the integration of several tools requiring Group Management into the Colaboratorio portal.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the

Global CEO Forum to promote the creation of a worldwide environment for these applications.

In Work-package 4 the activities have been centred around the adoption of NRENum. For this, training was conducted at the TICAL2015 meeting in Viña del Mar, Chile. In this training workshop participated 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru. The material developed for this workshop was then uploaded to RedCLARA's e-Learning website and translated in to English and French where the material is ready for use in the implementation of NRENum around the World. A training Workshop was also conducted in Manila, The Philippines during the APAN meeting in January 2016.

The other key activity of WP4 has been the support to the adoption of NRENum. We can report that five (5) new NRENs has become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of making decisions.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

For WP5 the first period has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Referred to the Alert funding system, the WP was been involved in activities for a new version of the service with changes on the feed, usability and management. Training material for the promotion and enhance of the Colaboratorio has been developed and published in the project website. Another key activity has being the virtual days on the Horizon 2020 calls and on worldwide priority fields.

Finally, the Dissemination and Training activities have been extensive. The MAGIC project has been present in the following Meetings: IST Africa 2015 in Maputo, Mozambique; TNC2015 in Porto; TICAL2015 in Viña del Mar, Chile; RNP Forum in Brasilia, Brazil, ICT 2015 in Lisbon, Portugal; APAN41, Manila, The Philippines, Asia; UbuntuNet Connect 2015 Conference and e-AGE 2015, Casablanca, Morocco, Arab States. During these events brochures and give-aways have been distributed to position the project and the projects' ideas among the researchers, policy makers and technicians of NRENs around the World.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- To organise the Kick-off Meeting in Paris and make sure that all Work Packages organised themselves and their work progress. As reported, the Kick-off took place in Paris on June 11-12, 2015, and was attended by representatives of 19 out of the 20 partners. Only SURFNet excused its attendance.
- To agree on and sign a Consortium Agreement. Issues which required discussed for the Consortium Agreement included the treatment of Intellectual Property Rights, the level of distribution of the applications and other matters such as the distribution of the funding and the mechanisms to include

and exclude partners. The Consortium Agreement, modelled upon the DESCA Model (www.desca.-2020.eu) was signed by all partners as of August 18, 2015.

- To distribute the funding from the European Commission as agreed in the Consortium Agreement. This was done between July 01, 2015 and August 20, 2015.
- To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place by Video-conference, with the exception of the Kick-off Meeting which was a face-to-face meeting. Steering Committee Meetings were held on the following dates:
 - June 11-12, 2015 (The Kick-off Meeting)
 - July 23, 2015
 - September 24, 2015
 - November 25, 2015
 - January 25, 2016
 - April 27, 2016

The minutes of the Meetings are available in the wiki of the MAGIC Community maintained in the Colaboratorio Portal.

- To oversee the Deliverables and Milestones.
 - All deliverables have been submitted to the EC through the H2020 Project Management System.
- The milestones have the following status:
 - MS1 completed
 - Kick off Meeting Minutes; Project Website
 - Event participation plan
 - MS2 has been completed as of October 2015, i.e., Month 6 instead of Month 4 because of changes in the procedures to sign MoUs internally in GÉANT due to its internal restructuring.
 - The agreement itself
 - MS3 has been completed by September 29, 2015
 - The pilot portal itself has already been deployed in Latin America: Ecuador (CEDIA), Costa Rica (CONARE) and Mexico (CUDI) and in Africa where jointly with TANDEM we have deployed the portal in Nigeria (NgREN) for the service of WACREN. Further implementations are under way.
 - MS4 has been completed as of February 25, 2016, after completing the launch events of 4 User Global User Communities:
 - e-Health: February 2nd, 2016 <https://eventos.redclara.net/indico/event/634/>
 - Biodiversity: February 11th, 2016, <https://eventos.redclara.net/indico/event/639/>
 - Environment: February 18th, 2016, <https://eventos.redclara.net/indico/event/640/>
 - Remote Instrumentation: February 25th, 2016, <https://eventos.redclara.net/indico/event/641/>
 - MS5 Assessment of group management platforms has been successfully completed on October 30, 2015 as described in D3.2
 - MS6 has been successfully completed as NRENum.net has been deployed in 5 countries in Latin America: El Salvador (RAICES), Ecuador (CEDIA), Chile (REUNA), Uruguay (RAU) and Mexico (CUDI).
 - MS7 Four Communities established (each with a thematic Champion) in December 2015: e-Health, Environment, Biodiversity, Remote Instrumentation
 - MS8 Training in AAI has already been completed for The Caribbean, the Arab Countries (ASREN), West Africa (WACREN) and East and Southern Africa (UbuntuNet). eduroam training is complete in CKLN, ASREN and WACREN. Planned workshops will complete training for the remaining regions during 2016 (See. D2.4).
 - MS9 Completed by April 29, 2012. The training material in PDF available at the website.
 - MS10 The information system on funding opportunities is available since April 6, 2016. It is available through the Colaboratorio portal.

- MS11 This Milestone is yet to be completed, only one Asian NREN, Sri Lankan NREN. More candidates are studying their possibilities to join. We are very confident that we will reach the target of at least 3 Asian NRENs joining NRENnum.
- MS12 All dissemination activities have been completed. See D6.4.
- No major problems have occurred during this period, the project has run smoothly, except for the delays that have already been reported. There are three main reasons for these delays:
 - A slow start affecting above all the time needed to reach agreements between European and Latin American Projects.
 - The difficulty to identify user communities willing to become test communities and the time-consuming work of collecting information on researchers and research groups.
 - The difficulty in creating Identity Federations. As in other countries this is a slow process. Nevertheless, it can be seen that there is a lot of interest and it is expected that there will be four Identity Federations by the end of the project, though it is possible that additional time may be needed for the project to achieve all of its goals.
 - The delay in the beginning of the CAREN II Project that is intended to foster the development of NRENs in the Central Asia region, a pre-requisite for eduGAIN and eduroam deployment.
 - The difficulty to convince Asian NRENs to adopt NRENnum as planned. We are certain that we will be overcome this difficulty in the coming period with the active support of TEIN and APAN.
- No changes in the consortium, except for the merge of DANTE and TERENA into GEANT. Nevertheless the 2 organisations keep separate names, namely GEANT Ltd. And GEANT Association.

1.2.2 Work Package 2: Platforms for Mobility

During this first year, the activities were focused on planning, dissemination and training. The activities were coordinated by RNP.

In the Arab Region, ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organised in cooperation with the MAGIC and EUMEDCONNECT3¹ projects, and was designed for staff of National Research and Education Networks (NRENs) and Universities.

The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN. There were eleven (11) participants from six (6) countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia.

AAI is successfully implemented during MAGIC Project at: MARWAN (Morocco), ARN (Algeria); pilot status in AUB (Lebanon), JUNet, (Jordan) and planning to implement in Palestine and Egypt

Regarding eduroam, it is successfully implemented in Saudi Arabia, United Arab Emirates, Lebanon, Algeria, Morocco and ASREN. It is important to be noted that it was in operation in Saudi Arabia and the United Arab Emirates, as well as in Morocco, before the start of MAGIC. Eduroam is successfully at pilot level in Jordan, Tunisia and Oman and is starting in Egypt and Palestine.

In the South Africa region, a Federated Applications (FedApps) Training session was held on 26-28 April 2016 in Dar es Salaam as part of UbuntuNet Alliance’s strategy for deployment of AAI in the region. The training - supported by the MAGIC project - was facilitated by UbuntuNet Alliance and SANReN, South Africa. The training was attended by 22 engineers from 14 NRENs.

Concerning eduroam, the Research and Education Network for Uganda (RENU) in January 2016 became

¹ www.eumedconnect3.net

the 4th NREN in Eastern and Southern Africa to deploy and join eduroam after SANREN (South Africa), KENET (Kenya) and ZAMREN (Zambia). UbuntuNet Alliance continues to promote deployment of the service in the region. During the Federated Applications training in Dar es Salaam in April 2016, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training. With the eduroam experts from SANREN, UbuntuNet Alliance is currently looking into the possibility to provide this training in the coming months.

All other regions were investing effort in planning and trying to create the commitment of institutions or NRENs to join the project. The result of this work will support the implementation of new federations and new national roaming operators of eduroam.

1.2.3 Work Package 3: Cloud Provisioning and Group-ware Standards

During the reporting period, the work package team has worked in three tasks:

- 1) The preparation of the beta portal that will contain the applications and implement the groupware standards,
- 2) The assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation, and
- 3) The planning and design of a framework for group inter-operations and service catalogue implementation between cloud infrastructures

In the first task we started from the Colaboratorio tool built during the ELCIRA Project, and perform the following changes necessary to for the task of becoming a prototype for a global portal:

Modifications to the Registration System (SSO and Federated access)

- Upgrade of the registration system for using a modular approach and remove external software dependencies, graphic improvements

- Responsive design to fit mobile and desktop interfaces on registration system

Preparation for multiple languages including the use of extended characters set

- Multi-language adjustments (encoding and visualization) on registration system

- Multi-language adjustments (encoding and visualization) on communities system

- Multilanguage for academic breaking news, global agenda

Modification for multiple instances deployment

- Graphical user interface (GUI) enhancement and securing

- VCEspresso access modifications to allow personalization (NREN logo, and moderation key)

Communities system changes

- Registration system graphical user interface (GUI) enhancement and securing

- Responsive design to fit mobile and desktop interfaces on communities system

- Usability improvements in the communities system

- Modularization of modules for news and agenda to multiple sources

- Allow the NREN to define its own sources for news and agenda

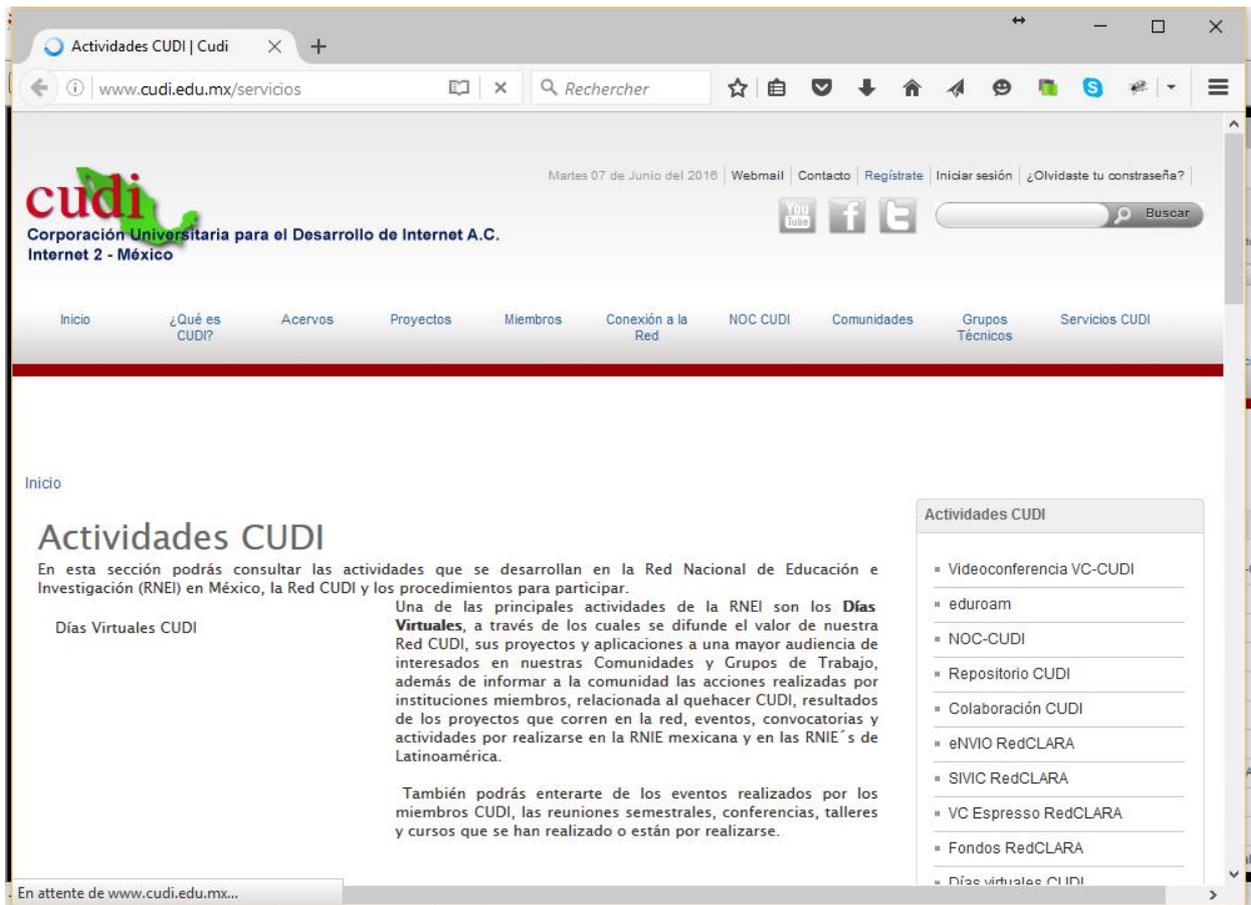
- Allow NRENadmin to define information sources from the NRENs

In order to deploy the pilot infrastructure (Colaboratorio), after initial contacts with the candidate RREN/NREN at management level, the work package team usually works directly with service and technical leaders of the RREN/NREN to work on the Colaboratorio pilot service implementation. Decisions like service look and feel, federated access deployment and which services to integrate are taken into account within the deployment process.

There are still some challenges in trying to convince some NRENs not to start every service from zero. NRENs seems to think that they need to install every service in their own premises to achieve a proper knowledge transfer. Thanks to the promotion, and a close work with each NREN, several of them have changed this mindset and understood that it is better to join forces in a federated effort, and learn together in the process. Colaboratorio promotion and dissemination has been done through several activities well

described in the work package 5 report in this document.

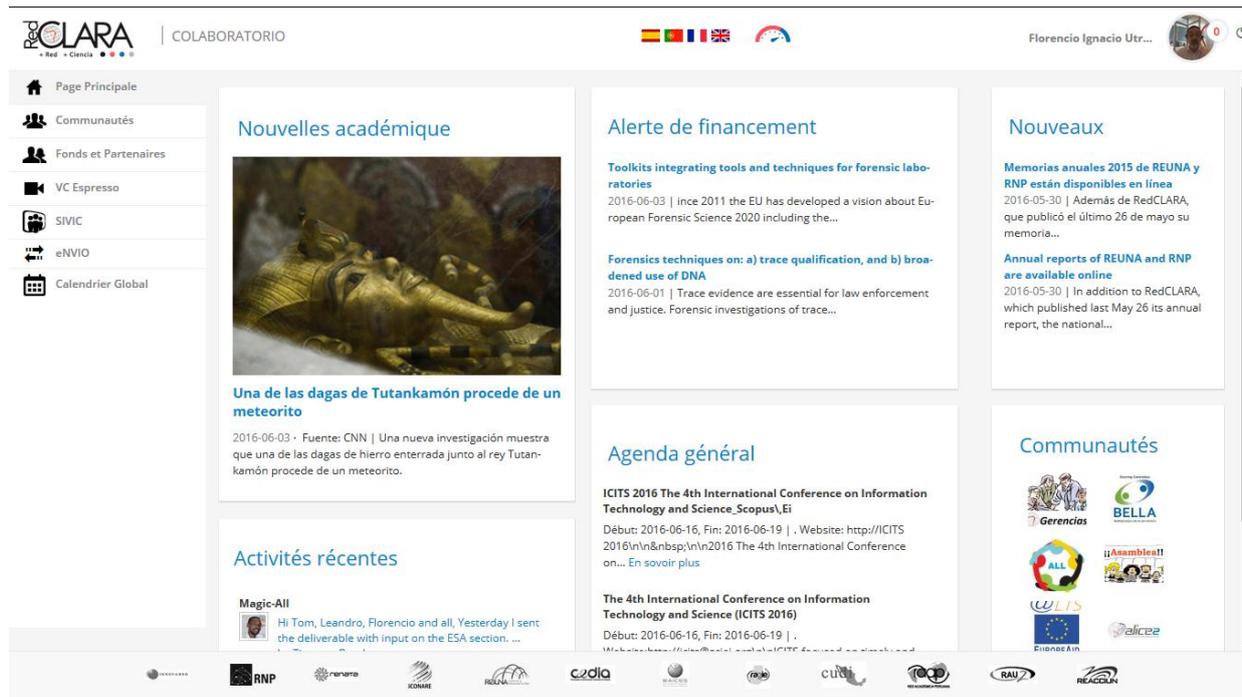
During this first year Colaboratorio has been implemented for the Ecuadorian NREN (CEDIA) that passed Colaboratorio in production on November 22/2015 and Mexico (CUDI). Colaboratorio is implemented in different flavours to fit the NREN requirements. For instance, in CUDI's case, the integration used the services VCEspresso, eNVIO, SIVIC, and the Funding systems from Colaboratorio, but in WACREN (deployed in the context of the TANDEM Project) and CKLN's cases, they use the entire system and localize some services like VCEspresso and mailing-lists for service convenience.



The Colaboratorio Portal in the Mexican NREN deployment

There is an undergoing work with South Africa (SANREN), Middle East (ASREN), and Ethiopia (EtherNet), to deploy Colaboratorio, and it is foreseen that to have at least 4 new deployments by the end of the project.

Collaboration with RENATER (France), WACREN and the TANDEM project resulted in Colaboratorio's translation to French language.



The Colaboratorio Portal in French

For the second task, the assessment of the existing group management standards, NRENs tools and value services for the global communities, the WP carried out the following tasks:

Group Management Standards

- Research study and testing of group management tools
- Testing on demonstrative and development platforms

Applications and tools

Research of Open Source tools to be included

- Etherpad
- Open edX
- CNC (Virtual storage)

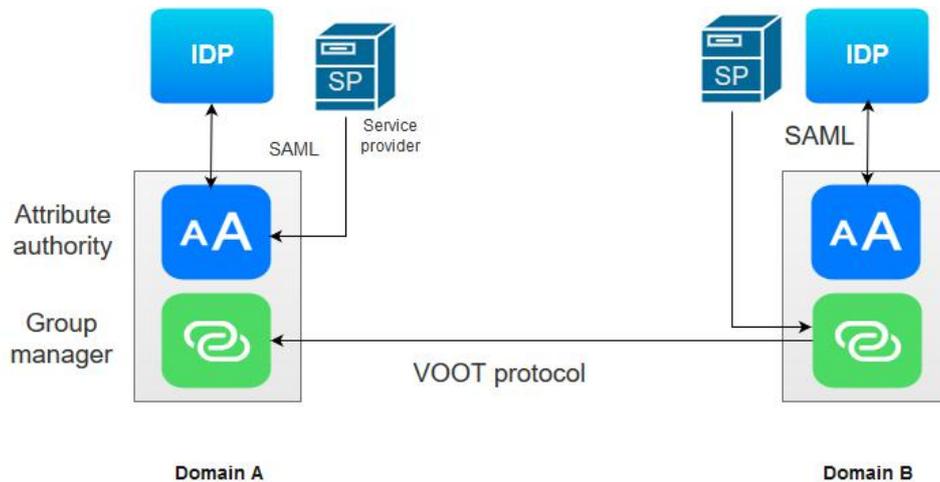
VCEspresso System

- Allow multiple recording servers and allow moderation access

Open repositories service

- Upgrade of the DSPACE repositories system to the latest version
- Connect the repositories system to the federated environment
- DSPACE graphical user interface (GUI) modifications

To decide on the standards to be chosen and the pilot implementation strategy for the groupware the working group had a face to face meeting in March 10 to 11 of 2016 in Vienna (AT) with representatives from the NRENs from Middle East (ASREN), France (RENATER), Czech republic (CESNET), Greece (GRNET), Caribbean (CKLN), Mexico (CUDI) and Latin-America (RedCLARA). In this meeting, the main objective was agree on how to deploy the group management feature between federations. The subject was discussed in previous meetings and from the result from the Vienna work it was established an architecture using a Group Management entity attached to an SAML attribute authority (AA). The architecture can be summarized as in the following picture:



The group agreed that the group managers can be a separate entities that reside in the attribute authority, so no additional trust relation would have to be set up. The only connection that still must be agreed between providers is between group managers through the VOOT protocol. The main agreements achieved were:

- a) The group management deployment shall be formed by three components: a) an SAML attribute authority (AA), b) a group manager (GM) application, and c) a group management proxy (GMP).
- b) The protocol to exchange group information will be VOOT. VOOT is an adaptation of the SCIM protocol, for the NREN needs.
- c) The group membership would be validated using standard SAML attributes.

For the third task, the planning and design requirements for the federated group management pilot was done. The work involved the definition of the services (FileSender, Colaboratorio, Docuwiki), the use cases, and the protocols for the implementation. This work required a high level of interaction among the partners, and the provisioning of resources by various of them. RENATER offered Sympa, and a service instance of the FileSender; RedCLARA provided Colaboratorio, and CESNET provided PERUN and Docuwiki. The integration of these applications using the VOOT protocol was designed and defined in several meeting, including the presence meeting at Vienna (Austria) in March 10-11. The result from this interactions was to use a service implementation integration a SAML Attribute Authority, the VOOT protocol and the group manager, as shown in the following picture:

The working group decided that the following will be the minimum applications for the pilot integration between regions:

- Sympa-FileSender,
- Colaboratorio
- PERUN-Dokuwiki

At the date of this report, the working group is advancing in the pilot set up, and is testing the PERUN, and SYMPA service instances created for this purpose.

In the fourth task, the activities have been focused on the definitions for the pilot implementation, i.e.

- a) Service authorization based on group information,
- b) Group members action, and
- c) Group mailing list action.

The first case, service authorization based on group information, allows to provide access to a privileged resource based on the group membership available in the network; the second case, group

members action, allow to do a get operation of the group members that the user belongs to, and do some action with it; and the last case, group mailing list action, allows to use a mailing list associated to a group to invite its members without disclosing members information. Some of the characteristics worth highlighting in the pilot are the integration to eduGAIN, and that groups' information will be shared used a direct agreement between parties. With regard to the service catalogue, the group did the evaluation of the GÉANT catalogue, how it works, and was agree to carry out the installation for the MAGIC applications. The directory application will be installed to feed applications when the report have being delivered.

1.2.4 Work Package 4: Agreements for Real Time Collaboration

The work of this WP, led by RENATA has focused during this period on NRENum training and implementation as well as setting the necessary agreements for the implementation of interoperation of real time applications.

In particular, an agreement of MAGIC with GÉANT to work on RTC standards has been developed and signed. Also, agreements are under way with APAN (Asia Pacific) and AARnet (Australia), who have extensive experience in RTC applications and are leading the Global CEO working group on RTC.

The first NRENum.net training activity was carried out during the TICAL 2015 conference held in Viña del Mar - Chile, in July 2015 where 11 participants from different countries in Latin America were trained on how to implement NRENum.net. People who attended this event were contacted by RENATA to start working on the implementation of NRENum.net in their countries.

An On line training course was also developed to ease training in the different world regions. The course is available on line in English, French and Spanish. The course is intended to guide NRENs on delegation and technical issues related to establishing an NRENum.net service. RedCLARA has offered its Moodle Platform to host these training courses and RENATA deployed documentation about the use and implementation of NRENum.net service. This course is oriented to systems administrators of NRENs in charge of running this service for their users and institutions.

Online training material is On line in the following links:

- Spanish: <http://cursos.redclara.net/course/view.php?id=47>
- English: <http://cursos.redclara.net/course/view.php?id=48>
- French: <http://cursos.redclara.net/course/view.php?id=49>

Invitations to participate on NRENum.net service offering RENATA's support were sent to all NRENs in Latin America as well as, through the different world regional leaders, to the other participating regions. A special emphasis has been put to invite NRENs from Asia Pacific and Africa.

In Latin America, RAICES from El Salvador and RAU from Uruguay showed immediate interest on this service. A meeting has been done with each of them to explain information, benefits and to schedule a work plan for delegation of the NRENum.net zone to the NREN itself.

Following this effort, three (3) new NRENs have already become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015). This information has been taken from NRENum.net news on <https://nrenum.net>.

With RedCLARA support, CEDIA has been guided in their delegation process of the NRENum.net zone (+593). CEDIA did a very fast step with configurations and proceedings so they were the first delegated country.

RAICES the Salvadorian NREN did a very good job and RENATA supported every step in the configuration of the DNS zone for the country code (+503), they had to overcome technical issues because their DNS haven't had reverse domains registered but finally zone was fully delegated.

CUDI from Mexico did a very good job on installation of DNS servers and the configuration of the NRENum.net zone (+52) on them. They had the same problem because their DNS servers haven't had reverse domains registered, after these problems were solved and configurations were set the zone it is now delegated.

A work plan has been made in order to break down necessary steps to implement NRENum.net by an NREN and we have been using it with newly delegated countries to accomplish the Deliverable 4.2. "NRENum.net deployed in 3 new NRENs" with deadline month 12th. These are the newly delegated country codes to NRENs (chronologically added):

- RAU from Uruguay (27 November 2015)
- LEARN from Sri Lanka (14 December 2015),
- REUNA from Chile (7 January 2016).

This information has been taken from NRENum.net news on <https://nrenum.net>.

RAU from Uruguay had a great expertise in DNS set up, thus the process ended very fast and finally the zone "8.9.5.nrenum.net" was delegated according to the +598 E.164 country code.

LEARN the Sri Lanka NREN created the zone for +94 country code and after fulfilling delegation requirements they made it, LEARN did a great job becoming our first member of APAN joining to NRENum.net service.

REUNA Chilean NREN after completed the zone creation for the +56 country code in their two DNS servers zone was delegated with no complications on the way.

Unfortunately, we were not able to achieve the goals of Milestone 11, i.e. to incorporate three (3) Asia Pacific countries to the NRENum.net service, we have sent many invitations in collaboration with TEIN*CC, but we did not have the impact we expected. Nevertheless, we have recently made advances and we are very confident that we will be able to complete this MS by the end of the next period.

NRENum.net service had a great acceptance in Latin America and now we want to spread this service in other regions.

We consider these are the main reasons we found in the adoption of NRENum.net service: lack of promotion in order to understand how works this service, what are the benefits for NRENs and in some cases technical issues.

We have moved forward on DNSSEC activities related to the Deliverable D.4.3, currently we have RENATA from Colombia and RAICES from El Salvador that has secured their respective zones using DNSSEC technology.

WP4 has been led by RENATA with contributions from CEDIA, CUDI, NIIFI, RedCLARA, RENATER, REUNA, RNP, and WACREN

1.2.5 Work Package 5: Global Science Communities

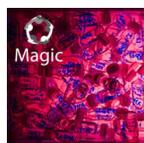
During the reported period, one of the main activities was centred in the definition of the priority areas that will be taken to the creation of global science communities. After looking at several considerations, that include a direct consultation to the partner NRENs and RRENs, the the partners decided to adopt the results of the ELCIRA project "Report on Key Research Communities", because even though it represents the information provided in Latin America, it also has similarities with the situation of other regions. For example, a report from CKLN showed that the Caribbean region had the following priority areas: Health, Earth Sciences, Security, Agriculture, Forestry & Fisheries and Education.

The areas presented in ELCIRA are: Biodiversity, Environment, e-Health and High Energy Physics. Having looked at feedback coming from the regions, partners decided not to include High Energy Physics at present, but to continue with a proposal from Mexico to create a Community on Remote Instrumentation on nano-structured materials.

The overall goal for these MAGIC Global Science Communities is to enable thematic experts and people with same interests from different parts of the world to interact and share experiences with each other with the aim of advancing knowledge and tackling global challenges.

With this objective as a guide, it was sent a call to regional partners to submit names and contact details of potential participants from all MAGIC regions to join the Global Science Communities in the identified priorities, efforts were directed at identifying champions for each community. The champions are a crucial figure in the work of the communities, especially because the communities being academic/scientific in nature require someone who is an insider in the field to guide and coordinate the work with fellow specialists.

Opening Conferences for the four Global Science Communities were held during the month of February 2016. The following was the format and presentations for the opening meetings for each community.



Global Science Community on E-Health

Objective: The Global Science Community on eHealth aims to increase engagement of practitioners, researchers, academics and students of eHealth from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 2 February 2016 (<https://eventos.redclara.net/indico/event/634/>)

Members: 58

Countries: Belize, Brazil, Canada, Colombia, Chile, Germany, Dominican Republic, Etiopia, France, Jamaica, Mexico, Malawi, Nigeria, South Africa, Uganda.

Community Champion: Prof Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>

First virtual meeting of the Global Science Community on e-Health



Global Science Community on Biodiversity

Objective: The Biodiversity Community aims to increase engagement of practitioners, researchers, academics and students of biodiversity from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 11 February 2016

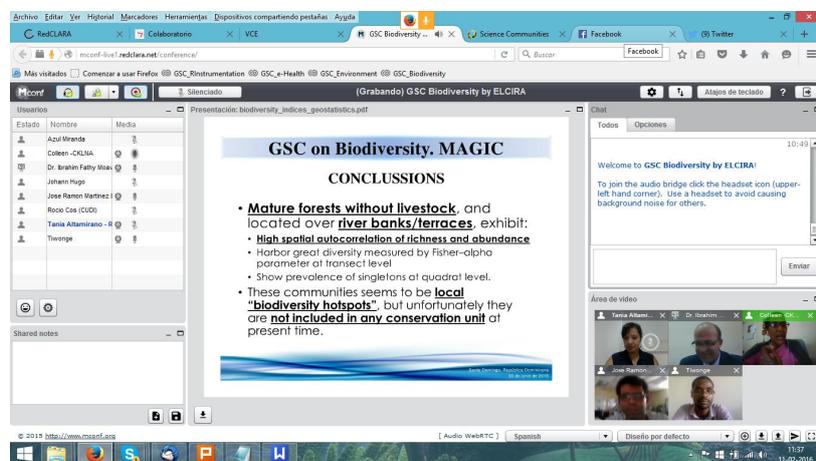
(<https://eventos.redclara.net/indico/event/639/>)

Members: 31

Countries: Argentina, Colombia, Chile, Dominican Republic, France, Ghana, Jordan, Libano, Malawi, Mexico, South Africa.

Community Champion: Prof José Ramón Martínez Professor and researcher of the Universidad Autónoma de santo Domingo (UASD), Dominic Republic.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>



First virtual meeting of the Global Science Community on Biodiversity



Global Science Community on Environment

Objective: The Environment community aims to increase engagement of practitioners, researchers, academics and students of the environment from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 18 February 2016

(<https://eventos.redclara.net/indico/event/640/>)

Members: 28

Countries: Argentina, Chile, Dominican Republic, France, Ghana, Jamaica, Malawi, Mexico, Nigeria.

Community Champion: Dr David C. Smith, Coordinator Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-environment>



First virtual meeting of the Global Science Community on Environment



Global Science Community on Remote Instrumentation

Objective: The Remote Instrumentation community aims to increase engagement of practitioners, researchers, academics and students involved or interested in remote instrumentation from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

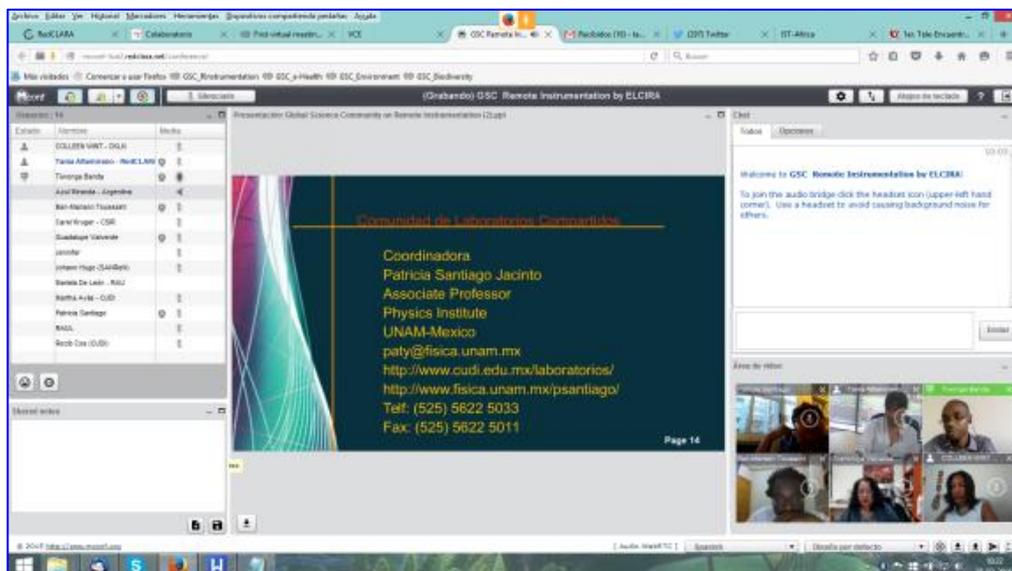
Opening Conference: 25 February 2016 (<https://eventos.redclara.net/indico/event/641/>)

Members: 16

Countries: Chile, Colombia, Dominican Republic, Malawi, Mexico, South Africa, Uganda.

Community Champion: Prof Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-remote-instrumentation>



First virtual meeting of the Global Science Community on Remote Instrumentation

The results of the opening meetings provide a sense of the diversity of the communities. In the e-Health GSC, one output was the development of a survey among the members to identify themes of interest and current activities of the participants. The results showed that the main areas are: Cardiology, Child and Adolescent Health, Standards for Telemedicine, and Health Informatics. The next steps include a grand round about this topics in the month of July, 2016, coordinated and led by the champion, Luiz Messina, from RUTE, RNP, Brasil.

The Biodiversity community scheduled a second activity on May 5th, 2016 entitled “Experiences from around the World” with the participation of representatives from Egypt, Brazil, Trinidad & Tobago and Dominican Republic.

<https://eventos.redclara.net/indico/event/661/>



The Biodiversity community call to join

For the Remote instrumentation the next steps include an informative session scheduled for June 16, 2016, on “Nanoparticles for Drug Delivery in Parkinson”.

Another topic that was thought to be very useful for communities is Science Communication, simplifying research studies and findings for various audiences (policy makers, end users, founders etc).

Information System on Worldwide Funding Opportunities

Another important activity was the work on the identification of open calls to feed the Information System on Worldwide Funding Opportunities and Partner Search database, which is accessible through Colaboratorio. To follow up the activity, a report system was developed that allows access to calls published in a specific period. The report of the publication is available on line and can be seen in (link for internal use, not for dissemination):

http://dev1.redclara.net/joomla4_new/joomla4/reporte_fondos/

Besides, the system had a process of improvement that included:

- ❖ Adjustment of the form used to feed the data base - September 15th, 2015.
- ❖ Report system about the calls uploaded in the system - October 20th , 2015.
- ❖ Adjustments of the information display on the public page - January 29th, 2016.
- ❖ Implementation of the options to edit and eliminate entries published on the system - March 3rd, 2016.
- ❖ Weekly dispatch to the Colaboratorio user’s email with information about open calls according of their area of interest specified on their profile - March 8th, 2016.
- ❖ Enable the option of publishing a calls in different language (Spanish, English and Portuguese) when available - April 6th, 2016.

Global virtual days on Horizon 2020 calls

A three day session dedicated to Latin America and the Caribbean titled: “Segundo Ciclo Virtual para América Latina y el Caribe sobre Horizonte 2020” (Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020)² was developed. It took place on June 17-24, 2015 and was developed jointly with the Argentine Bureau for Enhancing Cooperation with the European Union (ABEST III), the Latin America, Caribbean and European Union Network on Research and Innovation (ALCUENET) and the Ministry of Education and Culture of Uruguay.

For the organization of the activity, a web page was created (See: <https://eventos.redclara.net/indico/event/495/overview>) on the event manager of the collaborative platform, Colaboratorio (See image below).



Webpage of the Virtual Information day on H2020

The dissemination activities included news, a newsletter and invitation by email to potential participants from the region (See image). The event was hosted using H323 videoconference, therefore those interested had to register their videoconference rooms through the form available on the website and had take part in the test session to guarantee the quality of the transmission during the actual event.

The impact of the activity was shown in the elevated number of videoconference rooms registered to participate in the cycle: 56 in total. Additionally, the event was streamed live through the Internet, with a peak of 120 users connected at the same time and a total of 290 participants by streaming on the three days (See image below).

² This was a second version of a previous activity developed; the information is available here: <https://eventos.redclara.net/indico/event/435/>



H2020 Virtual Information Day

Global virtual days on priority worldwide fields

Another activity planned with the communities is the development of global virtual days on priority worldwide fields. In this context, on December 15th, 2015 a virtual day on Politics and models of implementation of Open Access in the world. took place

For the coordination of the event, a web page was created (see: <https://eventos.redclara.net/indico/event/623/>)

The activity was mainly directed to the African region, thence all the presentations and the material generated (available for download from the home page of the web site) was in English. The agenda included the participation of representatives from Latin America, Africa and Europe who presented their respective experiences.

Politics and models of implementation of Open Access in the world

15 de diciembre de 2015
GMT timezone

> Home
> Registration
Registration Form
> Speakers
> Agenda
> Important Dates
> How to participate

"Open Access" to information – the free, immediate, online access to the results of scholarly research, and the right to use and re-use those results as you need – has the power to transform the way research and scientific inquiry are conducted. It has direct and widespread implications for academia, medicine, science, industry, and for society as a whole.- Open Access Week-

The activity aims to present different experiences related to Open Access in the World in order to be a contribution for those countries that are working to enhance the share of knowledge.

During this virtual conference the participants will have the opportunity to learn about experiences in Latin America, Europe, Africa and the activities developed by the Confederation of Open Access Repositories - COAR in the world.

Starts 15/12/2015 13:00
Ends 15/12/2015 15:30
GMT

Altamirano López, Tania

Slides

• Hours are presented in GMT/UTC(Greenwich Mean Time). Please check your local time at:
http://www.worldtimeserver.com/convert_time_in_UTC.aspx
• Streaming: <http://www.redclara.net/streaming> (available the day of the event)

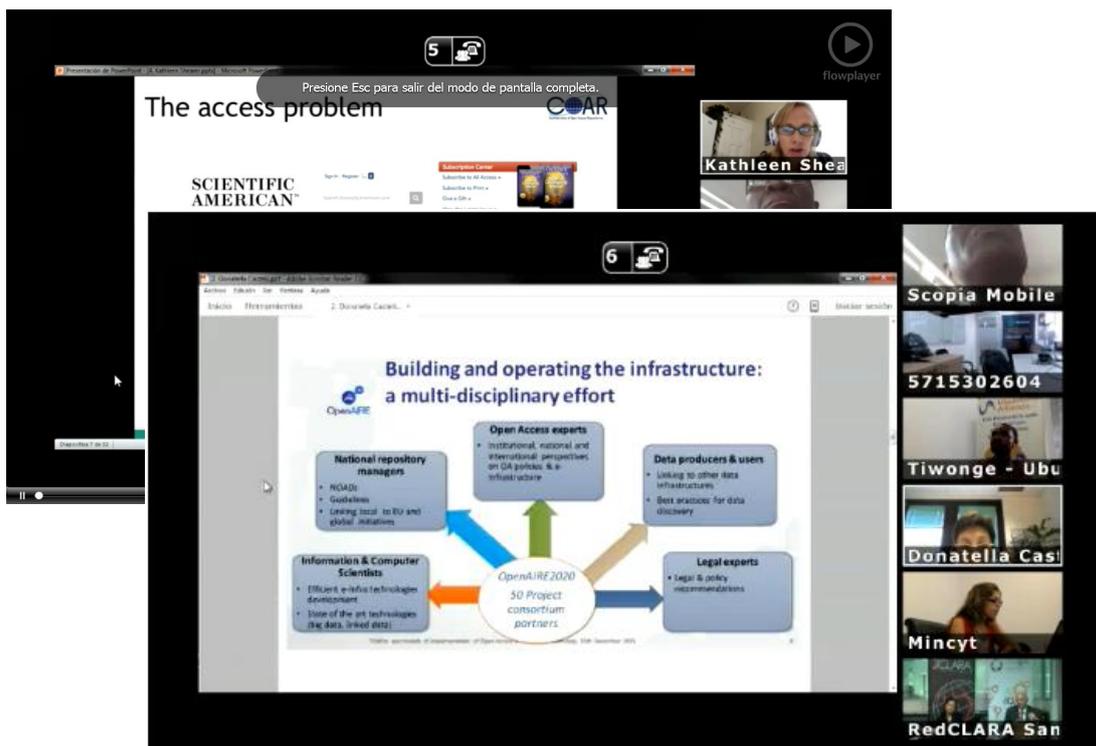
Magic
Middleware for collaborative Applications and Global Virtual Communities

Virtual day on Politics and models of implementation of Open Access

For the dissemination of the activity, an informative article was generated and published in the web pages of the RedCLARA, MAGIC and was also included in the informative material of the partners institutions (See image below).

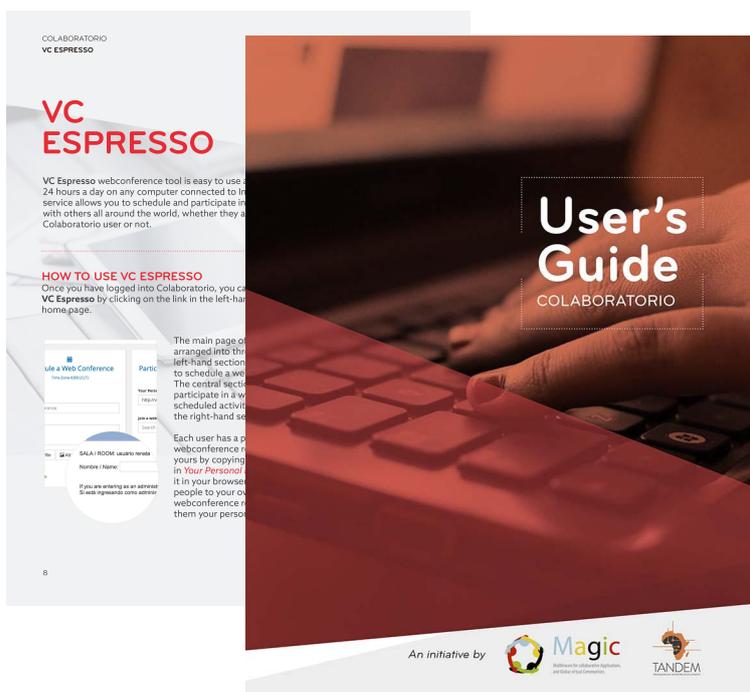


The event was conducted using a H323 videoconference system with a streaming transmission. The participation included 22 videoconference rooms registered and a peak of 20 participants by Internet. For those connected remotely, there was the option of sending their comments and questions using the Skype account: dias.virtuales to interact with the speakers.



Training materials to show the uses and benefits of the global collaborative tools

To enhance and support the work of the Global Science Communities, a User Guide on the Colaboratorio was developed. It presents an easy and friendly explanation on the main elements of the platform and how to take advantage of them in daily work. The material is available in English and Spanish from the MAGIC website: <http://magic-project.eu/index.php/training>



The User Guide to the Colaboratorio

1.2.6 Work Package 6: Dissemination and Training

Training in Latin America, Arab countries and The Caribbean:

Within the reported period three face-to-face training sessions were carried out:

- **Federated Applications (FedApps) Training**
Date: 26-28 April 2016
Venue: Ramada Resort, Dar es Salaam, Tanzania
Attendees: 22 engineers from 14 NRENs members of the UbuntuNet Alliance

- **Federated Access and eduroam workshop in the Caribbean**
Date: October 7 to 9, 2015
Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica
Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).
Note from CKLN: “Attendees are expected to deploy the pilot and implementation in their respective NRENs/Institutions on the subsequent phases of the project”.

- **Workshop on Joining eduroam and Identity Federation**
Date: September 8 to 10, 2015
Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan
Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.
Note from ASREN: “Participants should start immediately working on eduroam then idp”.

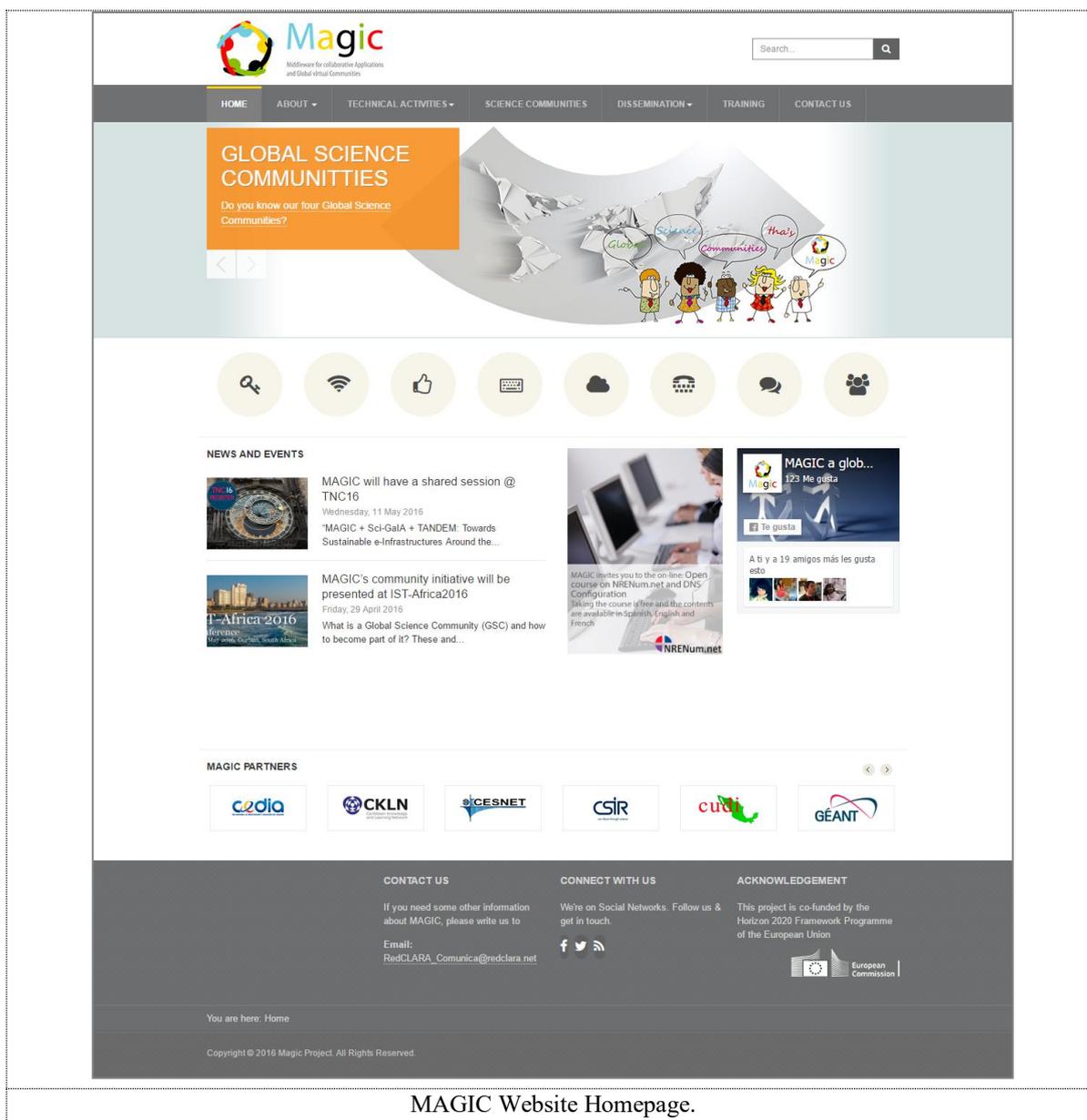
- **Mobility Federated Services and Nrenum.net**
Date: July 8, 2015
Venue: Viña del Mar, Chile. Enjoy Conference Center
Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

Intense dissemination to the on-line open course on NRENum.net and DNS - was carried out by means of the MAGIC communication channels and of those of its partners as well.

On-line presence:

MAGIC’s on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social interphases and its by-monthly Newsletter.

Regarding its Intranet, it is extensively used by the project partners for all its internal communications and for the different WP interaction.



MAGIC Website Homepage.

The MAGIC website was developed during M01 and M02, and delivered on-line on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was delivered on the same date in Facebook and Twitter.

The success of the website and the social network pages, has been statistically measured by WP6. The website usage is measured using the Piwik open-source tool which started taking website statistics on 16 June 2015, and the main numbers are the following ones:

	Jun.'15	Jul.'15	Aug.'15	Sep.'15	Oct.'15	Nov.'15	Dec.'15	Jan.'16	Feb.'16	Mar.'16	Apr.'16	May '16
MAGIC Project												
Number of unique visitors	231	211	340	328	427	849	412	563	408	378	417	261
Number of pages seen	751	610	905	875	943	2062	887	1102	876	821	779	622

MAGIC Website main statistics of usage

On May 2016, “MAGIC a global connection” (Facebook) and “@MAGIC_our_voice” (Twitter)

showed a growth of more than 200% each in its outreach.

Regarding the project’s newsletter, under the name of “MAGIC TIME” five editions were delivered to all the project members, three in 2015 and 2 in 2016 (January and May), all of them can be checked out at <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.



First edition of the MAGIC TIME, July 2015.

The following table show the statistics of the five newsletters:

	July	September	November	January	May
Opened emails	42	42	38	44	78
Recipients	73	78	78	83	184
Total recipients clicks	15	9	5	9	7
Total clicks	48	10	6	42	10

Brochures and promotional material done

In order to serve the different dissemination needs, project brochures were printed in Spanish (1000 copies), English (1500 copies), and Portuguese (1000 copies) and also translated into French. All these brochures have been published in the website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format, and most of them were distributed in those international events where MAGIC had representation.

Regarding the branded promotional goodies, within the reported period we did the following pieces for its distribution in the international events in where MAGIC had representation within a booth:

- 400 umbrellas
- 1000 speakers for mobile devices
- 1500 vintage puzzles
- 150 pen-drives and key holders

The distribution of these material will be explained in the following paragraphs.

Participation in international events

Within the reported period, the MAGIC project was disseminated within three major international events, the first two of them in Latin America and the third in Europe. In all these events MAGIC had space in a stand where it distributed brochures and branded promotional goodies among the attendees.

July 6th to 8th, TICAL2015, Viña del Mar, Chile, Latin America:

MAGIC had an exhibition booth at TICAL2015 where brochures in Spanish and umbrellas with MAGIC's logo were delivered. A video explaining MAGIC in Spanish was generated for the occasion MAGIC and also published in MAGIC's Facebook interphase. In addition, videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts. Training sessions within TICAL's Conference framework were coordinated.

August 25th to 27th, RNP2015 Forum, Brasilia, Brazil, Latin America:

MAGIC had a space at RNP stand. Brochures of the project were translated into Portuguese and distributed among the attendees. In addition promotional MAGIC umbrellas were given away between those who requested more information about our project. Videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

October 20 to 20nd, ICT2015, Lisbon, Portugal, Europe:

In a common effort with TANDEM and Sci-GaIA, under the name of GIISC (Global ICT Infrastructures for International Scientific Collaboration), the MAGIC project had a shared exhibition booth at the INCO Village, and a Networking Sessions in ICT2015. Within the stand MAGIC delivered brochures with the Project information in English, Spanish and Portuguese, and branded goodies: vintage puzzles and speakers for the mobile devices.

November 16th to 20th , Maputo, Mozambique, Africa:

MAGIC had a relevant participation in **Sci-GaIA Workshop on Open Science**, by means of the presentations made by representatives of GRNET and RedCLARA

During November 18th and 19th, MAGIC was introduced to the attendees of the **UbuntuNet Connect 2015 Conference**, throughout three presentations made by representatives of RedCLARA and GRNET.

e-AGE 2015, December 7 and 8, 2015, Casablanca, Morocco, Arab States:

With a stand shared with TEIN*CC where the MAGIC project information and promotional material was distributed and its participation in the Conference third session, entitled as "Evolving Services for Science, Research, and Education Communities", by means of the presentations of representatives of GRNET and RedCLARA, the global collaboration project could share in a face-to-face fashion the importance of the participation of the Arab research and education community in the project.

APAN41, January 24 - 29, Manila, The Philippines, Asia:

At the 41st Asia Pacific Advanced Network Meeting - Manila Revisited: Enabling Connectivity for an Integrated World, MAGIC was represented by RedCLARA through a presentation entitled as "MAGIC Project and NREnum Service Middleware for collaborative Applications and Global Virtual Communities".

The following table shows the number of dissemination and promotion pieces given away in all these events.

Pieces	Number of pieces delivered in each international event				
	TICAL2015	RNP2015 Forum	ICT2015	UbuntuNet Connect 2015	e-AGE 2015
Brochures in Spanish	600 (the Ecuadorian and the Chilean NRENs asked for brochures to send to their members)		100		
Brochures in Portuguese		300	130	100	
Brochures in English			500	200	300
Umbrellas	257	60		60	
Speakers			500	250	
Puzzles			700	300	
Pendrives-key holders					200

Also, within the reported period MAGIC's participation in two international events was under preparation: IST-Africa 2016 and TNC16. This will be reported in the upcoming Progress Report.

WP6 has been lead by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, NITC, RNP, TEIN*CC and WACREN.

1.3 Impact

As the information on expected impacts is relevant as was proposed in the DoW, we will go one by one analysing the advances in the Indicators and expected dates to reach its full achievement.

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoW): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:

Training in the Arab Countries

Number of trained engineers 11

Training in The Caribbean

Number of trained engineers 15

Training in the East and South African countries

Number of trained engineers 22

Total so far

Number of trained engineers 48

b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENs and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries having signed eduroam agreements with MAGIC
4 new pilot federations

Advances in the Indicator:

Number of countries committed to eduroam so far: 10

Latin America

Caribbean 1 (Jamaica)

Arab Countries (ASREN) 5 (Algeria, Lebanon, Jordan, Tunisia and Oman

East and South Africa (UbuntuNet) 2 (Uganda, Malawi)

West Africa (WACREN) 3 (Senegal, Ghana, Nigeria)

Pilot federations already created and in process of becoming eduGAIN members

Morocco

Algeria

Lebanon

Jordan

South Africa: SAFIRE

Malawi

Uganda

WACREN eduID

c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

The regions committed are: Europe, Arab Countries, The Caribbean and Latin America. It is expected that West Africa and East/Southern Africa will also join the pilot.

d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: *6 countries in 2 regions having incorporated NRENum.net for Global dialling*

Advances in the Indicator:

*5 countries in LA already joined NRENum.net
1 Countries in Asia has already joined*

Conversations are under way to include several Asian countries in NRENum. Our estimate is that over three more countries will join in the next reporting period.

e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

*5 NRENs using applications built and deployed/hosted by another.
2 NRENs with a pilot cloud applications portal implemented
The number of applications deployed in the pilot test will be at least 2
The Directory of the applications provided by NRENs available for use of other NRENs contains at least 10 applications*

Advances in the Indicator:

Within the Colaboratorio container developed by RedCLARA, the following applications are contained:

*Filesender, developed by UNINET and modified by RENATER is hosted in RedCLARA
MCONF, an Open Source WebConference System modified by RNP and RedCLARA, is hosted in RedCLARA, RNP and soon RENATA, ASREN and NgREN*

The Funding & Partners funding database hosted in RedCLARA

These applications are being used by CEDIA (Ecuador), CONARE (Costa Rica), NgREN/WACREN (Nigeria), ASREN, EtherNet and others are coming. The above result is added to the existing Colaboratorio implementations in RENATA (Colombia), CKLN (Caribbean), CUDI (Mexico) and the undergoing work with INNOVARED (Argentina) that is on testing phase.

Currently, the following applications are being implemented as shared applications

Docuwiki, a wiki system to be hosted in CESNET

JITSI, a webconference system implemented at RENATER

Etherpad, a collaborative editing system hosted in RENATER

CNC, a cloud storage system developed and hosted in RNP

Other applications are being studied to be included.

Thus, we currently already have over 5 NRENs using shared applications

*Over 4 NRENs with the applications portal implemented
The number of new test applications in the pilot will exceed 4
The Directory of applications is currently under development but it will certainly contain well over 10 applications.*

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

2 information days have been organised in Year 1, 4 more are planned for Year 2.

The Database of funding is complete and providing information on a global at a Global scale

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

No review yet

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

Two tasks that has been delayed:

A) The Workshop of User Communities was delayed in two months. This was due to two factors: 1) the slow start in UbuntuNet and 2) the longer than expected time needed to define the areas of interest common to all world regions.

B) The Pilot on AAI and the Completion if the Training in AAI. This is delayed to October 2016 due to the delay in the start of CAREN2, necessary for Central Asia to organise their NRENS.

5.2 Use of resources

The following table shows the amount of resources spent which amounts to € 765,955 and is requesting reimbursement for € 575,356. This amounts to 42% of the foreseen claims in manpower and 38% in travel expenses. This deviation is mainly due to the fact that the second project meeting has taken place in Month 13 and another conference is planned for March 2017.

Participant	(A) Direct personnel costs	(B) Other direct costs	(C) Direct costs of subcontracting	(F) Indirect costs (=0.25* (A+B+E))	(H) Total eligible costs (=A+B+C+D+F+G)	(K) Requested Reimbursement
CLARA	152.882 €	42.580 €	16.146 €	€ 48.866	€ 260.475	260.475 €
GEANT Ltd.	4.024 €	1.889 €	0 €	€ 1.478	€ 7.392	7.392 €
GEANT Association	9.466 €	10.225 €	0 €	€ 4.923	€ 24.614	24.614 €
RNP	22.350 €	8.680 €	0 €	€ 7.757	€ 38.787	0 €
RENATA	10.983 €	1.124 €	0 €	€ 3.027	€ 15.134	15.134 €
REUNA	9.473 €	2.633 €	0 €	€ 3.027	€ 15.133	15.133 €
CEDIA	1.310 €	3.270 €	0 €	€ 1.145	€ 5.725	5.725 €
CUDI	90.043 €	12.450 €	0 €	€ 25.623	€ 128.116	0 €
UbuntuNet	23.434 €	6.540 €	0 €	€ 7.493	€ 37.467	37.467 €
WACREN	29.044 €	5.545 €	0 €	€ 8.647	€ 43.236	43.236 €
ASREN	35.525 €	4.407 €	0 €	€ 9.983	€ 49.915	49.915 €
CESNET	8.199 €	1.930 €	0 €	€ 2.532	€ 12.662	12.662 €
GRNET	18.898 €	7.246 €	0 €	€ 6.536	€ 32.680	32.679 €
SURFNET	1.221 €	0 €	0 €	€ 305	€ 1.526	0 €
CSIR(SANREN)	6.160 €	2.880 €	0 €	€ 2.260	€ 11.301	0 €
RENATER	20.422 €	1.970 €	0 €	€ 5.598	€ 27.989	27.989 €
NIIFI	8.116 €	3.203 €	0 €	€ 2.830	€ 14.148	14.148 €
CKLN	11.439 €	8.584 €	0 €	€ 5.006	€ 25.028	25.028 €
CAREN NOC	700 €	2.307 €	0 €	€ 752	€ 3.759	3.759 €
TEIN*CC	2.304 €	5.754 €	0 €	€ 2.015	€ 10.073	0 €
Total	€ 465.994	€ 133.216	€ 16.146	€ 149.803	€ 765.159	€ 575.356

In general, the use of resources is in line with the planning, the only deviations to underline are:

UbuntuNet Whose slow start explain the low use of manpower during the first months. Now that additional personnel has been hired, they will invest more time to catch up with their activities, specially in WP5.

RENATA That went through internal reorganisation which forced them to concentrate their participation in WP4 only. The efforts committed in the other packages will be done during Year 2.

CESNET, SURFNet, GRNET, RENATER. Whose activities will be more centred in the coming months with their participation in WP2, WP3 and WP4.

In terms of manpower, the partners have spent a total of 141 PMs, i.e., 47% of the total manpower committed which is in line with the time elapsed which corresponds as average to 50% of the total time. The following is the detail of PMs spent by partner:

	WP1	WP2	WP3	WP4	WP5	WP6	Total Person/ Months per Participant
CLARA	8,4	0,3	18,2	2,4	11,7	9,5	50,7
GEANT Ltd.	0,4	0,0	0,1	0,0	0,1	0,1	0,7
GEANT Associati	0,3	0,8	0,1	0,0	0,0	0,0	1,1
RNP	0,5	3,5	0,7	0,7	1,0	1,0	7,4
RENATA	0,3	0,0	0,0	7,0	0,0	0,0	7,3
REUNA	0,5	0,3	0,6	1,9	0,0	0,0	3,2
CEDIA	0,2	0,3	0,4	0,0	0,0	0,0	0,9
CUDI	1,5	12,7	5,1	7,1	3,4	3,1	32,9
UbuntuNet	1,1	1,1	0,0	0,0	2,2	0,6	5,1
WACREN	0,3	1,5	0,8	1,3	1,5	0,5	5,8
ASREN	0,4	5,3	0,8	0,1	1,6	1,0	9,2
CESNET	0,2	0,5	2,5	0,0	0,0	0,0	3,2
GRNET	0,2	1,7	1,7	0,0	0,0	0,0	3,5
SURFNET	0,1	0,0	0,1	0,0	0,0	0,0	0,1
CSIR(SANREN)	0,5	0,0	0,1	0,0	0,5	0,3	1,3
RENATER	1,2	0,6	1,3	0,4	0,0	0,0	3,5
NIIFI	0,3	0,0	0,2	0,3	0,9	0,0	1,7
CKLN	0,4	0,2	0,2	0,0	0,7	0,0	1,5
CAREN NOC	0,3	0,2	0,2	0,0	0,0	0,0	0,7
TEIN*CC	0,2	0,4	0,2	0,0	0,2	0,3	1,3
Total Person/Months	17,2	29,4	33,0	21,2	23,8	16,4	141,0

As requested by the reviewers, we hereby detail the expense of partners per task in each Workpackage.

Workpackage 1: Management

The following table shows the separation by task in WP1 of PMs reported by the partners.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	6,00 PM	2,43 PM
GEANT Ltd.		0,44 PM
GEANT Association	0,13 PM	0,13 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	
REUNA	0,40 PM	0,05 PM
CEDIA	0,09 PM	0,10 PM
CUDI	0,70 PM	0,78 PM
UbuntuNet	1,12 PM	0,00 PM
WACREN	0,25 PM	
ASREN	0,20 PM	0,20 PM
CESNET	0,24 PM	
GRNET	0,09 PM	0,10 PM
SURFNET		0,06 PM
CSIR(SANREN)	0,25 PM	0,25 PM
RENATER	0,60 PM	0,60 PM
NIIFI	0,29 PM	
CKLN	0,43 PM	
CAREN NOC	0,30 PM	0,00 PM
TEIN*CC	0,20 PM	
Total per Task	11,79 PM	5,39 PM
Total per WP	17,17 PM	

Reported PMs for WP1 per partner for Year 1

The following table shows the originally planned expenses in PMs for Year 1.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	5,00 PM	2,70 PM
GEANT Ltd.		0,25 PM
GEANT Association	0,25 PM	0,25 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	0,25 PM
REUNA	0,13 PM	0,13 PM
CEDIA	0,13 PM	0,13 PM
CUDI	1,00 PM	1,00 PM
UbuntuNet	0,03 PM	0,00 PM
WACREN	0,13 PM	0,13 PM
ASREN	0,20 PM	0,20 PM
CESNET	0,25 PM	
GRNET	0,1 PM	0,1 PM
SURFNET		0,125 PM
CSIR(SANREN)	0,55 PM	0,55 PM
RENATER	0,13 PM	0,13 PM
NIIFI		
CKLN	0,13 PM	0,13 PM
CAREN NOC	0,25 PM	0,00 PM
TEIN*CC	0,13 PM	0,13 PM
Total per Task	8,9 PM	6,4 PM
Total per WP	15,3 PM	

Planned PMs for WP1 in Year 1

The difference between the planning and the actual PMs spent is a consequence of the larger effort that had to be done in coordination, specially by the Coordinator. In all the expense differs in only 12.2% from the original plan.

Workpackage 2: Platforms for Mobility

The table of reported PMs divided by task is:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	0,03 PM	0,00 PM	0,11 PM		0,14 PM
GEANT Ltd.	0,03 PM				
GEANT Association	0,19 PM		0,30 PM		0,30 PM
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA					
REUNA	0,20 PM		0,10 PM		
CEDIA	0,25 PM			0,08 PM	
CUDI	7,22 PM	0,98 PM	1,38 PM	2,15 PM	0,99 PM
UbuntuNet	0,02 PM	0,34 PM	0,00 PM	0,00 PM	0,74 PM
WACREN			1,00 PM	0,50 PM	
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		0,46 PM			
GRNET			0,80 PM		0,87 PM
SURFNET					
CSIR(SANREN)					
RENATER				0,58 PM	
NIIFI			0,03 PM		
CKLN					0,20 PM
CAREN NOC	0,00 PM	0,00 PM	0,20 PM	0,00 PM	0,00 PM
TEIN*CC			0,20 PM		0,20 PM
Total per Task	9,24 PM	3,48 PM	5,82 PM	4,21 PM	6,64 PM
Total per WP	29,40 PM				

Reported PMs by task in WP2, Year 1

The planned distribution by task was:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	2,00 PM	0,50 PM	1,25 PM		0,60 PM
GEANT Ltd.	0,15 PM				
GEANT Association	0,13 PM	0,13 PM			
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA	0,25 PM		0,25 PM		
REUNA	0,13 PM		0,13 PM		
CEDIA			0,25 PM		
CUDI	2,50 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,50 PM	0,25 PM	0,75 PM
WACREN			1,00 PM		0,50 PM
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		1,00 PM			
GRNET			0,8 PM		0,8 PM
SURFNET					
CSIR(SANREN)			0,13 PM		0,13 PM
RENATER		0,50 PM	0,50 PM	0,25 PM	0,50 PM
NIIFI	0,4 PM				0,6 PM
CKLN			0,50 PM		0,50 PM
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM
TEIN*CC			0,13 PM		0,13 PM
Total per Task	7,1 PM	5,1 PM	8,3 PM	2,4 PM	8,7 PM
Total per WP	31,5 PM				

Planned distribution per task WP2 for Year 1.

As can be seen, individually there are some deviations from the planning, but in all the deviation is only 2.1 PMs representing 6.7% of the original plan. This is mainly due to the late start of the activities in some regions harder to coordinate.

Workpackage 3: Cloud Provisioning and Groupware Standards

The following is the table of reported PMs per task

Partner	T3.1. Implement applications portal for 2 new NRENs	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security,
CLARA	4,73 PM	6,80 PM	3,40 PM	3,30 PM		
GEANT Ltd.		0,05 PM				
GEANT Association		0,06 PM				
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA		0,40 PM	0,06 PM	0,05 PM		0,05 PM
CEDIA		0,15 PM	0,20 PM			
CUDI	1,04 PM	1,03 PM	1,38 PM	1,34 PM	0,33 PM	0,00 PM
UbuntuNet	0,00 PM	0,00 PM	0,03 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,25 PM	0,50 PM				
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,44 PM	0,04 PM			
GRNET		0,73 PM	0,73 PM	0,20 PM		
SURFNET		0,03 PM	0,03 PM			
CSIR(SANREN)		0,05 PM				
RENATER		0,60 PM	0,70 PM			
NIIFI		0,19 PM				
CKLN						0,19 PM
CAREN NOC	0,00 PM	0,00 PM	0,10 PM	0,00 PM	0,00 PM	0,10 PM
TEIN ^{CC}		0,20 PM	0,00 PM			
Total per Task	6,54 PM	13,40 PM	6,84 PM	5,21 PM	0,50 PM	0,52 PM
Total per WP	33,00 PM					

Reported PMs per task, WP3, Year 1

The corresponding planned PMs per task is the following

Partner	T3.1. Implement applications portal for 2 new NRENS	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security, continuity, confidentiality, communication, billing and technical requirements.
CLARA	3,00 PM	2,00 PM	1,00 PM	3,50 PM		
GEANT Ltd.		0,15 PM				
GEANT Association		0,13 PM	0,13 PM			
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA	1,00 PM	0,50 PM	0,50 PM	0,50 PM		
CEDIA	0,13 PM	0,13 PM				
CUDI	1,00 PM	1,00 PM	1,50 PM	1,50 PM	1,50 PM	0,75 PM
UbuntuNet	0,00 PM	0,50 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,75 PM					
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,70 PM	0,30 PM			
GRNET		0,7 PM	0,7 PM	0,2 PM		
SURFNET		0,063 PM	0,063 PM			
CSIR(SANREN)	0,10 PM	0,10 PM	0,06 PM			
RENATER		0,50 PM	0,50 PM			
NIIFI		0,2 PM				
CKLN	0,05 PM	0,10 PM	0,10 PM			
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC		0,13 PM		0,13 PM		
Total per Task	6,5 PM	9,1 PM	5,4 PM	6,4 PM	1,7 PM	0,9 PM
Total per WP	30,0 PM					

Planned PMs per task WP3, Year 1

The difference of 3 PMs equivalent to 10% of the total is explained by the effort in the preparation of the Pilot platform to become a tool easy to deploy in different regions of the World, the tasks described in full in &1.2.3 were necessary to make the platform a multilingual, group-ware ready platform as was requested by the partners during the development of the project. This extra effort was done mainly by RedCLARA which duplicated the effort with respect to the original plan. This major larger effort will be compensated by changing PMs from other WPs and using larger non-funded resources if required.

Workpackage 4: Agreements for Real Time Collaboration

The table of PMs per task for this WP are as follows:

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,22 PM	0,88 PM	1,33 PM	0,00 PM	
GEANT Ltd.		0,02 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	4,00 PM	3,00 PM			
REUNA	1,60 PM	0,25 PM			
CEDIA	0,02 PM				
CUDI	4,06 PM	1,92 PM	0,00 PM	0,00 PM	1,13 PM
UbuntuNet	0,01 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)					
RENATER	0,09 PM			0,30 PM	
NIIFI		0,32 PM			
CKLN					
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	10,89 PM	7,08 PM	1,48 PM	0,45 PM	1,28 PM
Total per WP	21,18 PM				

Reported PMs per task WP4

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,50 PM	0,00 PM	1,00 PM	0,00 PM	0,00 PM
GEANT Ltd.		0,15 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	3,00 PM	2,50 PM			
REUNA	1,25 PM				
CEDIA					
CUDI	2,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)	0,13 PM	0,13 PM			
RENATER	0,50 PM	0,50 PM			
NIIFI					
CKLN	0,13 PM	0,13 PM			
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	8,6 PM	5,3 PM	2,4 PM	1,2 PM	1,2 PM
Total per WP	18,7 PM				

Planned PMs per task WP4

The larger effort of 2.48PMs, essentially concentrated by RENATA amounts to almost a 50% extra by RENATA, bur in all the extra effort amounts to 13.3% of the total.

Workpackage 5. Global Science Communities

The reported PMs per tasks in this WP is as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	2,70 PM	4,51 PM	1,26 PM	0,85 PM	1,42 PM	1,00 PM
GEANT Ltd.	0,02 PM				0,02 PM	0,02 PM
GEANT Association	0,02 PM					
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,86 PM	0,55 PM	0,31 PM	0,50 PM	0,36 PM	0,81 PM
UbuntuNet	1,17 PM	0,00 PM	0,14 PM	0,00 PM	0,31 PM	0,62 PM
WACREN	0,50 PM		0,50 PM			0,50 PM
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,30 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,20 PM	0,20 PM	0,05 PM			
RENATER						
NIIFI	0,43 PM		0,10 PM			0,35 PM
CKLN						0,73 PM
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,18 PM					
Total per Task	7,25 PM	5,43 PM	2,63 PM	1,62 PM	2,39 PM	4,48 PM
Total per WP	23,79 PM					

Reported PMs per task WP5

The planned PMs per task was as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	1,0 PM	3,0 PM	3,0 PM	1,0 PM	2,0 PM	1,0 PM
GEANT Ltd.	0,05 PM				0,05 PM	0,05 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA	0,50 PM		0,50 PM			0,50 PM
REUNA						
CEDIA						
CUDI	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	1,00 PM	0,50 PM	0,75 PM	1,00 PM	0,50 PM	1,00 PM
WACREN	0,50 PM	0,50 PM			0,50 PM	
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,20 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,10 PM	0,05 PM		0,05 PM		0,1 PM
RENATER						
NIIFI						
CKLN	0,05 PM	0,00 PM	0,05 PM	0,05 PM		0,10 PM
CAREN NOC	0,13 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,13 PM		0,13 PM			
Total per Task	5,6 PM	5,2 PM	5,8 PM	3,4 PM	4,3 PM	4,1 PM
Total per WP	28,4 PM					

Planned PMs per task WP5

The difference of 4.61PMs, equivalent to minus 16.23% is explained by the slow start of the WP due to the difficulty to assign manpower in the leader of the WP (UbuntuNet) and consequent the delay in the planning of the virtual and face to face meetings. This difference is being solved during year 2.

Workpackage 6. Dissemination and Training

The reported PMs per task can be seen in the following table:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co- ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with	T6.6 Support to WP5 activities.
CLARA	2,50 PM	1,54 PM	2,00 PM	0,50 PM	2,00 PM	1,00 PM
GEANT Ltd.		0,03 PM	0,03 PM	0,03 PM		0,03 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,14 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,31 PM	0,32 PM	0,13 PM	0,97 PM	0,60 PM	0,75 PM
UbuntuNet	0,61 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)					0,30 PM	
RENATER						
NIIFI						
CKLN						
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,15 PM				0,15 PM	
Total per Task	3,94 PM	2,26 PM	2,43 PM	1,77 PM	4,02 PM	2,02 PM
Total per WP	16,44 PM					

Reported PMs per partner WP6

The planned expense in PMs was:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co-ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development, advances, achievements, training activities,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with training activities.	T6.6 Support to WP5 activities.
CLARA	2,25 PM	1,00 PM	3,00 PM	2,00 PM	2,00 PM	2,00 PM
GEANT Ltd.		0,05 PM	0,05 PM	0,05 PM		
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,50 PM	0,50 PM	0,50 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,75 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,50 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)						
RENATER					0,50 PM	0,50 PM
NIIFI						
CKLN	0,05 PM	0,10 PM			0,10 PM	
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,13 PM				0,13 PM	
Total per Task	4,0 PM	2,0 PM	3,8 PM	3,3 PM	4,7 PM	4,3 PM
Total per WP	22,2 PM					

Planned PMs per partner WP6

The difference is an expenditure of 5.46 PMs less than foreseen that is explained by the change in the year of execution of some of the Dissemination activities, such as TNC 2016 and other events. This difference will be caught in Year 2.

Summarizing, the following table shows the difference between planned and reported PMs for each WP.

	WP1	WP2	WP3	WP4	WP5	WP6	Total
Planned	15,30 PM	31,54 PM	29,99 PM	18,69 PM	28,41 PM	22,15 PM	146,06 PM
Reported	17,17 PM	29,40 PM	33,00 PM	21,18 PM	23,79 PM	16,44 PM	140,98 PM
Difference	1,87 PM	-2,14 PM	3,02 PM	2,49 PM	-4,61 PM	-5,71 PM	-5,08 PM
Percentage	12%	-7%	10%	13%	-16%	-26%	-3%

Thus, in average, despite the ups and downs of the different WPs the resources have shown to be appropriate for the first year and correspond roughly to 50% of the total PMs budgeted.

Other Direct Costs

The reviewers requested that we explain the Subcontracts which are indeed the direct costs associated with printed material, give-aways, room rental and other services related to the organisation of training and workshops. We have spent €16.146 as detailed in the following Table. The expenses are necessary for the dissemination and training tasks.

Dissemination material	€7.583
Facility rentals	€1.419
Give-aways	€3.872
Refreshments	€1.838
Registration in conferences	€1.435
	€16.146

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

Executive Summary

This deliverable reports the work and achievements of the MAGIC Project during its first year of implementation. The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

To reach this objective the project has established four specific objectives:

- a) to promote the adoption of a set of technologies that facilitate the access and use of services for people who work in a global environment. This implies that they have to travel and access networks when abroad, hence the need for eduroam; they need to access services requiring identification and authorisation mechanisms working worldwide, hence the need for AAI and eduGAIN, and they need to do this in a secure environment, hence the need for security awareness.

In this first year the project has been able to carry out several dissemination and training activities in the Middle East (ASREN region) and the Caribbean (CKLN region). Furthermore, the training material has been translated into French and Russian in preparation of the training in the WACREN and CAREN (Central Asia) regions.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN. In this way we already have pilots in 3 regions covered by the project.

- b) To agree on a standard for Group Management and develop a model for inter-operation between NREN cloud application markets of participating world regions. A test pilot must be deployed and services provided by different regions will be integrated into the pilot.

The project started from the Colaboratorio developed during the ELCIRA Project and developed an improved version capable of being deployed in different World regions as it can be adapted to different languages, stand alone or cloud implementations, with federated access and most of all, capable of implementing the GroupWare technologies selected. This pilot infrastructure (Colaboratorio) has already been implemented in several Latin American countries, in WACREN, to serve the West and Central Africa and is already in the process of deployment in several Arab and African countries.

As for the Group Management technology, the project adopted the VOOT technology as a basic protocol to exchange information about groups, designed the interoperation schemes and is currently in the implementation phase of the pilot using this technology. This will allow that groups of users (user communities) access applications on different NRENs and service providers in a transparent way, similarly to the use of AAI technology for the identification of a person.

- c) To seek consensus among participating world regions on the importance of interoperability of real-time applications.

The work during this period has been focused on promoting the adoption of NRENum, the technology allowing to assign a global numbers to different devices (videoconference equipment, phones, etc) and manage the operation using the DNS servers already in operation by all NRENs. Training and dissemination has been carried out in Chile, the Asia Pacific and other regions.

We can report that five (5) new NRENs have already implement NRENum.net and became part of the worldwide service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of carrying out their internal decision processes.

- d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and developing joint activities.

The activity of the prior has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Another key activity has been the virtual days on the Horizon 2020 calls and on worldwide priority fields.

An important achievement of this period has also been the development and implementation of the new Funding and partners system, changes on the feed, usability and management were made with respect to the pre-existing system developed during the ELCIRA Project. Training material for the use of the collaboration tools has been developed and published in the project website.

The project has carried out intensive dissemination of the project goals and results in key meetings where the NRENs meet, such as TNC, the UbuntuNet Conference, TICAI, the WACREN Meeting, the eAGE Conference and others. The project maintains a website and spreads the news of its activities using social networking tools.

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middle-ware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

The Work package on Mobility (WP2) focused first on preparing a roadmap for the work of deploying Identity Federations in the different project regions: Arab Countries, South and East Africa, West Africa, Central Asia, the Caribbean, Asia-Pacific and Latin America, identifying in those regions by focal points, NRENs or institutions, which were interested in AAI and eduroam. Besides this an on-line training to implement an Identity federation was developed and translated into French, Spanish and Russian in order to spread even more the amount of technicians trained. Two workshops on Identity Federations and eduroam were carried out during this period: one for the Arab States region on September, 2015 in Amman and the second one for the Caribbean region hold on October 2015 in Kingston, Jamaica.

During this period, AAI implementations were successfully developed in Algeria and Morocco, while Pilots are already in place in Lebanon, Jordan, Malawi, Uganda, South Africa and WACREN.

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

In Work-package 3 the work has been focused on two activities: a) the improvement and deployment of the Colaboratorio collaboration tool for the use of different NREN partners and b) the analysis of the group-ware standards available for group collaboration.

In the deployment of shared collaboration tools we can report that a personalized version of the Colaboratorio has been deployed for the use of Nigeria in Africa for the use of WACREN (in synergy with TANDEM) as well as CEDIA in Ecuador and several other NRENs are already in several stages of use and/or deployment of this tool. Also several applications are being added to the portal in order to increase the number of applications provided to the users of different regions around the World.

In the Group-ware standards, the WP has found that 5 middle-ware technologies that can be used for the purpose of applications integration with working groups: OPENCONEXT, PERUN, SYMPA, SCIM and UNITY. The WP is now working on completing a set of basic minimum set of inter-operation requirements and then will move into the testing and construction of a test-bed for the integration of several tools requiring Group Management into the Colaboratorio portal.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the

Global CEO Forum to promote the creation of a worldwide environment for these applications.

In Work-package 4 the activities have been centred around the adoption of NRENum. For this, training was conducted at the TICAL2015 meeting in Viña del Mar, Chile. In this training workshop participated 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru. The material developed for this workshop was then uploaded to RedCLARA's e-Learning website and translated in to English and French where the material is ready for use in the implementation of NRENum around the World. A training Workshop was also conducted in Manila, The Philippines during the APAN meeting in January 2016.

The other key activity of WP4 has been the support to the adoption of NRENum. We can report that five (5) new NRENs has become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador, RAICES from El Salvador and recently CUDI from Mexico, REUNA from Chile and RAU from Uruguay. Several countries in Africa and Asia Pacific have been contacted with the support of the regional partners and work is under way to include them in the coming months as NRENum delegated areas. Sri Lanka has joined from the Asian region and several others are in the process of making decisions.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

For WP5 the first period has been focused in the establishment and strengthening of the Global Science Communities: Biodiversity, Environment, e-Health and Remote Instrumentation. After the development of the opening sessions, each group has proposed and developed specific activities with its members. Referred to the Alert funding system, the WP was been involved in activities for a new version of the service with changes on the feed, usability and management. Training material for the promotion and enhance of the Colaboratorio has been developed and published in the project website. Another key activity has being the virtual days on the Horizon 2020 calls and on worldwide priority fields.

Finally, the Dissemination and Training activities have been extensive. The MAGIC project has been present in the following Meetings: IST Africa 2015 in Maputo, Mozambique; TNC2015 in Porto; TICAL2015 in Viña del Mar, Chile; RNP Forum in Brasilia, Brazil, ICT 2015 in Lisbon, Portugal; APAN41, Manila, The Philippines, Asia; UbuntuNet Connect 2015 Conference and e-AGE 2015, Casablanca, Morocco, Arab States. During these events brochures and give-aways have been distributed to position the project and the projects' ideas among the researchers, policy makers and technicians of NRENs around the World.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- To organise the Kick-off Meeting in Paris and make sure that all Work Packages organised themselves and their work progress. As reported, the Kick-off took place in Paris on June 11-12, 2015, and was attended by representatives of 19 out of the 20 partners. Only SURFNet excused its attendance.
- To agree on and sign a Consortium Agreement. Issues which required discussed for the Consortium Agreement included the treatment of Intellectual Property Rights, the level of distribution of the applications and other matters such as the distribution of the funding and the mechanisms to include

and exclude partners. The Consortium Agreement, modelled upon the DESCA Model (www.desca.-2020.eu) was signed by all partners as of August 18, 2015.

- To distribute the funding from the European Commission as agreed in the Consortium Agreement. This was done between July 01, 2015 and August 20, 2015.
- To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place by Video-conference, with the exception of the Kick-off Meeting which was a face-to-face meeting. Steering Committee Meetings were held on the following dates:
 - June 11-12, 2015 (The Kick-off Meeting)
 - July 23, 2015
 - September 24, 2015
 - November 25, 2015
 - January 25, 2016
 - April 27, 2016

The minutes of the Meetings are available in the wiki of the MAGIC Community maintained in the Colaboratorio Portal.

- To oversee the Deliverables and Milestones.
 - All deliverables have been submitted to the EC through the H2020 Project Management System.
- The milestones have the following status:
 - MS1 completed
 - Kick off Meeting Minutes; Project Website
 - Event participation plan
 - MS2 has been completed as of October 2015, i.e., Month 6 instead of Month 4 because of changes in the procedures to sign MoUs internally in GÉANT due to its internal restructuring.
 - The agreement itself
 - MS3 has been completed by September 29, 2015
 - The pilot portal itself has already been deployed in Latin America: Ecuador (CEDIA), Costa Rica (CONARE) and Mexico (CUDI) and in Africa where jointly with TANDEM we have deployed the portal in Nigeria (NgREN) for the service of WACREN. Further implementations are under way.
 - MS4 has been completed as of February 25, 2016, after completing the launch events of 4 User Global User Communities:
 - e-Health: February 2nd, 2016 <https://eventos.redclara.net/indico/event/634/>
 - Biodiversity: February 11th, 2016, <https://eventos.redclara.net/indico/event/639/>
 - Environment: February 18th, 2016, <https://eventos.redclara.net/indico/event/640/>
 - Remote Instrumentation: February 25th, 2016, <https://eventos.redclara.net/indico/event/641/>
 - MS5 Assessment of group management platforms has been successfully completed on October 30, 2015 as described in D3.2
 - MS6 has been successfully completed as NRENum.net has been deployed in 5 countries in Latin America: El Salvador (RAICES), Ecuador (CEDIA), Chile (REUNA), Uruguay (RAU) and Mexico (CUDI).
 - MS7 Four Communities established (each with a thematic Champion) in December 2015: e-Health, Environment, Biodiversity, Remote Instrumentation
 - MS8 Training in AAI has already been completed for The Caribbean, the Arab Countries (ASREN), West Africa (WACREN) and East and Southern Africa (UbuntuNet). eduroam training is complete in CKLN, ASREN and WACREN. Planned workshops will complete training for the remaining regions during 2016 (See. D2.4).
 - MS9 Completed by April 29, 2012. The training material in PDF available at the website.
 - MS10 The information system on funding opportunities is available since April 6, 2016. It is available through the Colaboratorio portal.

- MS11 This Milestone is yet to be completed, only one Asian NREN, Sri Lankan NREN. More candidates are studying their possibilities to join. We are very confident that we will reach the target of at least 3 Asian NRENs joining NRENnum.
- MS12 All dissemination activities have been completed. See D6.4.
- No major problems have occurred during this period, the project has run smoothly, except for the delays that have already been reported. There are three main reasons for these delays:
 - A slow start affecting above all the time needed to reach agreements between European and Latin American Projects.
 - The difficulty to identify user communities willing to become test communities and the time-consuming work of collecting information on researchers and research groups.
 - The difficulty in creating Identity Federations. As in other countries this is a slow process. Nevertheless, it can be seen that there is a lot of interest and it is expected that there will be four Identity Federations by the end of the project, though it is possible that additional time may be needed for the project to achieve all of its goals.
 - The delay in the beginning of the CAREN II Project that is intended to foster the development of NRENs in the Central Asia region, a pre-requisite for eduGAIN and eduroam deployment.
 - The difficulty to convince Asian NRENs to adopt NRENnum as planned. We are certain that we will be overcome this difficulty in the coming period with the active support of TEIN and APAN.
- No changes in the consortium, except for the merge of DANTE and TERENA into GEANT. Nevertheless the 2 organisations keep separate names, namely GEANT Ltd. And GEANT Association.

1.2.2 Work Package 2: Platforms for Mobility

During this first year, the activities were focused on planning, dissemination and training. The activities were coordinated by RNP.

In the Arab Region, ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organised in cooperation with the MAGIC and EUMEDCONNECT3¹ projects, and was designed for staff of National Research and Education Networks (NRENs) and Universities.

The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN. There were eleven (11) participants from six (6) countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia.

AAI is successfully implemented during MAGIC Project at: MARWAN (Morocco), ARN (Algeria); pilot status in AUB (Lebanon), JUNet, (Jordan) and planning to implement in Palestine and Egypt

Regarding eduroam, it is successfully implemented in Saudi Arabia, United Arab Emirates, Lebanon, Algeria, Morocco and ASREN. It is important to be noted that it was in operation in Saudi Arabia and the United Arab Emirates, as well as in Morocco, before the start of MAGIC. Eduroam is successfully at pilot level in Jordan, Tunisia and Oman and is starting in Egypt and Palestine.

In the South Africa region, a Federated Applications (FedApps) Training session was held on 26-28 April 2016 in Dar es Salaam as part of UbuntuNet Alliance’s strategy for deployment of AAI in the region. The training - supported by the MAGIC project - was facilitated by UbuntuNet Alliance and SANReN, South Africa. The training was attended by 22 engineers from 14 NRENs.

Concerning eduroam, the Research and Education Network for Uganda (RENU) in January 2016 became

¹ www.eumedconnect3.net

the 4th NREN in Eastern and Southern Africa to deploy and join eduroam after SANREN (South Africa), KENET (Kenya) and ZAMREN (Zambia). UbuntuNet Alliance continues to promote deployment of the service in the region. During the Federated Applications training in Dar es Salaam in April 2016, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training. With the eduroam experts from SANREN, UbuntuNet Alliance is currently looking into the possibility to provide this training in the coming months.

All other regions were investing effort in planning and trying to create the commitment of institutions or NRENs to join the project. The result of this work will support the implementation of new federations and new national roaming operators of eduroam.

1.2.3 Work Package 3: Cloud Provisioning and Group-ware Standards

During the reporting period, the work package team has worked in three tasks:

- 1) The preparation of the beta portal that will contain the applications and implement the groupware standards,
- 2) The assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation, and
- 3) The planning and design of a framework for group inter-operations and service catalogue implementation between cloud infrastructures

In the first task we started from the Colaboratorio tool built during the ELCIRA Project, and perform the following changes necessary to for the task of becoming a prototype for a global portal:

Modifications to the Registration System (SSO and Federated access)

- Upgrade of the registration system for using a modular approach and remove external software dependencies, graphic improvements

- Responsive design to fit mobile and desktop interfaces on registration system

Preparation for multiple languages including the use of extended characters set

- Multi-language adjustments (encoding and visualization) on registration system

- Multi-language adjustments (encoding and visualization) on communities system

- Multilanguage for academic breaking news, global agenda

Modification for multiple instances deployment

- Graphical user interface (GUI) enhancement and securing

- VCEspresso access modifications to allow personalization (NREN logo, and moderation key)

Communities system changes

- Registration system graphical user interface (GUI) enhancement and securing

- Responsive design to fit mobile and desktop interfaces on communities system

- Usability improvements in the communities system

- Modularization of modules for news and agenda to multiple sources

- Allow the NREN to define its own sources for news and agenda

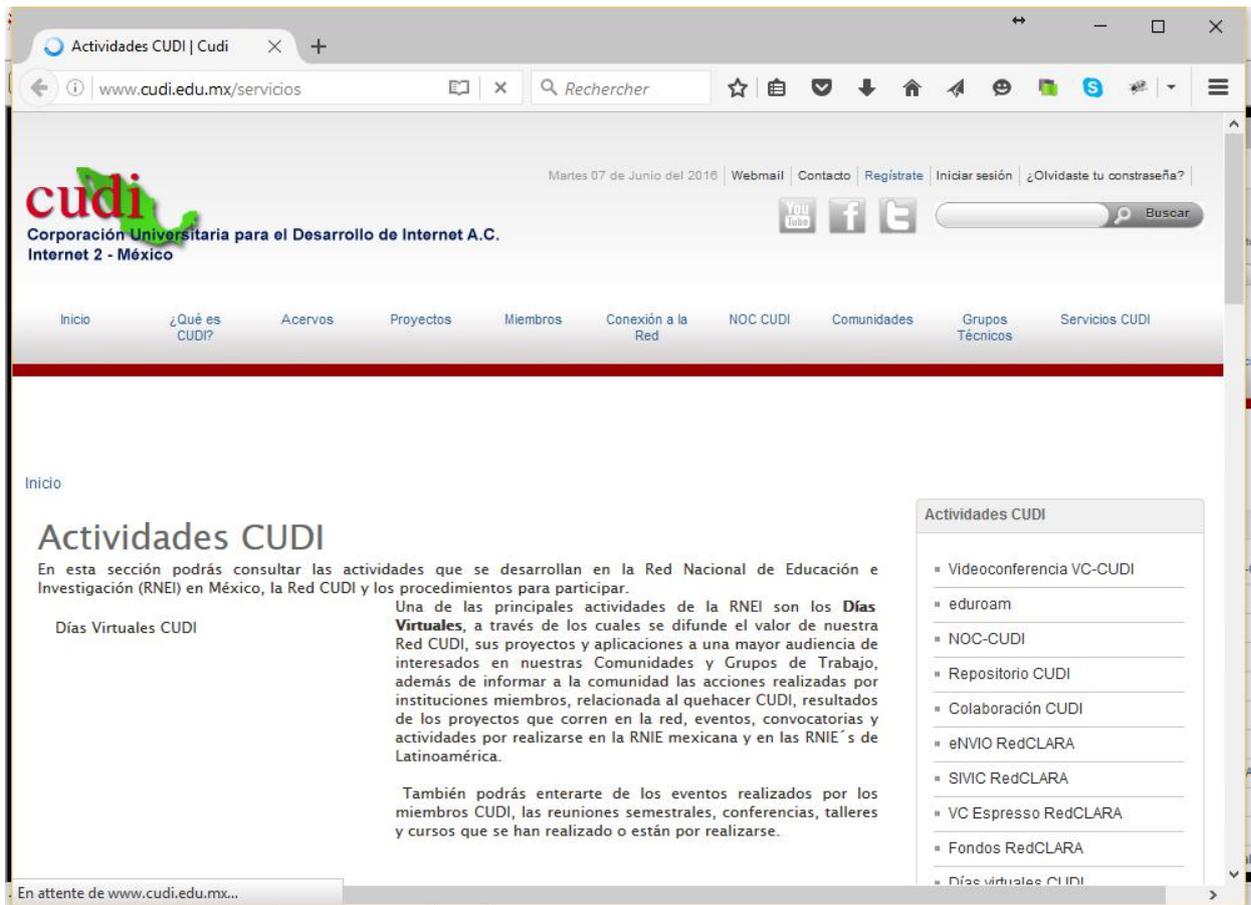
- Allow NRENadmin to define information sources from the NRENs

In order to deploy the pilot infrastructure (Colaboratorio), after initial contacts with the candidate RREN/NREN at management level, the work package team usually works directly with service and technical leaders of the RREN/NREN to work on the Colaboratorio pilot service implementation. Decisions like service look and feel, federated access deployment and which services to integrate are taken into account within the deployment process.

There are still some challenges in trying to convince some NRENs not to start every service from zero. NRENs seems to think that they need to install every service in their own premises to achieve a proper knowledge transfer. Thanks to the promotion, and a close work with each NREN, several of them have changed this mindset and understood that it is better to join forces in a federated effort, and learn together in the process. Colaboratorio promotion and dissemination has been done through several activities well

described in the work package 5 report in this document.

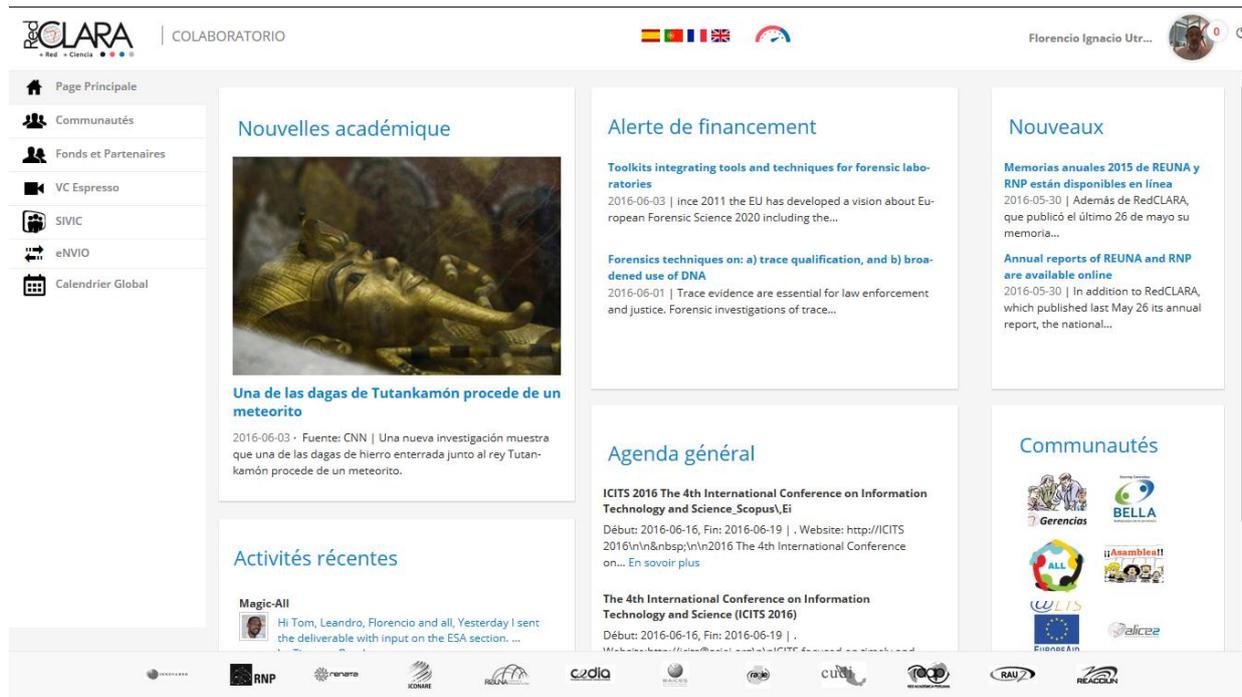
During this first year Colaboratorio has been implemented for the Ecuadorian NREN (CEDIA) that passed Colaboratorio in production on November 22/2015 and Mexico (CUDI). Colaboratorio is implemented in different flavours to fit the NREN requirements. For instance, in CUDI's case, the integration used the services VCEspresso, eNVIO, SIVIC, and the Funding systems from Colaboratorio, but in WACREN (deployed in the context of the TANDEM Project) and CKLN's cases, they use the entire system and localize some services like VCEspresso and mailing-lists for service convenience.



The Colaboratorio Portal in the Mexican NREN deployment

There is an undergoing work with South Africa (SANREN), Middle East (ASREN), and Ethiopia (EtherNet), to deploy Colaboratorio, and it is foreseen that to have at least 4 new deployments by the end of the project.

Collaboration with RENATER (France), WACREN and the TANDEM project resulted in Colaboratorio's translation to French language.



The Colaboratorio Portal in French

For the second task, the assessment of the existing group management standards, NRENs tools and value services for the global communities, the WP carried out the following tasks:

Group Management Standards

- Research study and testing of group management tools
- Testing on demonstrative and development platforms

Applications and tools

Research of Open Source tools to be included

- Etherpad
- Open edX
- CNC (Virtual storage)

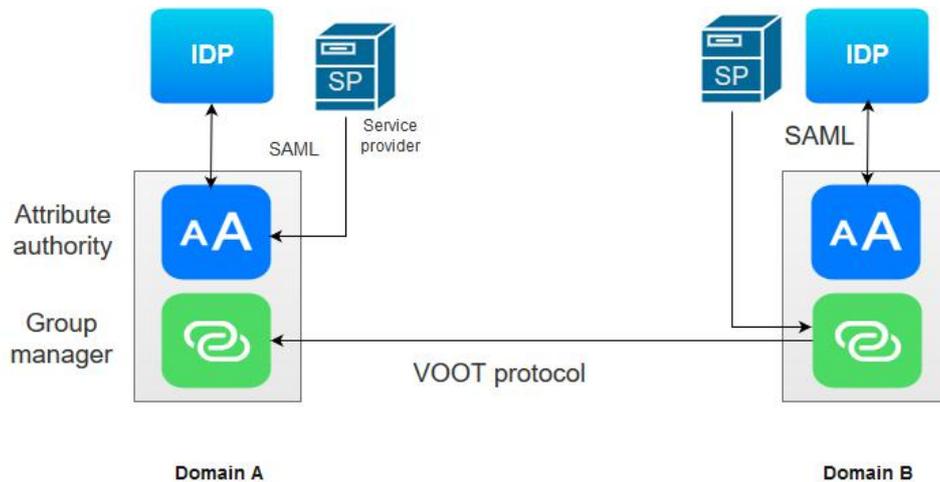
VCEspresso System

- Allow multiple recording servers and allow moderation access

Open repositories service

- Upgrade of the DSPACE repositories system to the latest version
- Connect the repositories system to the federated environment
- DSPACE graphical user interface (GUI) modifications

To decide on the standards to be chosen and the pilot implementation strategy for the groupware the working group had a face to face meeting in March 10 to 11 of 2016 in Vienna (AT) with representatives from the NRENs from Middle East (ASREN), France (RENATER), Czech republic (CESNET), Greece (GRNET), Caribbean (CKLN), Mexico (CUDI) and Latin-America (RedCLARA). In this meeting, the main objective was agree on how to deploy the group management feature between federations. The subject was discussed in previous meetings and from the result from the Vienna work it was established an architecture using a Group Management entity attached to an SAML attribute authority (AA). The architecture can be summarized as in the following picture:



The group agreed that the group managers can be a separate entities that reside in the attribute authority, so no additional trust relation would have to be set up. The only connection that still must be agreed between providers is between group managers through the VOOT protocol. The main agreements achieved were:

- a) The group management deployment shall be formed by three components: a) an SAML attribute authority (AA), b) a group manager (GM) application, and c) a group management proxy (GMP).
- b) The protocol to exchange group information will be VOOT. VOOT is an adaptation of the SCIM protocol, for the NREN needs.
- c) The group membership would be validated using standard SAML attributes.

For the third task, the planning and design requirements for the federated group management pilot was done. The work involved the definition of the services (FileSender, Colaboratorio, Docuwiki), the use cases, and the protocols for the implementation. This work required a high level of interaction among the partners, and the provisioning of resources by various of them. RENATER offered Sympa, and a service instance of the FileSender; RedCLARA provided Colaboratorio, and CESNET provided PERUN and Docuwiki. The integration of these applications using the VOOT protocol was designed and defined in several meeting, including the presence meeting at Vienna (Austria) in March 10-11. The result from this interactions was to use a service implementation integration a SAML Attribute Authority, the VOOT protocol and the group manager, as shown in the following picture:

The working group decided that the following will be the minimum applications for the pilot integration between regions:

- Sympa-FileSender,
- Colaboratorio
- PERUN-Dokuwiki

At the date of this report, the working group is advancing in the pilot set up, and is testing the PERUN, and SYMPA service instances created for this purpose.

In the fourth task, the activities have been focused on the definitions for the pilot implementation, i.e.

- a) Service authorization based on group information,
- b) Group members action, and
- c) Group mailing list action.

The first case, service authorization based on group information, allows to provide access to a privileged resource based on the group membership available in the network; the second case, group

members action, allow to do a get operation of the group members that the user belongs to, and do some action with it; and the last case, group mailing list action, allows to use a mailing list associated to a group to invite its members without disclosing members information. Some of the characteristics worth highlighting in the pilot are the integration to eduGAIN, and that groups' information will be shared used a direct agreement between parties. With regard to the service catalogue, the group did the evaluation of the GÉANT catalogue, how it works, and was agree to carry out the installation for the MAGIC applications. The directory application will be installed to feed applications when the report have being delivered.

1.2.4 Work Package 4: Agreements for Real Time Collaboration

The work of this WP, led by RENATA has focused during this period on NRENum training and implementation as well as setting the necessary agreements for the implementation of interoperation of real time applications.

In particular, an agreement of MAGIC with GÉANT to work on RTC standards has been developed and signed. Also, agreements are under way with APAN (Asia Pacific) and AARnet (Australia), who have extensive experience in RTC applications and are leading the Global CEO working group on RTC.

The first NRENum.net training activity was carried out during the TICAL 2015 conference held in Viña del Mar - Chile, in July 2015 where 11 participants from different countries in Latin America were trained on how to implement NRENum.net. People who attended this event were contacted by RENATA to start working on the implementation of NRENum.net in their countries.

An On line training course was also developed to ease training in the different world regions. The course is available on line in English, French and Spanish. The course is intended to guide NRENs on delegation and technical issues related to establishing an NRENum.net service. RedCLARA has offered its Moodle Platform to host these training courses and RENATA deployed documentation about the use and implementation of NRENum.net service. This course is oriented to systems administrators of NRENs in charge of running this service for their users and institutions.

Online training material is On line in the following links:

- Spanish: <http://cursos.redclara.net/course/view.php?id=47>
- English: <http://cursos.redclara.net/course/view.php?id=48>
- French: <http://cursos.redclara.net/course/view.php?id=49>

Invitations to participate on NRENum.net service offering RENATA's support were sent to all NRENs in Latin America as well as, through the different world regional leaders, to the other participating regions. A special emphasis has been put to invite NRENs from Asia Pacific and Africa.

In Latin America, RAICES from El Salvador and RAU from Uruguay showed immediate interest on this service. A meeting has been done with each of them to explain information, benefits and to schedule a work plan for delegation of the NRENum.net zone to the NREN itself.

Following this effort, three (3) new NRENs have already become members of NRENum.net service. The three new NRENs are (chronologically added): CEDIA from Ecuador (24 July 2015), RAICES from El Salvador (30 September 2015) and recently CUDI from Mexico (15 October 2015). This information has been taken from NRENum.net news on <https://nrenum.net>.

With RedCLARA support, CEDIA has been guided in their delegation process of the NRENum.net zone (+593). CEDIA did a very fast step with configurations and proceedings so they were the first delegated country.

RAICES the Salvadorian NREN did a very good job and RENATA supported every step in the configuration of the DNS zone for the country code (+503), they had to overcome technical issues because their DNS haven't had reverse domains registered but finally zone was fully delegated.

CUDI from Mexico did a very good job on installation of DNS servers and the configuration of the NRENum.net zone (+52) on them. They had the same problem because their DNS servers haven't had reverse domains registered, after these problems were solved and configurations were set the zone it is now delegated.

A work plan has been made in order to break down necessary steps to implement NRENum.net by an NREN and we have been using it with newly delegated countries to accomplish the Deliverable 4.2. "NRENum.net deployed in 3 new NRENs" with deadline month 12th. These are the newly delegated country codes to NRENs (chronologically added):

- RAU from Uruguay (27 November 2015)
- LEARN from Sri Lanka (14 December 2015),
- REUNA from Chile (7 January 2016).

This information has been taken from NRENum.net news on <https://nrenum.net>.

RAU from Uruguay had a great expertise in DNS set up, thus the process ended very fast and finally the zone "8.9.5.nrenum.net" was delegated according to the +598 E.164 country code.

LEARN the Sri Lanka NREN created the zone for +94 country code and after fulfilling delegation requirements they made it, LEARN did a great job becoming our first member of APAN joining to NRENum.net service.

REUNA Chilean NREN after completed the zone creation for the +56 country code in their two DNS servers zone was delegated with no complications on the way.

Unfortunately, we were not able to achieve the goals of Milestone 11, i.e. to incorporate three (3) Asia Pacific countries to the NRENum.net service, we have sent many invitations in collaboration with TEIN*CC, but we did not have the impact we expected. Nevertheless, we have recently made advances and we are very confident that we will be able to complete this MS by the end of the next period.

NRENum.net service had a great acceptance in Latin America and now we want to spread this service in other regions.

We consider these are the main reasons we found in the adoption of NRENum.net service: lack of promotion in order to understand how works this service, what are the benefits for NRENs and in some cases technical issues.

We have moved forward on DNSSEC activities related to the Deliverable D.4.3, currently we have RENATA from Colombia and RAICES from El Salvador that has secured their respective zones using DNSSEC technology.

WP4 has been led by RENATA with contributions from CEDIA, CUDI, NIIFI, RedCLARA, RENATER, REUNA, RNP, and WACREN

1.2.5 Work Package 5: Global Science Communities

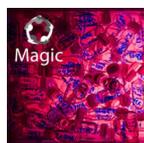
During the reported period, one of the main activities was centred in the definition of the priority areas that will be taken to the creation of global science communities. After looking at several considerations, that include a direct consultation to the partner NRENs and RRENs, the partners decided to adopt the results of the ELCIRA project "Report on Key Research Communities", because even though it represents the information provided in Latin America, it also has similarities with the situation of other regions. For example, a report from CKLN showed that the Caribbean region had the following priority areas: Health, Earth Sciences, Security, Agriculture, Forestry & Fisheries and Education.

The areas presented in ELCIRA are: Biodiversity, Environment, e-Health and High Energy Physics. Having looked at feedback coming from the regions, partners decided not to include High Energy Physics at present, but to continue with a proposal from Mexico to create a Community on Remote Instrumentation on nano-structured materials.

The overall goal for these MAGIC Global Science Communities is to enable thematic experts and people with same interests from different parts of the world to interact and share experiences with each other with the aim of advancing knowledge and tackling global challenges.

With this objective as a guide, it was sent a call to regional partners to submit names and contact details of potential participants from all MAGIC regions to join the Global Science Communities in the identified priorities, efforts were directed at identifying champions for each community. The champions are a crucial figure in the work of the communities, especially because the communities being academic/scientific in nature require someone who is an insider in the field to guide and coordinate the work with fellow specialists.

Opening Conferences for the four Global Science Communities were held during the month of February 2016. The following was the format and presentations for the opening meetings for each community.



Global Science Community on E-Health

Objective: The Global Science Community on eHealth aims to increase engagement of practitioners, researchers, academics and students of eHealth from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

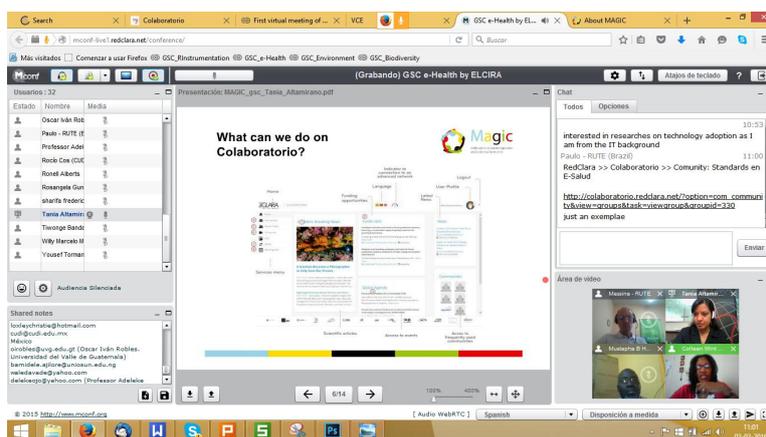
Opening Conference: 2 February 2016 (<https://eventos.redclara.net/indico/event/634/>)

Members: 58

Countries: Belize, Brazil, Canada, Colombia, Chile, Germany, Dominican Republic, Etiopia, France, Jamaica, Mexico, Malawi, Nigeria, South Africa, Uganda.

Community Champion: Prof Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>



First virtual meeting of the Global Science Community on e-Health



Global Science Community on Biodiversity

Objective: The Biodiversity Community aims to increase engagement of practitioners, researchers, academics and students of biodiversity from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 11 February 2016

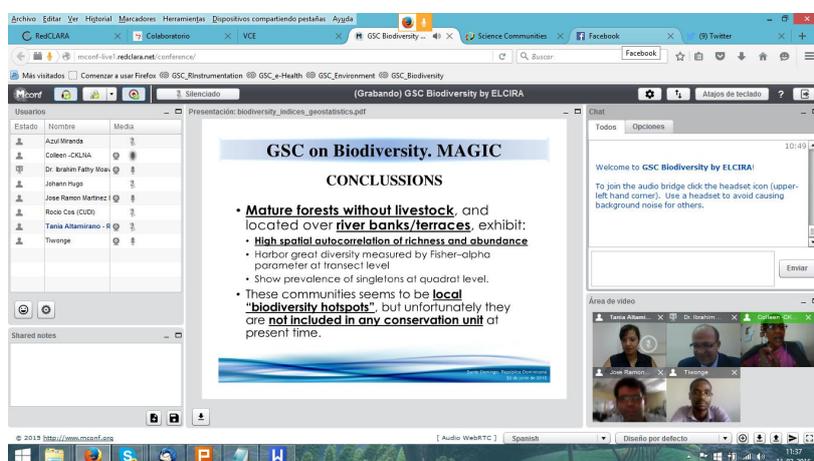
(<https://eventos.redclara.net/indico/event/639/>)

Members: 31

Countries: Argentina, Colombia, Chile, Dominican Republic, France, Ghana, Jordan, Libano, Malawi, Mexico, South Africa.

Community Champion: Prof José Ramón Martínez Professor and researcher of the Universidad Autónoma de santo Domingo (UASD), Dominic Republic.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity>



First virtual meeting of the Global Science Community on Biodiversity



Global Science Community on Environment

Objective: The Environment community aims to increase engagement of practitioners, researchers, academics and students of the environment from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Opening Conference: 18 February 2016

(<https://eventos.redclara.net/indico/event/640/>)

Members: 28

Countries: Argentina, Chile, Dominican Republic, France, Ghana, Jamaica, Malawi, Mexico, Nigeria.

Community Champion: Dr David C. Smith, Coordinator Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-environment>



First virtual meeting of the Global Science Community on Environment



Global Science Community on Remote Instrumentation

Objective: The Remote Instrumentation community aims to increase engagement of practitioners, researchers, academics and students involved or interested in remote instrumentation from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

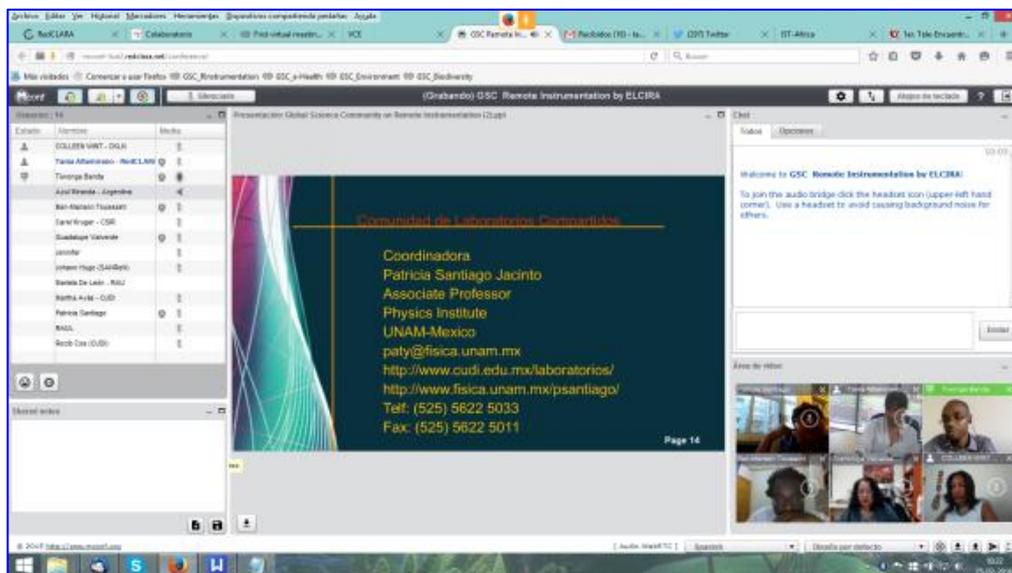
Opening Conference: 25 February 2016 (<https://eventos.redclara.net/indico/event/641/>)

Members: 16

Countries: Chile, Colombia, Dominican Republic, Malawi, Mexico, South Africa, Uganda.

Community Champion: Prof Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico

Webpage: <http://www.magic-project.eu/index.php/global-science-communities/gsc-remote-instrumentation>



First virtual meeting of the Global Science Community on Remote Instrumentation

The results of the opening meetings provide a sense of the diversity of the communities. In the e-Health GSC, one output was the development of a survey among the members to identify themes of interest and current activities of the participants. The results showed that the main areas are: Cardiology, Child and Adolescent Health, Standards for Telemedicine, and Health Informatics. The next steps include a grand round about this topics in the month of July, 2016, coordinated and led by the champion, Luiz Messina, from RUTE, RNP, Brasil.

The Biodiversity community scheduled a second activity on May 5th, 2016 entitled “Experiences from around the World” with the participation of representatives from Egypt, Brazil, Trinidad & Tobago and Dominican Republic.

<https://eventos.redclara.net/indico/event/661/>



The Biodiversity community call to join

For the Remote instrumentation the next steps include an informative session scheduled for June 16, 2016, on “Nanoparticles for Drug Delivery in Parkinson”.

Another topic that was thought to be very useful for communities is Science Communication, simplifying research studies and findings for various audiences (policy makers, end users, founders etc).

Information System on Worldwide Funding Opportunities

Another important activity was the work on the identification of open calls to feed the Information System on Worldwide Funding Opportunities and Partner Search database, which is accessible through Colaboratorio. To follow up the activity, a report system was developed that allows access to calls published in a specific period. The report of the publication is available on line and can be seen in (link for internal use, not for dissemination):

http://dev1.redclara.net/joomla4_new/joomla4/reporte_fondos/

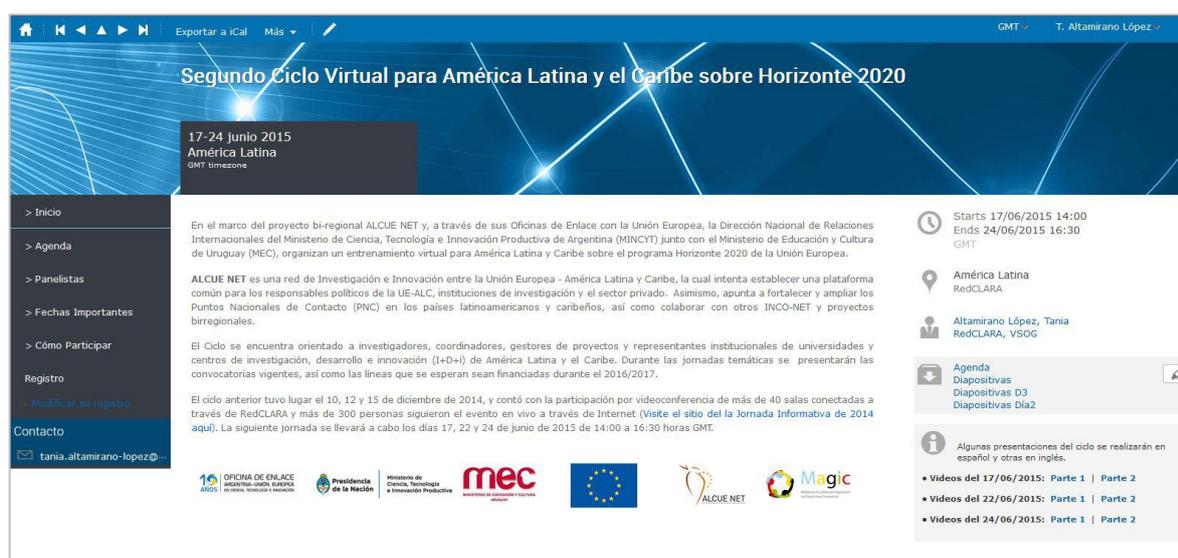
Besides, the system had a process of improvement that included:

- ❖ Adjustment of the form used to feed the data base - September 15th, 2015.
- ❖ Report system about the calls uploaded in the system - October 20th , 2015.
- ❖ Adjustments of the information display on the public page - January 29th, 2016.
- ❖ Implementation of the options to edit and eliminate entries published on the system - March 3rd, 2016.
- ❖ Weekly dispatch to the Colaboratorio user’s email with information about open calls according of their area of interest specified on their profile - March 8th, 2016.
- ❖ Enable the option of publishing a calls in different language (Spanish, English and Portuguese) when available - April 6th, 2016.

Global virtual days on Horizon 2020 calls

A three day session dedicated to Latin America and the Caribbean titled: “Segundo Ciclo Virtual para América Latina y el Caribe sobre Horizonte 2020” (Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020)² was developed. It took place on June 17-24, 2015 and was developed jointly with the Argentine Bureau for Enhancing Cooperation with the European Union (ABEST III), the Latin America, Caribbean and European Union Network on Research and Innovation (ALCUENET) and the Ministry of Education and Culture of Uruguay.

For the organization of the activity, a web page was created (See: <https://eventos.redclara.net/indico/event/495/overview>) on the event manager of the collaborative platform, Colaboratorio (See image below).



Webpage of the Virtual Information day on H2020

The dissemination activities included news, a newsletter and invitation by email to potential participants from the region (See image). The event was hosted using H323 videoconference, therefore those interested had to register their videoconference rooms through the form available on the website and had take part in the test session to guarantee the quality of the transmission during the actual event.

The impact of the activity was shown in the elevated number of videoconference rooms registered to participate in the cycle: 56 in total. Additionally, the event was streamed live through the Internet, with a peak of 120 users connected at the same time and a total of 290 participants by streaming on the three days (See image below).

² This was a second version of a previous activity developed; the information is available here: <https://eventos.redclara.net/indico/event/435/>



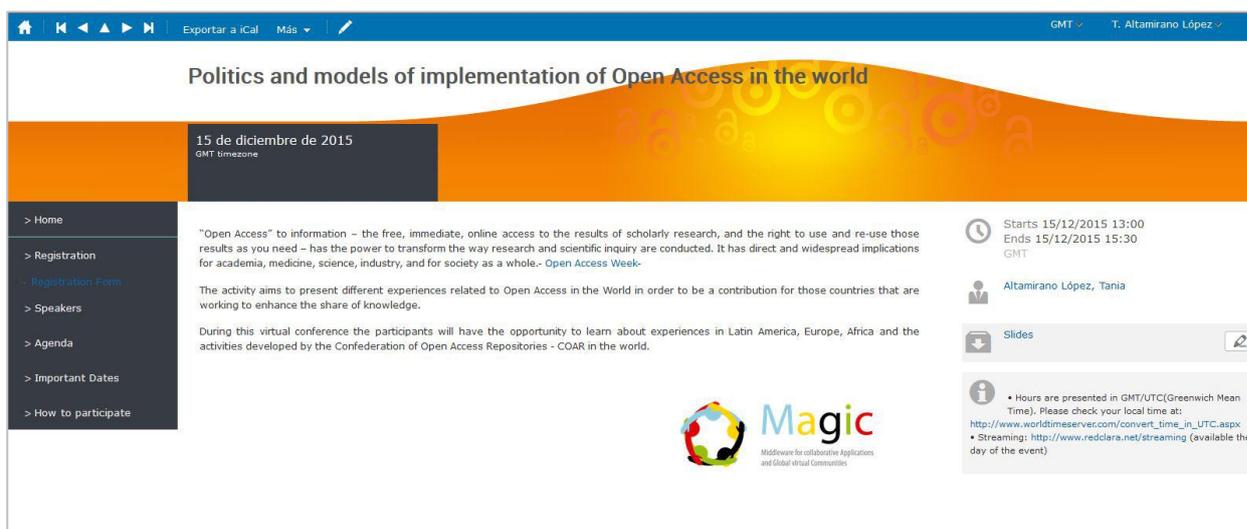
H2020 Virtual Information Day

Global virtual days on priority worldwide fields

Another activity planned with the communities is the development of global virtual days on priority worldwide fields. In this context, on December 15th, 2015 a virtual day on Politics and models of implementation of Open Access in the world. took place

For the coordination of the event, a web page was created (see: <https://eventos.redclara.net/indico/event/623/>)

The activity was mainly directed to the African region, thence all the presentations and the material generated (available for download from the home page of the web site) was in English. The agenda included the participation of representatives from Latin America, Africa and Europe who presented their respective experiences.

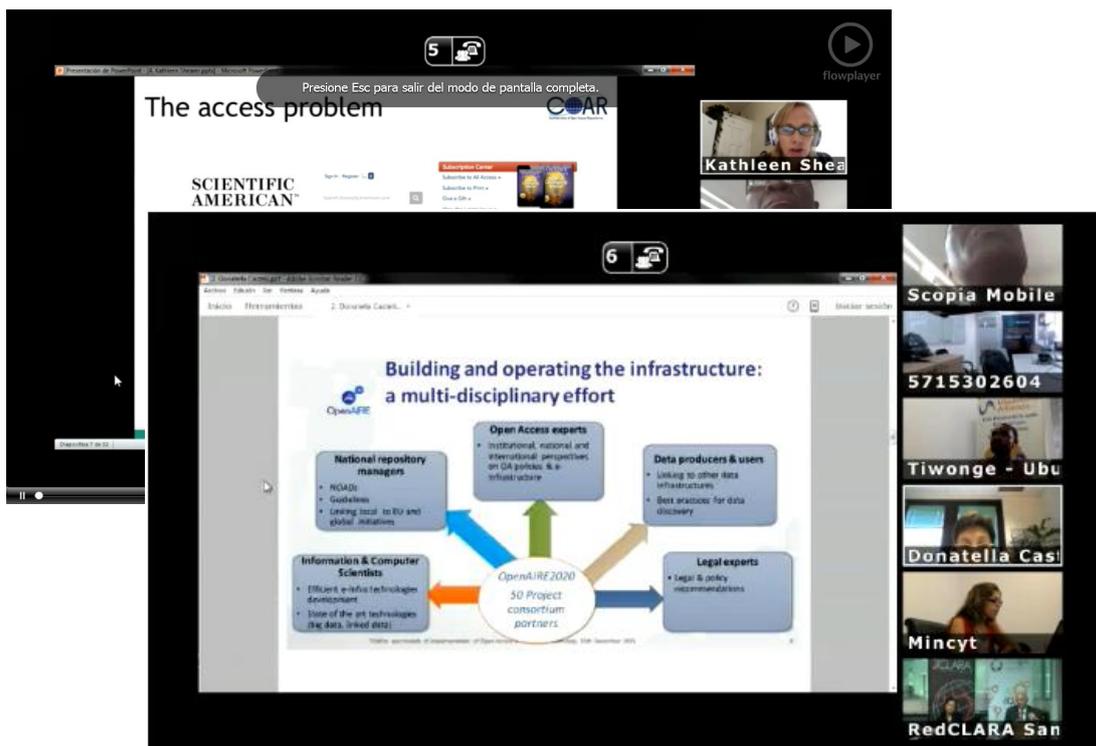


Virtual day on Politics and models of implementation of Open Access

For the dissemination of the activity, an informative article was generated and published in the web pages of the RedCLARA, MAGIC and was also included in the informative material of the partners institutions (See image below).

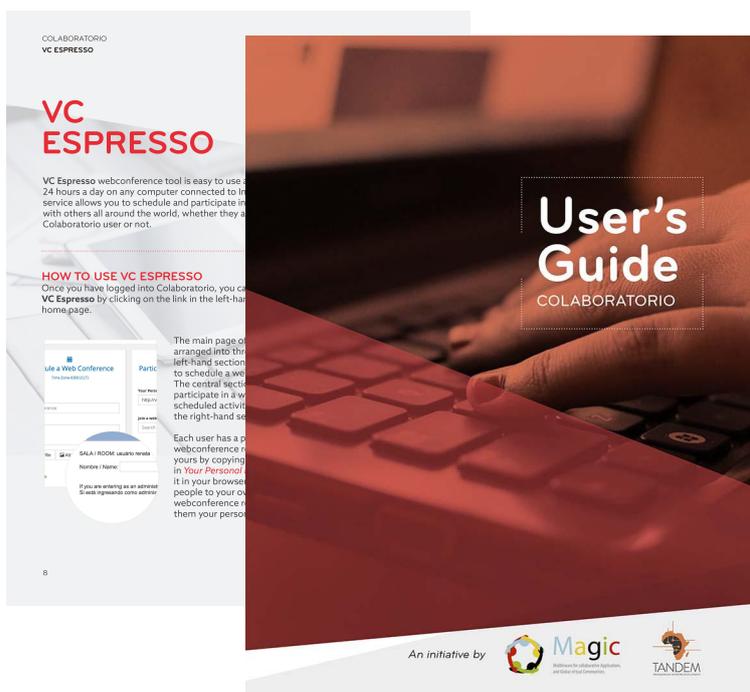


The event was conducted using a H323 videoconference system with a streaming transmission. The participation included 22 videoconference rooms registered and a peak of 20 participants by Internet. For those connected remotely, there was the option of sending their comments and questions using the Skype account: dias.virtuales to interact with the speakers.



Training materials to show the uses and benefits of the global collaborative tools

To enhance and support the work of the Global Science Communities, a User Guide on the Colaboratorio was developed. It presents an easy and friendly explanation on the main elements of the platform and how to take advantage of them in daily work. The material is available in English and Spanish from the MAGIC website: <http://magic-project.eu/index.php/training>



The User Guide to the Colaboratorio

1.2.6 Work Package 6: Dissemination and Training

Training in Latin America, Arab countries and The Caribbean:

Within the reported period three face-to-face training sessions were carried out:

- **Federated Applications (FedApps) Training**
Date: 26-28 April 2016
Venue: Ramada Resort, Dar es Salaam, Tanzania
Attendees: 22 engineers from 14 NRENs members of the UbuntuNet Alliance

- **Federated Access and eduroam workshop in the Caribbean**
Date: October 7 to 9, 2015
Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica
Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).
Note from CKLN: “Attendees are expected to deploy the pilot and implementation in their respective NRENs/Institutions on the subsequent phases of the project”.

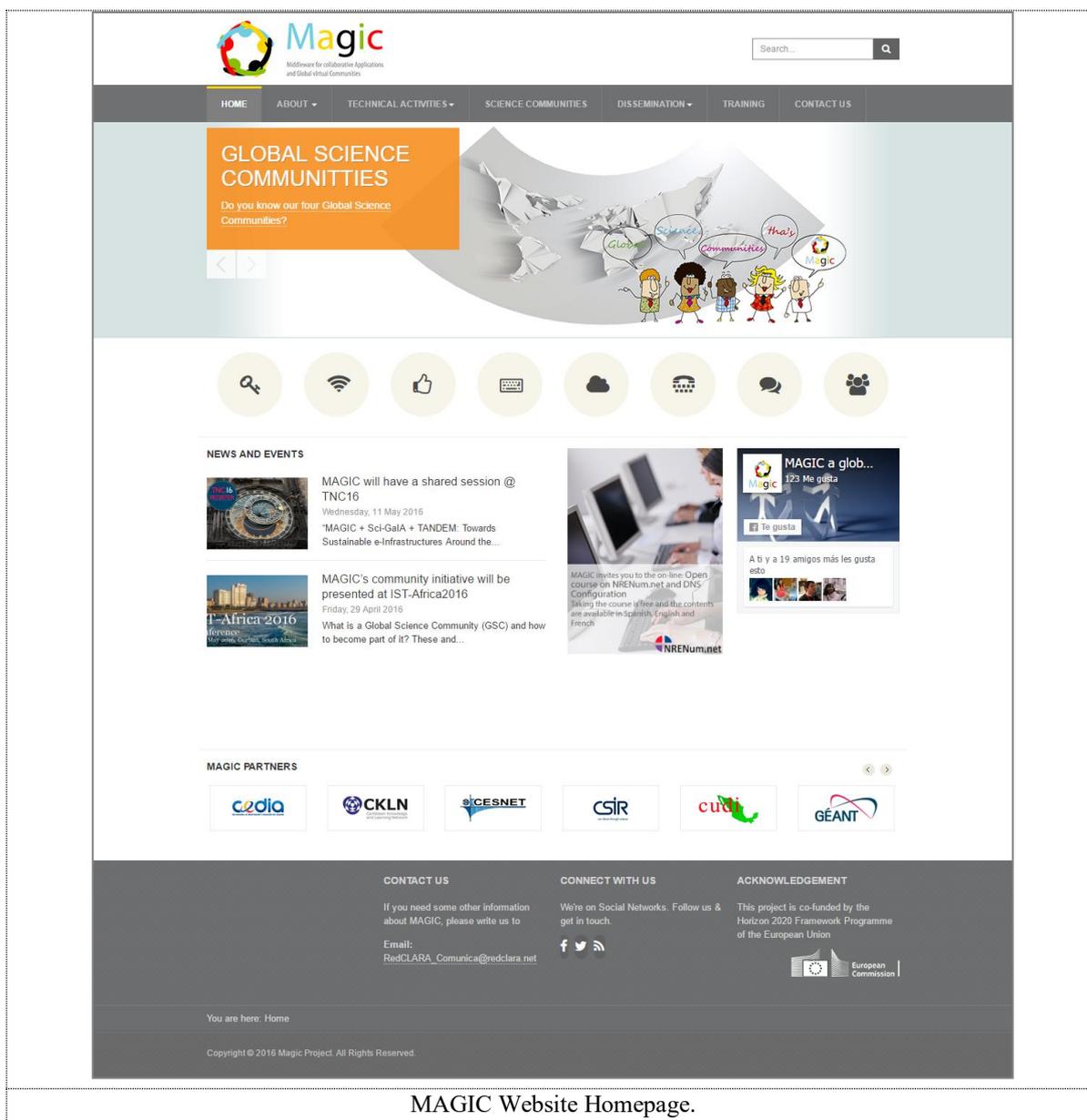
- **Workshop on Joining eduroam and Identity Federation**
Date: September 8 to 10, 2015
Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan
Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.
Note from ASREN: “Participants should start immediately working on eduroam then idp”.

- **Mobility Federated Services and Nrenum.net**
Date: July 8, 2015
Venue: Viña del Mar, Chile. Enjoy Conference Center
Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

Intense dissemination to the on-line open course on NRENum.net and DNS - was carried out by means of the MAGIC communication channels and of those of its partners as well.

On-line presence:

MAGIC’s on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social interphases and its by-monthly Newsletter.
Regarding its Intranet, it is extensively used by the project partners for all its internal communications and for the different WP interaction.



MAGIC Website Homepage.

The MAGIC website was developed during M01 and M02, and delivered on-line on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was delivered on the same date in Facebook and Twitter.

The success of the website and the social network pages, has been statistically measured by WP6. The website usage is measured using the Piwik open-source tool which started taking website statistics on 16 June 2015, and the main numbers are the following ones:

	Jun.'15	Jul.'15	Aug.'15	Sep.'15	Oct.'15	Nov.'15	Dec.'15	Jan.'16	Feb.'16	Mar.'16	Apr.'16	May '16
MAGIC Project												
Number of unique visitors	231	211	340	328	427	849	412	563	408	378	417	261
Number of pages seen	751	610	905	875	943	2062	887	1102	876	821	779	622

MAGIC Website main statistics of usage

On May 2016, “MAGIC a global connection” (Facebook) and “@MAGIC_our_voice” (Twitter)

showed a growth of more than 200% each in its outreach.

Regarding the project’s newsletter, under the name of “MAGIC TIME” five editions were delivered to all the project members, three in 2015 and 2 in 2016 (January and May), all of them can be checked out at <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.



First edition of the MAGIC TIME, July 2015.

The following table show the statistics of the five newsletters:

	July	September	November	January	May
Opened emails	42	42	38	44	78
Recipients	73	78	78	83	184
Total recipients clicks	15	9	5	9	7
Total clicks	48	10	6	42	10

Brochures and promotional material done

In order to serve the different dissemination needs, project brochures were printed in Spanish (1000 copies), English (1500 copies), and Portuguese (1000 copies) and also translated into French. All these brochures have been published in the website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format, and most of them were distributed in those international events where MAGIC had representation.

Regarding the branded promotional goodies, within the reported period we did the following pieces for its distribution in the international events in where MAGIC had representation within a booth:

- 400 umbrellas
- 1000 speakers for mobile devices
- 1500 vintage puzzles
- 150 pen-drives and key holders

The distribution of these material will be explained in the following paragraphs.

Participation in international events

Within the reported period, the MAGIC project was disseminated within three major international events, the first two of them in Latin America and the third in Europe. In all these events MAGIC had space in a stand where it distributed brochures and branded promotional goodies among the attendees.

July 6th to 8th, TICAL2015, Viña del Mar, Chile, Latin America:

MAGIC had an exhibition booth at TICAL2015 where brochures in Spanish and umbrellas with MAGIC's logo were delivered. A video explaining MAGIC in Spanish was generated for the occasion MAGIC and also published in MAGIC's Facebook interphase. In addition, videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts. Training sessions within TICAL's Conference framework were coordinated.

August 25th to 27th, RNP2015 Forum, Brasilia, Brazil, Latin America:

MAGIC had a space at RNP stand. Brochures of the project were translated into Portuguese and distributed among the attendees. In addition promotional MAGIC umbrellas were given away between those who requested more information about our project. Videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

October 20 to 20nd, ICT2015, Lisbon, Portugal, Europe:

In a common effort with TANDEM and Sci-GaIA, under the name of GIISC (Global ICT Infrastructures for International Scientific Collaboration), the MAGIC project had a shared exhibition booth at the INCO Village, and a Networking Sessions in ICT2015. Within the stand MAGIC delivered brochures with the Project information in English, Spanish and Portuguese, and branded goodies: vintage puzzles and speakers for the mobile devices.

November 16th to 20th , Maputo, Mozambique, Africa:

MAGIC had a relevant participation in **Sci-GaIA Workshop on Open Science**, by means of the presentations made by representatives of GRNET and RedCLARA

During November 18th and 19th, MAGIC was introduced to the attendees of the **UbuntuNet Connect 2015 Conference**, throughout three presentations made by representatives of RedCLARA and GRNET.

e-AGE 2015, December 7 and 8, 2015, Casablanca, Morocco, Arab States:

With a stand shared with TEIN*CC where the MAGIC project information and promotional material was distributed and its participation in the Conference third session, entitled as "Evolving Services for Science, Research, and Education Communities", by means of the presentations of representatives of GRNET and RedCLARA, the global collaboration project could share in a face-to-face fashion the importance of the participation of the Arab research and education community in the project.

APAN41, January 24 - 29, Manila, The Philippines, Asia:

At the 41st Asia Pacific Advanced Network Meeting - Manila Revisited: Enabling Connectivity for an Integrated World, MAGIC was represented by RedCLARA through a presentation entitled as "MAGIC Project and NRENum Service Middleware for collaborative Applications and Global Virtual Communities".

The following table shows the number of dissemination and promotion pieces given away in all these events.

Pieces	Number of pieces delivered in each international event				
	TICAL2015	RNP2015 Forum	ICT2015	UbuntuNet Connect 2015	e-AGE 2015
Brochures in Spanish	600 (the Ecuadorian and the Chilean NRENs asked for brochures to send to their members)		100		
Brochures in Portuguese		300	130	100	
Brochures in English			500	200	300
Umbrellas	257	60		60	
Speakers			500	250	
Puzzles			700	300	
Pendrives-key holders					200

Also, within the reported period MAGIC's participation in two international events was under preparation: IST-Africa 2016 and TNC16. This will be reported in the upcoming Progress Report.

WP6 has been lead by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, NITC, RNP, TEIN*CC and WACREN.

1.3 Impact

As the information on expected impacts is relevant as was proposed in the DoW, we will go one by one analysing the advances in the Indicators and expected dates to reach its full achievement.

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoW): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:

Training in the Arab Countries

Number of trained engineers 11

Training in The Caribbean

Number of trained engineers 15

Training in the East and South African countries

Number of trained engineers 22

Total so far

Number of trained engineers 48

b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENs and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries having signed eduroam agreements with MAGIC
4 new pilot federations

Advances in the Indicator:

Number of countries committed to eduroam so far: 10

Latin America

Caribbean 1 (Jamaica)

Arab Countries (ASREN) 5 (Algeria, Lebanon, Jordan, Tunisia and Oman

East and South Africa (UbuntuNet) 2 (Uganda, Malawi)

West Africa (WACREN) 3 (Senegal, Ghana, Nigeria)

Pilot federations already created and in process of becoming eduGAIN members

Morocco

Algeria

Lebanon

Jordan

South Africa: SAFIRE

Malawi

Uganda

WACREN eduID

c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

The regions committed are: Europe, Arab Countries, The Caribbean and Latin America. It is expected that West Africa and East/Southern Africa will also join the pilot.

d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: *6 countries in 2 regions having incorporated NRENum.net for Global dialling*

Advances in the Indicator:

*5 countries in LA already joined NRENum.net
1 Countries in Asia has already joined*

Conversations are under way to include several Asian countries in NRENum. Our estimate is that over three more countries will join in the next reporting period.

e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

*5 NRENs using applications built and deployed/hosted by another.
2 NRENs with a pilot cloud applications portal implemented
The number of applications deployed in the pilot test will be at least 2
The Directory of the applications provided by NRENs available for use of other NRENs contains at least 10 applications*

Advances in the Indicator:

Within the Colaboratorio container developed by RedCLARA, the following applications are contained:

*Filesender, developed by UNINET and modified by RENATER is hosted in RedCLARA
MCONF, an Open Source WebConference System modified by RNP and RedCLARA, is hosted in RedCLARA, RNP and soon RENATA, ASREN and NgREN*

The Funding & Partners funding database hosted in RedCLARA

These applications are being used by CEDIA (Ecuador), CONARE (Costa Rica), NgREN/WACREN (Nigeria), ASREN, EtherNet and others are coming. The above result is added to the existing Colaboratorio implementations in RENATA (Colombia), CKLN (Caribbean), CUDI (Mexico) and the undergoing work with INNOVARED (Argentina) that is on testing phase.

Currently, the following applications are being implemented as shared applications

Docuwiki, a wiki system to be hosted in CESNET

JITSI, a webconference system implemented at RENATER

Etherpad, a collaborative editing system hosted in RENATER

CNC, a cloud storage system developed and hosted in RNP

Other applications are being studied to be included.

Thus, we currently already have over 5 NRENs using shared applications

Over 4 NRENs with the applications portal implemented
The number of new test applications in the pilot will exceed 4
The Directory of applications is currently under development but it will certainly contain well over 10 applications.

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

2 information days have been organised in Year 1, 4 more are planned for Year 2.

The Database of funding is complete and providing information on a global at a Global scale

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

No review yet

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

Two tasks that has been delayed:

A) The Workshop of User Communities was delayed in two months. This was due to two factors: 1) the slow start in UbuntuNet and 2) the longer than expected time needed to define the areas of interest common to all world regions.

B) The Pilot on AAI and the Completion if the Training in AAI. This is delayed to October 2016 due to the delay in the start of CAREN2, necessary for Central Asia to organise their NRENS.

5.2 Use of resources

The following table shows the amount of resources spent which amounts to € 765,955 and is requesting reimbursement for € 575,356. This amounts to 42% of the foreseen claims in manpower and 38% in travel expenses. This deviation is mainly due to the fact that the second project meeting has taken place in Month 13 and another conference is planned for March 2017.

Participant	(A) Direct personnel costs	(B) Other direct costs	(C) Direct costs of subcontracting	(F) Indirect costs (=0.25* (A+B+E))	(H) Total eligible costs (=A+B+C+D+F+G)	(K) Requested Reimbursement
CLARA	152.882 €	42.580 €	16.146 €	€ 48.866	€ 260.475	260.475 €
GEANT Ltd.	4.024 €	1.889 €	0 €	€ 1.478	€ 7.392	7.392 €
GEANT Association	9.466 €	10.225 €	0 €	€ 4.923	€ 24.614	24.614 €
RNP	22.350 €	8.680 €	0 €	€ 7.757	€ 38.787	0 €
RENATA	10.983 €	1.124 €	0 €	€ 3.027	€ 15.134	15.134 €
REUNA	9.473 €	2.633 €	0 €	€ 3.027	€ 15.133	15.133 €
CEDIA	1.310 €	3.270 €	0 €	€ 1.145	€ 5.725	5.725 €
CUDI	90.043 €	12.450 €	0 €	€ 25.623	€ 128.116	0 €
UbuntuNet	23.434 €	6.540 €	0 €	€ 7.493	€ 37.467	37.467 €
WACREN	29.044 €	5.545 €	0 €	€ 8.647	€ 43.236	43.236 €
ASREN	35.525 €	4.407 €	0 €	€ 9.983	€ 49.915	49.915 €
CESNET	8.199 €	1.930 €	0 €	€ 2.532	€ 12.662	12.662 €
GRNET	18.898 €	7.246 €	0 €	€ 6.536	€ 32.680	32.679 €
SURFNET	1.221 €	0 €	0 €	€ 305	€ 1.526	0 €
CSIR(SANREN)	6.160 €	2.880 €	0 €	€ 2.260	€ 11.301	0 €
RENATER	20.422 €	1.970 €	0 €	€ 5.598	€ 27.989	27.989 €
NIIFI	8.116 €	3.203 €	0 €	€ 2.830	€ 14.148	14.148 €
CKLN	11.439 €	8.584 €	0 €	€ 5.006	€ 25.028	25.028 €
CAREN NOC	700 €	2.307 €	0 €	€ 752	€ 3.759	3.759 €
TEIN*CC	2.304 €	5.754 €	0 €	€ 2.015	€ 10.073	0 €
Total	€ 465.994	€ 133.216	€ 16.146	€ 149.803	€ 765.159	€ 575.356

In general, the use of resources is in line with the planning, the only deviations to underline are:

UbuntuNet Whose slow start explain the low use of manpower during the first months. Now that additional personnel has been hired, they will invest more time to catch up with their activities, specially in WP5.

RENATA That went through internal reorganisation which forced them to concentrate their participation in WP4 only. The efforts committed in the other packages will be done during Year 2.

CESNET, SURFNet, GRNET, RENATER. Whose activities will be more centred in the coming months with their participation in WP2, WP3 and WP4.

In terms of manpower, the partners have spent a total of 141 PMs, i.e., 47% of the total manpower committed which is in line with the time elapsed which corresponds as average to 50% of the total time. The following is the detail of PMs spent by partner:

	WP1	WP2	WP3	WP4	WP5	WP6	Total Person/ Months per Participant
CLARA	8,4	0,3	18,2	2,4	11,7	9,5	50,7
GEANT Ltd.	0,4	0,0	0,1	0,0	0,1	0,1	0,7
GEANT Associati	0,3	0,8	0,1	0,0	0,0	0,0	1,1
RNP	0,5	3,5	0,7	0,7	1,0	1,0	7,4
RENATA	0,3	0,0	0,0	7,0	0,0	0,0	7,3
REUNA	0,5	0,3	0,6	1,9	0,0	0,0	3,2
CEDIA	0,2	0,3	0,4	0,0	0,0	0,0	0,9
CUDI	1,5	12,7	5,1	7,1	3,4	3,1	32,9
UbuntuNet	1,1	1,1	0,0	0,0	2,2	0,6	5,1
WACREN	0,3	1,5	0,8	1,3	1,5	0,5	5,8
ASREN	0,4	5,3	0,8	0,1	1,6	1,0	9,2
CESNET	0,2	0,5	2,5	0,0	0,0	0,0	3,2
GRNET	0,2	1,7	1,7	0,0	0,0	0,0	3,5
SURFNET	0,1	0,0	0,1	0,0	0,0	0,0	0,1
CSIR(SANREN)	0,5	0,0	0,1	0,0	0,5	0,3	1,3
RENATER	1,2	0,6	1,3	0,4	0,0	0,0	3,5
NIIFI	0,3	0,0	0,2	0,3	0,9	0,0	1,7
CKLN	0,4	0,2	0,2	0,0	0,7	0,0	1,5
CAREN NOC	0,3	0,2	0,2	0,0	0,0	0,0	0,7
TEIN*CC	0,2	0,4	0,2	0,0	0,2	0,3	1,3
Total Person/Months	17,2	29,4	33,0	21,2	23,8	16,4	141,0

As requested by the reviewers, we hereby detail the expense of partners per task in each Workpackage.

Workpackage 1: Management

The following table shows the separation by task in WP1 of PMs reported by the partners.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	6,00 PM	2,43 PM
GEANT Ltd.		0,44 PM
GEANT Association	0,13 PM	0,13 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	
REUNA	0,40 PM	0,05 PM
CEDIA	0,09 PM	0,10 PM
CUDI	0,70 PM	0,78 PM
UbuntuNet	1,12 PM	0,00 PM
WACREN	0,25 PM	
ASREN	0,20 PM	0,20 PM
CESNET	0,24 PM	
GRNET	0,09 PM	0,10 PM
SURFNET		0,06 PM
CSIR(SANREN)	0,25 PM	0,25 PM
RENATER	0,60 PM	0,60 PM
NIIFI	0,29 PM	
CKLN	0,43 PM	
CAREN NOC	0,30 PM	0,00 PM
TEIN*CC	0,20 PM	
Total per Task	11,79 PM	5,39 PM
Total per WP	17,17 PM	

Reported PMs for WP1 per partner for Year 1

The following table shows the originally planned expenses in PMs for Year 1.

Partner	T1.1 Administrative Management	T1.2 Technical Management
CLARA	5,00 PM	2,70 PM
GEANT Ltd.		0,25 PM
GEANT Association	0,25 PM	0,25 PM
RNP	0,25 PM	0,25 PM
RENATA	0,25 PM	0,25 PM
REUNA	0,13 PM	0,13 PM
CEDIA	0,13 PM	0,13 PM
CUDI	1,00 PM	1,00 PM
UbuntuNet	0,03 PM	0,00 PM
WACREN	0,13 PM	0,13 PM
ASREN	0,20 PM	0,20 PM
CESNET	0,25 PM	
GRNET	0,1 PM	0,1 PM
SURFNET		0,125 PM
CSIR(SANREN)	0,55 PM	0,55 PM
RENATER	0,13 PM	0,13 PM
NIIFI		
CKLN	0,13 PM	0,13 PM
CAREN NOC	0,25 PM	0,00 PM
TEIN*CC	0,13 PM	0,13 PM
Total per Task	8,9 PM	6,4 PM
Total per WP	15,3 PM	

Planned PMs for WP1 in Year 1

The difference between the planning and the actual PMs spent is a consequence of the larger effort that had to be done in coordination, specially by the Coordinator. In all the expense differs in only 12.2% from the original plan.

Workpackage 2: Platforms for Mobility

The table of reported PMs divided by task is:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	0,03 PM	0,00 PM	0,11 PM		0,14 PM
GEANT Ltd.	0,03 PM				
GEANT Association	0,19 PM		0,30 PM		0,30 PM
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA					
REUNA	0,20 PM		0,10 PM		
CEDIA	0,25 PM			0,08 PM	
CUDI	7,22 PM	0,98 PM	1,38 PM	2,15 PM	0,99 PM
UbuntuNet	0,02 PM	0,34 PM	0,00 PM	0,00 PM	0,74 PM
WACREN			1,00 PM	0,50 PM	
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		0,46 PM			
GRNET			0,80 PM		0,87 PM
SURFNET					
CSIR(SANREN)					
RENATER				0,58 PM	
NIIFI			0,03 PM		
CKLN					0,20 PM
CAREN NOC	0,00 PM	0,00 PM	0,20 PM	0,00 PM	0,00 PM
TEIN*CC			0,20 PM		0,20 PM
Total per Task	9,24 PM	3,48 PM	5,82 PM	4,21 PM	6,64 PM
Total per WP	29,40 PM				

Reported PMs by task in WP2, Year 1

The planned distribution by task was:

Partner	T2.1 – Sharing the experience of the ELCIRA Project with the participating regional research and education networks.	T2.2 – Creation of in-class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers.	T2.3 – Action and Policy Coordination with other regional AAI organisations and federations.	T2.4 - On line Training Material on AAI development for Staff training	T2.5 –Implementation of AAI interoperability and interoperation and eduroam with regional NRENs and their European counterparts.
CLARA	2,00 PM	0,50 PM	1,25 PM		0,60 PM
GEANT Ltd.	0,15 PM				
GEANT Association	0,13 PM	0,13 PM			
RNP	0,70 PM	0,70 PM	0,70 PM	0,70 PM	0,70 PM
RENATA	0,25 PM		0,25 PM		
REUNA	0,13 PM		0,13 PM		
CEDIA			0,25 PM		
CUDI	2,50 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,50 PM	0,25 PM	0,75 PM
WACREN			1,00 PM		0,50 PM
ASREN	0,60 PM	1,00 PM	1,00 PM	0,20 PM	2,50 PM
CESNET		1,00 PM			
GRNET			0,8 PM		0,8 PM
SURFNET					
CSIR(SANREN)			0,13 PM		0,13 PM
RENATER		0,50 PM	0,50 PM	0,25 PM	0,50 PM
NIIFI	0,4 PM				0,6 PM
CKLN			0,50 PM		0,50 PM
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM
TEIN*CC			0,13 PM		0,13 PM
Total per Task	7,1 PM	5,1 PM	8,3 PM	2,4 PM	8,7 PM
Total per WP	31,5 PM				

Planned distribution per task WP2 for Year 1.

As can be seen, individually there are some deviations from the planning, but in all the deviation is only 2.1 PMs representing 6.7% of the original plan. This is mainly due to the late start of the activities in some regions harder to coordinate.

Workpackage 3: Cloud Provisioning and Groupware Standards

The following is the table of reported PMs per task

Partner	T3.1. Implement applications portal for 2 new NRENs	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security,
CLARA	4,73 PM	6,80 PM	3,40 PM	3,30 PM		
GEANT Ltd.		0,05 PM				
GEANT Association		0,06 PM				
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA		0,40 PM	0,06 PM	0,05 PM		0,05 PM
CEDIA		0,15 PM	0,20 PM			
CUDI	1,04 PM	1,03 PM	1,38 PM	1,34 PM	0,33 PM	0,00 PM
UbuntuNet	0,00 PM	0,00 PM	0,03 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,25 PM	0,50 PM				
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,44 PM	0,04 PM			
GRNET		0,73 PM	0,73 PM	0,20 PM		
SURFNET		0,03 PM	0,03 PM			
CSIR(SANREN)		0,05 PM				
RENATER		0,60 PM	0,70 PM			
NIIFI		0,19 PM				
CKLN						0,19 PM
CAREN NOC	0,00 PM	0,00 PM	0,10 PM	0,00 PM	0,00 PM	0,10 PM
TEIN ^{CC}		0,20 PM	0,00 PM			
Total per Task	6,54 PM	13,40 PM	6,84 PM	5,21 PM	0,50 PM	0,52 PM
Total per WP	33,00 PM					

Reported PMs per task, WP3, Year 1

The corresponding planned PMs per task is the following

Partner	T3.1. Implement applications portal for 2 new NRENS	T3.2. Assessment, evaluation and recommendation of global group and attribute management for inter-operation standardisation	T3.3. To plan and design a framework for group inter-operations and service catalogue between cloud infrastructures	T3.4. Service definition and pilot implementation including service catalogue	T3.5. Evaluate results and survey specific groups of users	T3.6. Define a set of recommended core requirements which cloud service providers are expected to meet, covering the following fields: intellectual property rights and ownership, legal aspects, security, continuity, confidentiality, communication, billing and technical requirements.
CLARA	3,00 PM	2,00 PM	1,00 PM	3,50 PM		
GEANT Ltd.		0,15 PM				
GEANT Association		0,13 PM	0,13 PM			
RNP	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,12 PM	0,13 PM
RENATA						
REUNA	1,00 PM	0,50 PM	0,50 PM	0,50 PM		
CEDIA	0,13 PM	0,13 PM				
CUDI	1,00 PM	1,00 PM	1,50 PM	1,50 PM	1,50 PM	0,75 PM
UbuntuNet	0,00 PM	0,50 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,75 PM					
ASREN	0,40 PM	0,05 PM	0,05 PM	0,20 PM	0,05 PM	0,05 PM
CESNET		2,70 PM	0,30 PM			
GRNET		0,7 PM	0,7 PM	0,2 PM		
SURFNET		0,063 PM	0,063 PM			
CSIR(SANREN)	0,10 PM	0,10 PM	0,06 PM			
RENATER		0,50 PM	0,50 PM			
NIIFI		0,2 PM				
CKLN	0,05 PM	0,10 PM	0,10 PM			
CAREN NOC	0,00 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC		0,13 PM		0,13 PM		
Total per Task	6,5 PM	9,1 PM	5,4 PM	6,4 PM	1,7 PM	0,9 PM
Total per WP	30,0 PM					

Planned PMs per task WP3, Year 1

The difference of 3 PMs equivalent to 10% of the total is explained by the effort in the preparation of the Pilot platform to become a tool easy to deploy in different regions of the World, the tasks described in full in &1.2.3 were necessary to make the platform a multilingual, group-ware ready platform as was requested by the partners during the development of the project. This extra effort was done mainly by RedCLARA which duplicated the effort with respect to the original plan. This major larger effort will be compensated by changing PMs from other WPs and using larger non-funded resources if required.

Workpackage 4: Agreements for Real Time Collaboration

The table of PMs per task for this WP are as follows:

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,22 PM	0,88 PM	1,33 PM	0,00 PM	
GEANT Ltd.		0,02 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	4,00 PM	3,00 PM			
REUNA	1,60 PM	0,25 PM			
CEDIA	0,02 PM				
CUDI	4,06 PM	1,92 PM	0,00 PM	0,00 PM	1,13 PM
UbuntuNet	0,01 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)					
RENATER	0,09 PM			0,30 PM	
NIIFI		0,32 PM			
CKLN					
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	10,89 PM	7,08 PM	1,48 PM	0,45 PM	1,28 PM
Total per WP	21,18 PM				

Reported PMs per task WP4

Partner	T4.1. Training and Deploying NRENum.net as the global dialing standard.	T4.2. To promote the implementation of DNSSec to enhance security of NRENum.net implementations.	T4.3. Design guidelines for integration architecture between legacy video networks and webconferencing	T4.4. To integrate the legacy (SIP capable) Global Video network with one open-source webconferencing system, and a VoIP network based on NRENum.net.	T4.5. Development of an on-line course and video tutorials on how to integrate real-time collaboration networks.
CLARA	0,50 PM	0,00 PM	1,00 PM	0,00 PM	0,00 PM
GEANT Ltd.		0,15 PM			
GEANT Association					
RNP	0,14 PM	0,14 PM	0,15 PM	0,15 PM	0,15 PM
RENATA	3,00 PM	2,50 PM			
REUNA	1,25 PM				
CEDIA					
CUDI	2,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,25 PM	0,25 PM	0,25 PM	0,00 PM	0,00 PM
WACREN	0,70 PM	0,55 PM			
ASREN	0,05 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
CESNET					
GRNET					
SURFNET					
CSIR(SANREN)	0,13 PM	0,13 PM			
RENATER	0,50 PM	0,50 PM			
NIIFI					
CKLN	0,13 PM	0,13 PM			
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC					
Total per Task	8,6 PM	5,3 PM	2,4 PM	1,2 PM	1,2 PM
Total per WP	18,7 PM				

Planned PMs per task WP4

The larger effort of 2.48PMs, essentially concentrated by RENATA amounts to almost a 50% extra by RENATA, but in all the extra effort amounts to 13.3% of the total.

Workpackage 5. Global Science Communities

The reported PMs per tasks in this WP is as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	2,70 PM	4,51 PM	1,26 PM	0,85 PM	1,42 PM	1,00 PM
GEANT Ltd.	0,02 PM				0,02 PM	0,02 PM
GEANT Association	0,02 PM					
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,86 PM	0,55 PM	0,31 PM	0,50 PM	0,36 PM	0,81 PM
UbuntuNet	1,17 PM	0,00 PM	0,14 PM	0,00 PM	0,31 PM	0,62 PM
WACREN	0,50 PM		0,50 PM			0,50 PM
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,30 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,20 PM	0,20 PM	0,05 PM			
RENATER						
NIIFI	0,43 PM		0,10 PM			0,35 PM
CKLN						0,73 PM
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,18 PM					
Total per Task	7,25 PM	5,43 PM	2,63 PM	1,62 PM	2,39 PM	4,48 PM
Total per WP	23,79 PM					

Reported PMs per task WP5

The planned PMs per task was as follows:

Partner	Task 5.1 Agreements on a set of worldwide user communities of common interest to the participating regions	Task 5.2 Implementation of an Information System on worldwide funding opportunities aimed at the end users and the user communities	Task 5.3: Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics	Task 5.4: H2020 Virtual Information Days to promote participation in International Calls	Task 5.5: Training material for the use of cloud-provided applications for collaboration	Task 5.6: Worldwide User Communities virtual meetings and seminars
CLARA	1,0 PM	3,0 PM	3,0 PM	1,0 PM	2,0 PM	1,0 PM
GEANT Ltd.	0,05 PM				0,05 PM	0,05 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA	0,50 PM		0,50 PM			0,50 PM
REUNA						
CEDIA						
CUDI	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	1,00 PM	0,50 PM	0,75 PM	1,00 PM	0,50 PM	1,00 PM
WACREN	0,50 PM	0,50 PM			0,50 PM	
ASREN	1,00 PM	0,00 PM	0,10 PM	0,10 PM	0,10 PM	0,20 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)	0,10 PM	0,05 PM		0,05 PM		0,1 PM
RENATER						
NIIFI						
CKLN	0,05 PM	0,00 PM	0,05 PM	0,05 PM		0,10 PM
CAREN NOC	0,13 PM	0,00 PM	0,13 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,13 PM		0,13 PM			
Total per Task	5,6 PM	5,2 PM	5,8 PM	3,4 PM	4,3 PM	4,1 PM
Total per WP	28,4 PM					

Planned PMs per task WP5

The difference of 4.61PMs, equivalent to minus 16.23% is explained by the slow start of the WP due to the difficulty to assign manpower in the leader of the WP (UbuntuNet) and consequent the delay in the planning of the virtual and face to face meetings. This difference is being solved during year 2.

Workpackage 6. Dissemination and Training

The reported PMs per task can be seen in the following table:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co- ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with	T6.6 Support to WP5 activities.
CLARA	2,50 PM	1,54 PM	2,00 PM	0,50 PM	2,00 PM	1,00 PM
GEANT Ltd.		0,03 PM	0,03 PM	0,03 PM		0,03 PM
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,14 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,31 PM	0,32 PM	0,13 PM	0,97 PM	0,60 PM	0,75 PM
UbuntuNet	0,61 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)					0,30 PM	
RENATER						
NIIFI						
CKLN						
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN*CC	0,15 PM				0,15 PM	
Total per Task	3,94 PM	2,26 PM	2,43 PM	1,77 PM	4,02 PM	2,02 PM
Total per WP	16,44 PM					

Reported PMs per partner WP6

The planned expense in PMs was:

Partner	T6.1 Coordination and management	T6.2 Planning of dissemination and co-ordination of training activities.	T6.3 Creation and management of the project's website: depicting information related to the project development, advances, achievements, training activities,	T6.4 Publication of online and physical dissemination material tailored to different audiences/users and project needs.	T6.5 Participation in specific regional events in order to promote the advances and success of the project and make them coincide with training activities.	T6.6 Support to WP5 activities.
CLARA	2,25 PM	1,00 PM	3,00 PM	2,00 PM	2,00 PM	2,00 PM
GEANT Ltd.		0,05 PM	0,05 PM	0,05 PM		
GEANT Association						
RNP	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,17 PM	0,15 PM
RENATA						
REUNA						
CEDIA						
CUDI	0,50 PM	0,50 PM	0,50 PM	1,00 PM	1,00 PM	1,00 PM
UbuntuNet	0,75 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,50 PM
WACREN					0,50 PM	
ASREN	0,20 PM	0,20 PM	0,10 PM	0,10 PM	0,30 PM	0,10 PM
CESNET						
GRNET						
SURFNET						
CSIR(SANREN)						
RENATER					0,50 PM	0,50 PM
NIIFI						
CKLN	0,05 PM	0,10 PM			0,10 PM	
CAREN NOC	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM	0,00 PM
TEIN ² CC	0,13 PM				0,13 PM	
Total per Task	4,0 PM	2,0 PM	3,8 PM	3,3 PM	4,7 PM	4,3 PM
Total per WP	22,2 PM					

Planned PMs per partner WP6

The difference is an expenditure of 5.46 PMs less than foreseen that is explained by the change in the year of execution of some of the Dissemination activities, such as TNC 2016 and other events. This difference will be caught in Year 2.

Summarizing, the following table shows the difference between planned and reported PMs for each WP.

	WP1	WP2	WP3	WP4	WP5	WP6	Total
Planned	15,30 PM	31,54 PM	29,99 PM	18,69 PM	28,41 PM	22,15 PM	146,06 PM
Reported	17,17 PM	29,40 PM	33,00 PM	21,18 PM	23,79 PM	16,44 PM	140,98 PM
Difference	1,87 PM	-2,14 PM	3,02 PM	2,49 PM	-4,61 PM	-5,71 PM	-5,08 PM
Percentage	12%	-7%	10%	13%	-16%	-26%	-3%

Thus, in average, despite the ups and downs of the different WPs the resources have shown to be appropriate for the first year and correspond roughly to 50% of the total PMs budgeted.

Other Direct Costs

The reviewers requested that we explain the Subcontracts which are indeed the direct costs associated with printed material, give-aways, room rental and other services related to the organisation of training and workshops. We have spent €16.146 as detailed in the following Table. The expenses are necessary for the dissemination and training tasks.

Dissemination material	€7.583
Facility rentals	€1.419
Give-aways	€3.872
Refreshments	€1.838
Registration in conferences	€1.435
	€16.146

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

1. Explanation of the work carried out by the beneficiaries and Overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating World Regions, aiming at consolidating and completing the building blocks of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

From May to October, 2016, Work Package 2 focused on consulting in eduroam and AAI implementation. Unfortunately, CKLN ceased to exist at the end of September 2016. Because of this, the Caribbean region is not reported on in this section. On 27 and 28 October the 1st TEIN-CAREN joint workshop was held in Bishkek, Kyrgyzstan, with the third session on 28 October being devoted entirely to eduroam. In the Arab states region, the expansion of eduroam coverage continued in countries that have already implemented eduroam, including Algeria, Morocco and Lebanon. In addition, Jordan has implemented eduroam at one university which has five campuses. Finally, a strategic action in Africa was carried out by RNP to support MoRENet (the Mozambican NREN). Thanks to this special action, MoRENET has committed to implementing both eduroam and eduGAIN before the end of the MAGIC project.

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

During the reporting period, the Work Package team worked on: a) the development of the pilot environment for the group management in federations solution; b) the review of the service catalogue attributes for MAGIC applications; c) the setting-up of the testing environment of the GÉANT service catalogue application.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the Global CEO Forum to promote the creation of a worldwide environment for these applications.

In Work Package 4 MAGIC promotes and supports the development of NRENum.net as the standard for global dialling. During this quarter, following the suggestions of the reviewers, WP4 has developed a MOOC in order to enrich the training process. The tool was developed to allow countries to follow their own path towards the adoption of NRENum, allowing a better appropriation of the technology and facilitating the

implementation in each of the MAGIC target countries. Furthermore, WP4 has worked on the integration of legacy videoconferencing network (SIP) and web-conference systems (MCONF). The advances are well underway. It is expected to have the pilot ready in March 2017.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

The project is supporting and fostering four Global Science Communities in the fields of e-Health; Biodiversity, Environment; and Remote Instrumentation. The first three were adopted from the findings of the ELCIRA project, and the last one was proposed by an active community in Mexico that saw the MAGIC initiative as a platform to scale their community to a global level. The four communities were launched in February 2016 and since then have been active with different activities. The MAGIC project has spent the last several months supporting the four communities in the following ways:

- Providing information on funding opportunities and possible partners through the Funding&Partners information system that was developed and integrated into the Colaboratorio. The information is also sent via a weekly e-mail.
- Providing the GSCs specifically with information on open Horizon 2020 calls via the regional virtual H2020 Info Days
- Providing the GSCs with networking opportunities through Worldwide Virtual Days where experts are invited to present and/or lead discussions on cross-cutting issues, such as Open Access; Science Communication; and Data Management.
- Providing training on the use of collaborative applications; and best practices on collaborating at a global landscape.

1.2 Explanation of the work carried per WP

1.2.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- To ensure that deliverables rejected in the evaluation meeting were corrected making sure that the reviewers' recommendations are followed.
- To distribute the funding received from the European Commission in accordance with the Consortium Agreement.
- To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place in person and by videoconference. Steering Committee Meetings were held on the following dates:
 - 18-19 May 2016. Second face-to-face meeting, held in Rio de Janeiro, Brazil.
 - 15 July 2016
 - 6 September 2016



The partners meeting in Rio de Janeiro

The minutes of the Meetings are available in the wiki of the MAGIC Community maintained on the Colaboratorio portal.

- To oversee the Deliverables and Milestones.
 - All deliverables, except D3.5 and D4.4 have been submitted to the EC through the H2020 Project Management System.
 - Deliverable D3.5 “Evaluation of pilot and services, user perception, and implementation effort” has been delayed due to the difficulty in obtaining answers to the survey and the fact that the pilot itself was delayed by two months. The Project commits to the delivery of the document by the end of January 2017 (month 21).
 - Deliverable D4.4 “Pilot test of an integration between the legacy global video network with one open-source web-conference, and a VoIP network based in NRENum” is delayed because the work to implement the gateway between the MCONF system used by the MAGIC Project has suffered delays in development. The Project commits to delivering this by month 23.
- The status of milestones is as follows:
 - MS1 completed
 - Kick-off Meeting Minutes; Project Website
 - Event participation plan
 - MS2 has been completed as of October 2015, i.e., Month 6 instead of Month 4 because of changes in the procedures to sign MoUs internally in GÉANT due to its internal restructuring.
 - The agreement itself
 - MS3 has been completed by 29 September 2015
 - The pilot portal itself deployed in Ecuador (CEDIA), Costa Rica (CONARE) and Nigeria (NgREN).
 - MS4 has been completed as of February 25, 2016, after completing the launch events of four Global User Communities:
 - e-Health: February 2nd, 2016
 - <https://eventos.redclara.net/indico/event/634/>
 - Biodiversity: February 11th, 2016,
 - <https://eventos.redclara.net/indico/event/639/>
 - Environment: February 18th, 2016,

- <https://eventos.redclara.net/indico/event/640/>
 - Remote Instrumentation: February 25th, 2016,
 - <https://eventos.redclara.net/indico/event/641/>
 - MS5 (Assessment of group management platforms) was successfully completed on 30 October 30 as described in D3.2
 - MS6 has been successfully completed as NRENum.net has been deployed in 5 countries in Latin America: El Salvador (RAICES), Ecuador (CEDIA), Chile (REUNA), Uruguay (RAU) and Mexico (CUDI).
 - MS7 Four Communities established (each with a thematic Champion) in December 2015: e-Health, Environment, Biodiversity and Remote Instrumentation
 - MS8 (Training in AAI) has already been completed for the Caribbean, the Arab Countries (ASREN), West Africa (WACREN) and East and Southern Africa (UbuntuNet). eduroam training has been complete for CKLN, ASREN and WACREN. AAI and eduroam training for Central Asia (CAREN) will be completed in February and March 2017.
 - MS9 completed by 29 April 2016. The training material in PDF is available on the website.
 - MS10 - The information system on funding opportunities has been available since 6 April 2016 via the Colaboratorio portal. An email alert is sent weekly to all registered users based on their preferences.
 - MS11 - This Milestone is yet to be completed; only one Asian NREN, the Sri Lankan NREN. More candidates are studying the possibilities of joining. The Project is very confident that we will reach the target of at least three Asian NRENs joining NRENum.
 - MS12 - All dissemination activities have been completed. See D6.4.
 - MS13 - Training in the African region has been completed in March 2016.
 - MS14 - Training in the Caribbean has been completed
 - MS15 - Participation of regional representatives of each global priority area in at least one Regional Best Practice Meeting. A Best Practice meeting was held for the Arab States Region at the e-AGE 2016 conference in Beirut, Lebanon on 1 December 2016. The next two events are planned in Africa and the Caribbean.
 - MS16 - Pilot of the group management platforms inter-operating and functioning in at least two applications sharing groups across continents. Completed in December 2016, see D3.4
 - MS17 - Training in the Central Asian region in progress, delayed to February 2017.
 - MS18 - eduroam agreements with at least 12 countries from different regions signed. Completed.
 - MS19 - Training in Asia. Completed in August 2016.
 - MS20- Strategic information to strengthen the worldwide communities. Delayed to March 2017.
 - MS21 - Integration between legacy video network and webconferencing is in progress completion delayed to March 2017.
- No major problems have occurred during this period, the project has run smoothly, except for some delays reported:
 - It has been complex to recover from the initial slow start affecting mostly the time needed to reach agreements between European and Latin American projects.
 - The difficulty to identify user communities willing to become test communities and the time-consuming work of collecting information on researchers and research groups. This has created a delay that has not been recovered so far but it is expected that this will be done before the end of the project.
 - The difficulty in securing the right timing in the delivery of the gateway between webconferencing and legacy video systems. This has delayed the delivery of this application and the corresponding pilot to March 2017.
 - CKLN, the Caribbean Knowledge and Learning Network has asked to leave the Consortium because it has been closed by its owners. An amendment is in preparation. The corresponding tasks will be taken by the Coordinator.

1.2.2 Work Package 2: Platforms for Mobility

From May to October 2016 Work Package 2 focused on consulting in eduroam and AAI implementation. Unfortunately, the MAGIC project manager reported that he has received a letter from CKLN's Director informing that CKLN closed at the end of September 2016. The European Commission has been informed of the situation and consultations are underway to decide on the avenues to take as regards the contract with the EC and the work that CKLN had committed. Because of this, the Caribbean region is not reported in this section.

For Central Asia, a contract was signed at the beginning of July in Bishkek, Kyrgyzstan, between the European Commission and GÉANT, guaranteeing the launch of the third phase of the EU-funded Central Asia Research and Education Network (CAREN) project. Under this project regional R&E connectivity will resume following the end of the previous project phase.. On 27 and 28 October, the 1st TEIN-CAREN joint workshop was held in Bishkek, Kyrgyzstan, with the third session on 28 October completely devoted to eduroam. Prof. Deokjai Choi from Chonnam National University presented "Intro to eduroam" and Almaz Bakenov from NITC made a presentation entitled "Roaming for Education and Research".

In the Arab States region, an expansion of eduroam coverage has been noticed in countries that have already had eduroam implemented, including Algeria, Morocco and Lebanon. In addition, Jordan has implemented eduroam at one university which has five campuses.

A strategic action in Africa was carried out involving RNP and MoRENet (the Mozambican NREN). Since 2013 MoRENet has been working with the Brazilian NREN (RNP) under an international cooperation framework which comprises training activities, exchanging good management and governance practices of networks, technical visits and, more recently, information exchanges on technical and operational management. As a result of this collaboration activity, a work plan comprising four phases has been developed.

- **Preparation:** in this phase, RNP and MoRENet elaborated an implementation plan for the project, detailing all work to be done to implement an Identity Federation and eduroam. This phase also comprised the elaboration of structural documents required to implement the federation and the eduroam roaming operator, including the signature of the terms of adhesion to eduroam and the MAGIC project;
- **Federation Implementation:** this phase corresponded to the implementation of the federation of authenticity and authorisation in Mozambique, which comprised a one-week online training course as well as assisted support via webconference;
- **eduroam implementation:** this phase corresponded to the implementation of the eduroam roaming operator in Mozambique, including a one-week online training course as well as assisted support via webconference;
- **Conclusion:** this corresponded to the drafting of an implementation report, which referred to the implementation plan drafted at the beginning of the Project, describing the planned results, contingency planning, lessons acquired, results accomplished and justification for extending the initial deadline.

The first phase of the project was concluded on 28 October, 2016, six weeks after the first formal meeting of the project, with the conclusion of the following tasks:

- Web seminars about identity federations and eduroam;
- Drafting of the project implementation;

- Infrastructure availability at the MoRENet client institution;
- Terms of adhesion signed by MoRENet;
- Preparation of structural documents.

The preparation of structural documents has proved to be an essential activity that assists both communication between the service, MoRENet clients and the international eduroam and eduGAIN services, into which the identity federation and the Mozambique roaming operator (RO) had the intention to integrate on the recommendation of RNP. As a result, the following documents were prepared:

- Agreement and signature of the memorandum by MAGIC and MoRENet;
- Use Policy of the eduroam roaming operator;
- Webpage for the eduroam roaming operator in Mozambique;
- Document with eduroam technical specifications;
- Adhesion to terms for eduroam client institutions;
- eduroam statement signature.

During a meeting held on 28 October 2016, one of the most significant activities of the second phase of the project relating to the implementation of the federation was the one-week online training course.

In Latin America, CUDI (the Mexican NREN) continues to work on AAI in Mexico. Currently the Mexican Identity Federation has a federated service implemented by CUDI. Work is also underway on the implementation of a service at the University of Colima, which is expected to be available by the end of December 2016. CUDI is also working on federating some of the applications found on its collaboration platform, which is also expected to be available by the end of 2016. Mexican NREN implemented a discovery service (DS) for the Mexican Federation of Identities, in which the CUDI IdP and the University of Colima have been included.

The Mexican Identity Federation is already connected to the CLARA collaboration; the metadata exchange was carried out and the identity providers are working.

1.2.3 Work Package 3: Cloud Provisioning and Groupware Standards

During the reporting period, the Work Package team worked on: a) the development of the pilot environment for the group management in federations solution; b) the review of the service catalogue attributes for MAGIC applications; c) the setting-up of the testing environment of the GÉANT service catalogue application.

The development of the pilot environment for group management in federations was completed by July 2016. The work included four (4) applications: the Colaboratorio, SIVIC, Filesender and Dockuwiki, hosted by RedCLARA, RedCLARA, RENATER and CESNET respectively. Access to these tools is federated. The table below shows the corresponding links:

Service	URL	Use case
Dokuwiki	https://dokuwiki-magic.cesnet.cz	The Docuwiki can validate write if the user has write permission based on the group he belongs to. The group is on another domain, in this case a Colaboratorio community.
Colaboratorio	http://colaboratorio.redclara.net	The Colaboratorio shares its communities information to the other applications.
SIVIC	http://colaboratorio.redclara.net	In the SIVIC application, a user can invite users to a videoconference. In this case, the invitation can be sent to the user's partners in a specific group by calling the group name whether the group is in another domain or not.
Filesender	https://filesender-premium.renater.fr	The Filesender application works in a similar fashion to SIVIC; the user can share a large file with a group by calling the group name.

The service catalogue is an important part of the scope of work in WP3. The service catalogue will list the applications, and the assessment of their main characteristics related to the provider and the application itself. In the group discussion, the conclusion was that the MAGIC catalogue shall manage the following properties:

1. IPR relating to Customer Data
2. Processing Data
3. Ownership of Data
4. Data Protection
5. Requests for Data Access from 3rd Parties
6. Quality of service
7. Notification
8. Liquidated Damages
9. Security of the Service
10. Managing security incidents
11. Data Backup and Restore
12. Compatibility
13. Portability
14. Electronic Data Processing (EDP)
15. Network Connectivity
16. AAI
17. User Provisioning
18. Protection of Minors as Users
19. Service Level Agreement
20. Quality review
21. Information about the Performance of the Service
22. Billing
23. Governing Law
24. Peering, Network Connectivity and Associated Costs

These will be the parameters that will be included in the service catalogue that will be delivered under Deliverable D3.4. This deliverable is expected to be completed by mid-December 2016.

1.2.4 Work Package 4: Agreements for Real Time Collaboration

In the Work Package 4, the team has been continuously working on the engagement of the Asian NRENs in NRENum.net. There have been various meetings with TEIN*CC, and it is expected to have one more country that joins NRENum.NET service by the end of the project. The team achieved the inclusion of Lebanon as one of the new implementations with deployment by August 2016. Another important advance in the Work Package was the deployment of DNSSec by Ecuador, completed in July 2016. The deployment in Ecuador was the fifth DNSsec implementation achieved, leading to the goal of three countries securing their zone being passed.

The work package team also redesigned the online courses for NRENum.net implementation. The courses were developed as Massive Open Online Courses (MOOCs) using the OpenEDX platform. The platform was contributed by FUN_MOOC in France. The course was designed in Spanish and English, and can be accessed via the following links:

Spanish version

http://clara.fun-campus.net/courses/course-v1:RedCLARA+NRUM01+2016_T4/about

English version

http://clara.fun-campus.net/courses/course-v1:MAGIC+NRENUMen+2016_T4/about

Other work that has been advancing in Work Package 4 is the beginning of the integration of webconference systems with the traditional SIP video solutions. There have being advances in the search for developers and definition of the scope of work. The group defined that the work shall include:

- a) The integration of the MCONF system to SIP capable devices
- b) The development of the content sharing
- c) Development of statistics
- d) An API for control and provisioning
- e) The deployment of a load-balancer solution for the network

1.2.5 Work Package 5: Global Science Communities

During the reported period Work Package 5 focused on strengthening the four Global Science Communities (GSC) that were launched during the previous reporting period. The Communities are:

- Global Science Community on e-Health,
- Global Science Community on Biodiversity,
- Global Science Community on Environment; and
- Global Science Community on Remote Instrumentation.

The coordination of each activity was planned, organised and carried out in collaboration with

the champions of each Community. We take special recognition that the Community Champions have been very useful in guiding the direction of the GSCs especially in line with emerging and trending issues in their field.

Virtual activities and the participation in international events were the main events where WP5 participated in the last six months.

a) Virtual activities with GSCs

With MAGIC being a global project that involves partners from all over the world, interaction among community members takes place using virtual resources that shorten distances and enhance collaboration from different circumstances. During the reporting period, a total of nine virtual events were conducted for the GSCs: eight for specific communities; and one generic one. The events were:

- Biodiversity Experiences from around the world
- Remote Instrumentation for Medical Applications
- Webinar on Science Communication
- Six e-Health Grand Rounds (focusing on e-Health, Cardiology and Child & Adolescent Health)

For remote webinars, community champions and members had to deal with time zones differences and different interest topics that could be more interesting for one or another group.

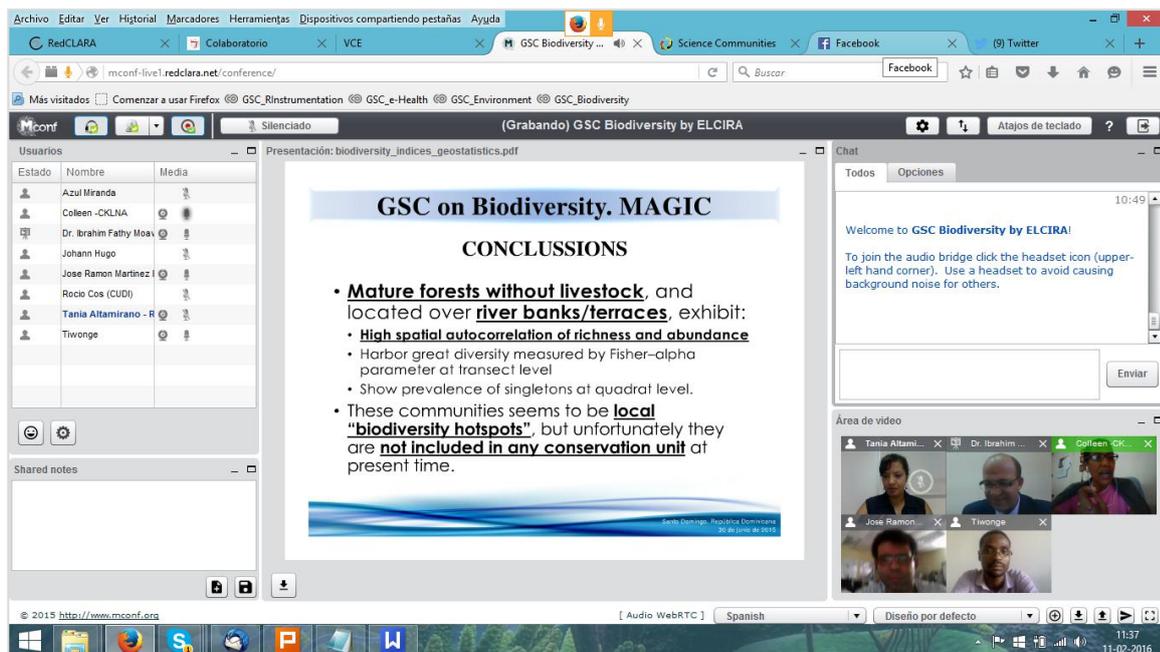
All sessions were recorded and stored on the website of the events. Slides for the presentations used are also available for download.

1. Global Science Community on Biodiversity: Experiences from Around the World

Date: 5 May 2016

Website: <https://eventos.redclara.net/indico/event/661/>

This session was held as a follow-up event to the Opening Conference for the GSC on Biodiversity, which was held on 11 February 2016. During the session four presenters from different parts of the world (Professor Ibrahim Fathy Moawad from Egypt; Professor Dora Canhos from Brazil; Dr Keisha Sandy from Trinidad & Tobago; and Dr José Manuel Mateo from the Dominican Republic) shared their activities and experience in the field of biodiversity. The session was concluded by an open discussion with next steps.



2. Webinar on Science Communication

Date: 30 June 2016

Website: <https://eventos.redclara.net/indico/event/719/>

The activity was facilitated by Michelle Wilmers, Curation and Dissemination Manager of the Global South Research on Open Educational Resources for Development (ROER4D) project, and based at the University of Cape Town, South Africa, with a presentation of a five-step model that can be applied by individual researchers or projects who wish to improve their international footprint and make the output of their work more visible and available for use. A total of 58 participants attended the webinar.

The webinar was not intended for a specific priority area and therefore dissemination was targeted at all community members. It was suggested during the follow-up event for the GSC on Biodiversity held on 5 May 2016 when participants felt there was a need to have a focused session to discuss how to effectively communicate scientific results.

The material presented by Ms. Wilmers was originally created in English but to make it more accessible and easy for the participants from different regions her presentation was translated into Spanish and Portuguese.

Webinar on Science Communication

30 June 2016
GMT timezone

> Home
> Speaker
> Topics
> How to participate

Research projects and individual researchers in all disciplines are exploring new modes of scholarly communication in order to engage a wider audience, obtain developmental impact, boost visibility, meet funder requirements, and maximise the return on research investment. Added to this, new trends around communicating a broad range of artefacts from the research process are playing an important role in fostering collaboration and professionalising different aspects of the overall research lifecycle. In short, the publishing or dissemination process can no longer be left solely to formal publishers and there is a need to develop internal capacity in order to engage more optimally with communication activity. This can be daunting for researchers who lack the time and expertise to engage meaningfully with this area of work.

Science Communication Webinar Outline
This 2-hour webinar will present a five-step model that can be applied by individual researchers or projects who wish to improve their international footprint and make the outputs of their work more visible and available for use. Focusing on the curation, "packaging", and dissemination of research, the discussion will pay particular attention to the needs of developing-country researchers who are working in diverse, multilingual, resource-constrained contexts

▶ REGISTER

Starts 30 Jun 2016 13:00
Ends 30 Jun 2016 15:00
GMT

Mrs. Altamirano López, Tania
Mr. Banda, Tiwonge
Ms. Wint-Bond, Colleen

Slides
Video

• Hours are presented in GMT/UTC (Greenwich Mean Time). Please check your local time at:
http://www.worldtimeserver.com/convert_time_in_UTC.aspx

Magic
Middleware for collaborative Applications and Global Virtual Communities

(Grabando) GSC Remote Instrumentation

Usuarios: 34

Estado	Nombre	Media
	Luiz Rassefi	
	Luz Inmaculada Madera Soriano	
	Martha Avila - CUDI	
	Martha Baez	
	Martha Freddie	
	María José López - RedCLARA	
	Michelle Wilmers	
	Noah Miller (ECLAC)	
	Ousmane Niger-RENWACREN	
	Peter Nicholas (ECLAC)	
	Rocio Cos	
	Rosa Guillermina Valdez	
	Sunday Akinaobyrin	
	Thiago Souza	
	William Johnson	
	William Ruiz	

Presentación: MAGIC_Wilmers_Presentation_30.06.16.pdf

Curation

Systematic organisation (and description) of resources to ensure the findability and searchability of your content, for the purposes of optimal sharing and reuse (internal and external)

> Undertake this work so that you (and others) can find your work when you are looking for it and to boost the return on your investment.

Dissemination

Access

Curation Rights management

Chat

Tania Altamirano - RedCLARA 09:35
Hi Peter, they have open an option just to hear, they didnt activate the mic

Colleen Wint -CKLNA 09:36
OK thanks

Enviar

Área de vídeo

Michelle Wilmers

© 2016 <http://www.mconf.org> [Audio WebRTC] Spanish Disposición a medida 9:42 30-06-2016

3. Webinar on Remote Instrumentation for Medical Applications

Date: 14 July 2016

Website: <https://eventos.redclara.net/indico/event/711/overview>

With the main purpose of finding scientific equipment operating in remote manipulation through the internet in collaborative scientific applications to solve social problems as in the health sector, a webinar was held on 14 July 2016 with speakers from Mexico, Japan and Belgium.

The activity was moderated by the champion of the Remote Instrumentation Community, Dr. Patricia Santiago and enabled interaction for the e-Health and Remote Instrumentation Community. The event was attended by 31 participants from different parts of the world.

Webinar on Remote Instrumentation for Medical Applications
14 July 2016
GMT timezone

> Home
> Speakers
> Agenda
> How to participate
> Streaming

The Global Conference on Remote Instrumentation community in the MAGIC project's main purpose is to find scientific equipment operating in remote manipulation through Internet in collaborative scientific applications to solve social problems as in the health sector.

The fundamental aim of the community is to promote the use of expensive equipment as well as take advantage of academic experts in these areas to form human personnel in remote parts of the world.

The Community of Remote Instrumentation initiates its activities with a Global Conference based on Remote Instrumentation applied to health.

Objectives
The Webinar on Remote Instrumentation for Medical Applications intends:

- to share the work and experiences of practitioners from around the world who conduct aspects of their medical or healthcare practice using remote instruments.
- that participants will have a better understanding of what is possible in their own institutions and countries.
- professional links and connections will be made and
- that practitioners will seek and suggest ways to collaborate in order to improve healthcare delivery by sharing instruments remotely.

[▶ REGISTER HERE](#)

Starts 14 Jul 2016 13:00
Ends 14 Jul 2016 15:30
GMT

Mrs. Santiago, Patricia
Mr. Banda, Tiwonge
Mrs. Altamirano López, Tania

Slides
Video

Hours are presented in GMT/UTC(Greenwich Mean Time). Please check your local time at:
http://www.worldtimeserver.com/convert_time_in_UTC.aspx

MAGIC
Webinar on Remote Instrumentation for Medical Applications

http://mconf-live1.redclara.net/conference/ VC Espresso GSC Remote Instrumentation

(Recording) GSC Remote Instrumentation

Users: 31

Status	Name	Media
	José P. Díaz G. - RAI	
	Juan Carlos Morales	
	KEITA Ibourahima	
	Lela Ounali	
	Luiz Russell	
	Michael Walkowiak	
	Michel J.F. Walraven	
	MONICA ORDOÑEZ	
	NAMBOGO NURIAT	
	Nancy Gertrudiz - IM	
	Ousmane Niger-REH	
	ousmane ly	
	Patricia Santiago	

Viewers Muted

Shared notes

Presentation: Davidson160714.pdf

*** Historical development of remote Telemedicine System in Jamaica**

- * 1995-2000 Research explored questions related to the application of Information Technology to Medicine, using Jamaica as the research location.
- * The research questions included:
 - * What is Information?
 - * What is Knowledge?
 - * What is the expected outcome of the practical application of Information Technology to health and medical care?
 - * How can the application of Information technology to Public health and medical care advance the harmonious development of man within the environment?

Chat

Public Options

Colleen Wint-Bond 09:57
what language will the live sessions be in?

Shuji Shimizu 09:57
This is a different type of question, but is the date of next CUDI meeting decided? If so, please let us know.

Colleen Wint-Bond 09:59
yes

Tania A- RedCLARA 09:59
yes

Nancy Gertrudiz - Mexico 10:00
As we have decide CUDI meeting, might next month

Send

Webcams

Patricia Santiago Prof Winston... Michel J.F. Walrav...
Juan Carlos Mora... Nancy Gertrudiz... ousmane ly

© 2016 <http://www.mconf.org> English *Custom layout 10:02 14-07-2016

4. Global e-Health Grand Rounds

Date: 6 September to 11 October 2016

<https://eventos.redclara.net/indico/event/713/>

Soon after the Opening Conference for the e-Health Community on 2 February 2016, an online survey was conducted with the community with the aim of determining areas of interest for the members. The result was a list of priority areas that were finally trimmed to four areas: eHealth

(Health informatics, Telemedicine and Telehealth), Cardiology, Standards for Telemedicine and Health Informatics and Child and Adolescent Health. Based on these topics, a Call for Abstracts was developed and published on 1 July to share global initiatives.

As a result the evaluation team led by the Champion, Dr. Luiz Ary Messina and Dr. Paulo Lopes received 22 proposals from Brazil, Canada, Czech Republic, Egypt, India, United States of America, Mexico, Moldova, Japan and Russia.

The works were presented by the authors in six sessions two dedicated to e-Health, two for Cardiology, one devoted to Standards for Telemedicine and Health Informatics and one more for Child and Adolescent Health.

The six sessions were held during September and October 2016 as follows:

- e-Health 1, 6 September 2016
- Cardiology 1, 13 September 2016
- e-Health 2, 20 September 2016
- Child & Adolescent Health, 27 September 2016
- e-Health 3, 4 October 2016
- Cardiology 2, 11 October 2016

b) Participation in International Events:

In addition to organising and holding virtual events, WP5 also participated in face-to-face international events with the aim of promoting the GSCs. During the reporting period, WP5 has participated in the following events:

- IST-Africa Conference 2016, Durban, South Africa, 11-13 May 2016. Supported by the European Commission (EC) and African Union Commission (AUC), and co-funded under Horizon 2020 (Contract 723240) IST-Africa is a strategic collaboration between IIMC (Ireland) and Ministries and National Councils responsible for Innovation, Science and Technology adoption, policy and research in 18 African Countries. The conference brings together researchers, policy makers, practitioners and many players in the field of science, technology and innovation in Africa and beyond.
- CUDI Spring Meeting 2016, Holiday Inn Hotel, Merida, Yucatán, May 25-27, 2016 31st semester meeting of the University Corporation for Internet Development of Mexico, which aims to inform the progress of the Mexican National Research and Education Network, which coordinates CUDI. This edition included the participation of 280 academics, researchers, technicians and authorities from the country.

IST Africa 2016, Durban, South Africa, 11-13 May 2016

<http://www.ist-africa.org/Conference2016/>

WP5 submitted a proposal for a Workshop at IST-Africa 2016 and was accepted. The workshop was held on Thursday, 12 May 2016 preceded by the AfricaConnect2 project session. A total of 40 participants attended the workshop where they had the opportunity of hearing about the project in general, the four GSCs and about the Colaboratorio as a collaborative tool available to academics and researchers. The WP5 team participated in the rest of the conference and interacted and networked with other projects and participants. A special flier focusing on the GSCs was printed and distributed to participants.

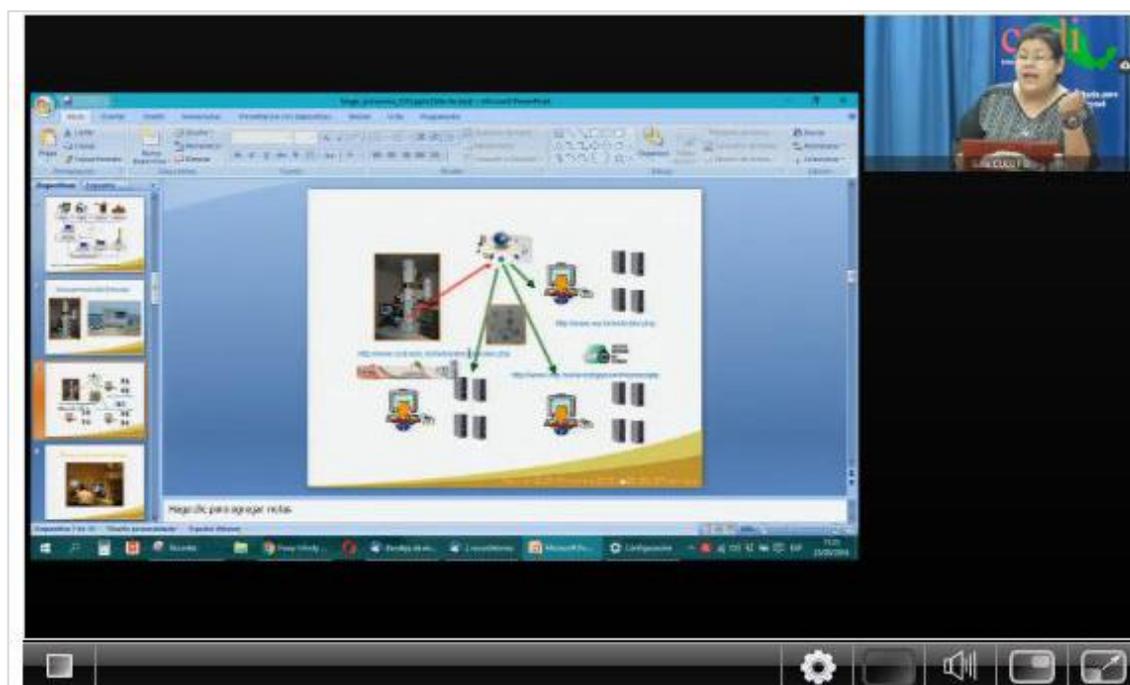


CUDI Spring Meeting 2016, Holiday Inn Hotel, Merida, Yucatán, May 25-27, 2016

http://www.cudi.edu.mx/primavera_2016/

MAGIC WP5 also participated in the CUDI Spring Meeting 2016, which was held on 25-27 May 2016. On 25 May the agenda included a full session dedicated to MAGIC and the different components of the project: work with the communities, collaborative tools, deployment of eduroam and federations.

The presentations about the MAGIC GSCs were developed by members of each community: *Instrumentación remota en MAGIC* - Patricia Santiago (UNAM), *Salud en MAGIC*- Nancy Gertrudiz (CUDI) and *Medioambiente en MAGIC*- Oscar Cárdenas (UDG)



Ubuntunet-Connect 2016 , Entebbe, Uganda, from 30 October 2016 to 4 November 2016

<https://events.ubuntunet.net/indico/event/1/>

Towards the end of the period, WP5 was preparing to participate in the UbuntuNet-Connect 2016 in Entebbe, Uganda. The activities started with a pre-conference workshop focused on end user engagement where all participants had the opportunity to learn about experiences around the world related to working with scientific and academic communities. The workshop discussed challenges facing NREN end user engagement in the UbuntuNet region. Case studies were shared from other parts of the world including Europe and Latin America. The MAGIC, Sci-GaIA and TANDEM projects provided input into the workshop and shared experiences. The workshop was conceived primarily for the purpose of trying to understand why it is challenging to bring more end user participants into activities.

During the conference, Tania Altamirano, a RedCLARA representative in the MAGIC project, gave a presentation that described the work developed with the communities and the collaborative tools that are being used to support interaction. This session also included a presentation and a debate with Roberto Barbera from the Sci-GaIA project.



c) Information System on Worldwide Funding Opportunities

During the first half of the project activities related to the Funding System were focused on the development of an improved version of the system, increasing the number of sources of calls, reviewing the format to feed the system and the information display for users. The work involved the integration of Laura Castellana, a librarian, in the team. Her activities are related to monitoring funding sources around the world to feed the system with calls that could be of interest to partners around the world, to update the information of the calls (new deadlines for example) and to clean the system of closed or completed calls.

In the reported period, work continued with the implementation of alerts by email. Sent to all registered users in the Colaboratorio, this services provides information of interest in accordance with the user's profile.

CLARA
+ Red + Ciencia

f f & fondos y socios

[Becas generales para extranjeros en Colombia / 2016-11-21](#)
Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior - ICETEX
Son ayudas financieras no reembolsables que se ofrecen a ciudadanos extranjeros, en reciprocidad a la cooperación internacional recibida por Colombia, en virtud de convenios de cooperación existentes. Hay especializaciones, maestrías y doctorados en todos los campos del conocimiento y en diferentes universidades localizadas en varios departamentos (estados) de la República de Colombia.

[Interconnecting Passenger Information Units \(PIUs\) to facilitate the exchange of PNR data / 2017-01-12](#)
European Commission
EUR 1 - 3.800.000
In complementarity with actions funded through the ISF-Police 2014 AWP and the national programmes, support will be provided to information exchange and in particular interconnection and data exchange between national PIUs. This includes activities such as the setting-up of secure communication channels between PIUs for the exchange of such information, the development of appropriate data formats and the drafting of guidelines for this exchange. Member States most advanced in this field will be encouraged to apply for funding aimed at increasing the sharing of experience and knowledge.

[Becas generales para extranjeros en Colombia / 2016-11-21](#)
Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior - ICETEX
Son ayudas financieras no reembolsables que se ofrecen a ciudadanos extranjeros, en reciprocidad a la cooperación internacional recibida por Colombia, en virtud de convenios de cooperación existentes. Hay especializaciones, maestrías y doctorados en todos los campos del conocimiento y en diferentes universidades localizadas en varios departamentos (estados) de la República de Colombia.

Cofinanciado por el programa marco "Horizonte 2020" de la Unión Europea
Mira <http://colaboratorio.mediclara.net>
Un servicio provisto por [BaeCLARA](#)

Si no desea recibir información por correo, responde a este correo indicando: "Eliminar suscripción a alerta de F&S"
[Get language / Ajustar idioma / Definir idioma](#)

d) Training Materials

Training material activities focused on the translation of the Colaboratorio user guide, with versions in English, Spanish, Portuguese and French (See: <http://magic-project.eu/index.php/training>).

Activities to follow in the next reporting period will be centred on new versions of the material.

e) H2020 Virtual Information Days

MAGIC WP5 promoted an InfoDay, Horizon 2020 - 'Health, demographic change and well-being', which was held in Brussels and live-streamed via the internet. It was not possible to track participation.

Towards the end of the reporting period an InfoDay on the H2020 ICT-39 Call was being planned to be held on 14 December 2016. Initially the event had been planned for 20 October but had to be changed because the e-Health Grand Rounds that consumed a lot of effort. Details of the event are found at: <https://events.ubuntunet.net/indico/event/9/>.

1.2.6 Work Package 6: Dissemination and Training

WP6 supports WP2, WP3 and WP5 on training activities. This consists of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

Within the reported period there were no face-to-face training sessions, but there was significant work to coordinate face-to-face training events in eduroam and identity federations in the CAREN region.

On-line presence:

The MAGIC on-line presence consists of the intranet, which is based in Colaboratorio, the MAGIC website, and Facebook and Twitter presences.

The intranet is extensively used by the project partners for all internal communications and for the interactions among the different Work Packages.

After the first project review, carried out in Brussels in July 2016, the reviewers rejected D.6.2, and stated that the “online presence should be reconsidered”, “organised for and target specific groups -NRENs/RRENs, focal points, communities and researchers, etc. - at a global level while sending clear messages to address the issues/challenges each group faces and providing possible solutions. The dissemination material and webpage should include clear information on how to get involved, what to access, and whom to contact in case of interest”. Following these recommendations, the website navigation map and its contents were updated and changed in order to better tackle the issues identified by the reviewers. The new navigation map for the website is the following:

– About MAGIC	Mobility	Groupware	Real Time Collab.	Science Communities	Training
– Objectives	– Platforms for Mobility: What is this about ?	– What is Cloud Provisioning and Groupware Standards about?	– Agreements for Real Time Collaboration: What is this about?	– What is a Global Science Community?	
– Partners	– Platforms for Mobility Objectives	– Objectives	– Objective	– How to Join a Global Science Community?	
– Milestones	– Platforms for Mobility Activities	– Activities	– Activities	– Global Science Communities Activities	
– Deliverables	– Identity Federations	– Group Management in Federation (GMF)	– NRENum: What is this?	– GSC Biodiversity	
– Presentations	– What is an Identity Federation?	– Chosen Standards & Group Management Systems	– Advantages and Benefits	– GSC e-Health	
– Project Structure	– Aiming to establish an Identity Federation?	– SAML2	– NRENum deployment within MAGIC	– GSC Environment	
– Project Management	– On line Training Material on AAI Development for Staff	– VOOT	– Aiming to implement NRENum?	– GSC Remote Instrumentation	
– Dissemination	– eduGAIN	– PERUN	– On-line Course on NRENum.net and DNS Configuration in English		
– News and Events	– What is eduGAIN?	– SYMPA	– On-line Course on NRENum.net and DNS Configuration in French		
– Newsletter	– Aiming to connect to eduGAIN?	– Pilot Implementation	– On-line Course on NRENum.net and DNS Configuration in Spanish		
– MAGIC branding	– eduroam	– Services to be provided	– DNSSec (Security): What is this?		
– MAGIC Brochures	– What is eduroam?	– Colaboratorio	– DNSSec deployment for NRENum within MAGIC		
– MAGIC Templates	– eduroam for Research and Education Networks	– Colaboratorio's origin	– Aiming to implement DNSSec?		

– Contact Us	– Which countries are eduroaming?	– Colaboratorio's deployment			
	– Aiming to provide eduroam?	– Which NRENs have Colaboratorio already installed?			
		– How can I get Colaboratorio for my NREN?			
		– Do you want to install Colaboratorio or one of our applications?			

Figure 1: MAGIC Website new navigation map - August 2016 (M16)

The new navigation map as well as the new contents, show all the tasks and results of the different Work Packages, provide clear and easy access to all those users that are interested in using, applying and implementing the applications, services and tools to their websites, or to have access to them, or to participate in the training courses and/or the Global Science Communities. All this new information was added, while still keeping the project information and news that were the main focus of the project during its first year. News ~~are~~ is updated ~~under~~ on a regular basis.

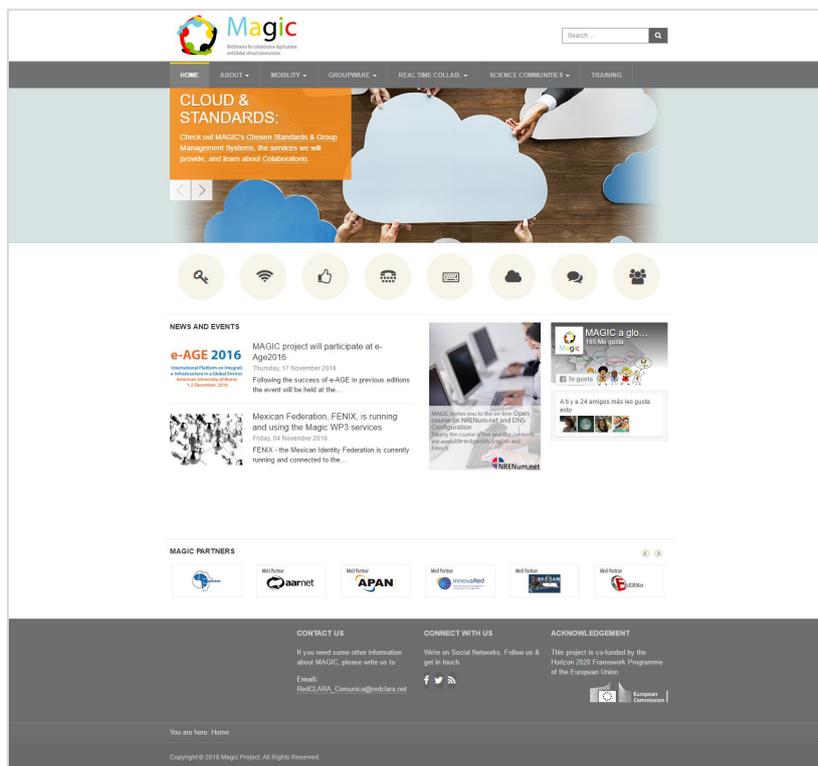


Figure 2: MAGIC Website Homepage, 23-11-2016.

The success of the website and the social network presence is statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and to provide feedback on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool. The Facebook page is measured using the tool provided by Facebook itself, and Twitter is measured in terms of followers and retweeted messages.

MAGIC Web Site																	
	2015							2016									
	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.
MAGIC Project																	
Unique visitors	231	211	340	328	427	849	412	563	408	378	417	699	413	390	147	74	391
Pages viewed	751	610	905	875	943	2062	887	1102	876	821	779	1592	862	683	490	146	698

Figure 3: MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

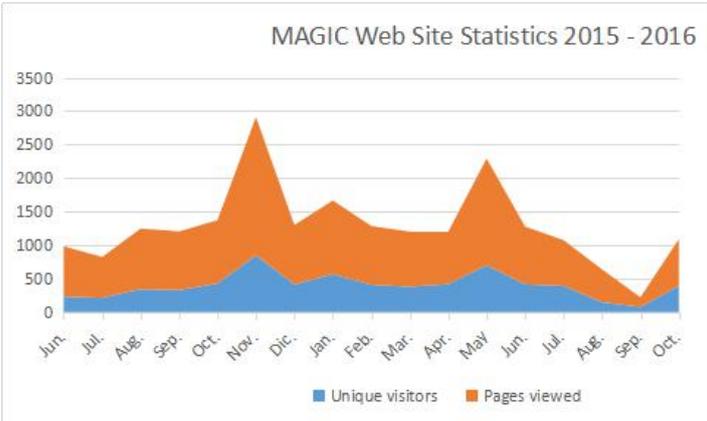


Figure 4: Graphic of the evolution of the MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

Though statistics immediately following the modification of the website are not as high as might have been expected, it is important to acknowledge that this occurred in the latter part of the northern hemisphere summer, coinciding with the vacation period there, so the low numbers only reflect the stationary falls, while the two strong increases were marked in the context of international events (UbuntuNet Connect and eAGE 2015; TNC16 and TICAL 2016).

In addition to the number of unique visitors and more viewed pages, since M02 every week the ten most viewed pages of the web site have been measured. From the sum of the ten weekly most viewed pages, a ranking of the 20 most viewed pages is created. The results show that visitors have paid more attention to the project itself, training, science communities and to the Cloud Provisioning and Groupware Standards (WP3) activities. This is shown in the following figure, while the second figure shows the regions from which visitors originate (the statistics where taken until 30 October 2016).

10 most viewed pages per week - MAGIC Web Site			
		Total of viewed pages	Unique visitors
1	Magic Project	6013	4695
2	About MAGIC	826	671
3	Objectives	688	572
4	Partners	497	420
5	Training	395	340
6	Science Communities	362	310
7	Deliverables	280	247
8	MAGIC's WP4 makes available on-line: Open course on NRENum.net and DNS Configuration	224	176
9	News and Events	180	100
10	Presentations	154	130
11	Milestones	152	138
12	The Ethiopian NREN is now part of MAGIC	117	107
13	Project Structure	106	88
14	WP3: Cloud Provisioning and Groupware Standards	100	85
15	September 8 to 10: Workshop on Joining eduroam and Identity Federation	84	69
16	Project Management	81	71
17	MAGIC Project lifted off	80	69
18	MAGIC, TANDEM and SciGalA will share a stand and a network session in ICT2015	77	61
19	10 months doing MAGIC	69	61
20	The Workshop on Joining eduroam and Identity Federation in Amman was a success	68	57

Figure 5: Graphic of the evolution of the MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

Continents from which visitors originate

Europe	2063
Central and South America	1740
Africa	1075
North America	818
Asia	512
Unknown	304
The Caribbean	307
Oceania	53

Figure 6: The MAGIC website general statistics, regions from which visitors originate.

Social Networks

The MAGIC social network presence was delivered at the end of M02, both in the Facebook and Twitter environments.

By 7 November 2016, “Magic a global connection”, the project’s presence on Facebook, which went live on 25 June 2015, had 165 likes. The growth of likes since July 2015 is shown in the following figure.

By 11 November 2015 @MACIC_our_voice, the project’s presence on Twitter, which had gone

live on 5 June 2015, had 30 followers. Almost one year later, on 8 November 2016, this number had grown to 112, with several interactions (most of them mentions).

COLABORATORIO landing page

After the first project review the need for a homepage for the Colaboratorio was identified. It was also recommended that access to the Colaboratorio be provided from within the project website. This was implemented along with a Colaboratorio landing page within the site. The landing pages currently included on the MAGIC website and on the WACREN site are shown in the following figures.

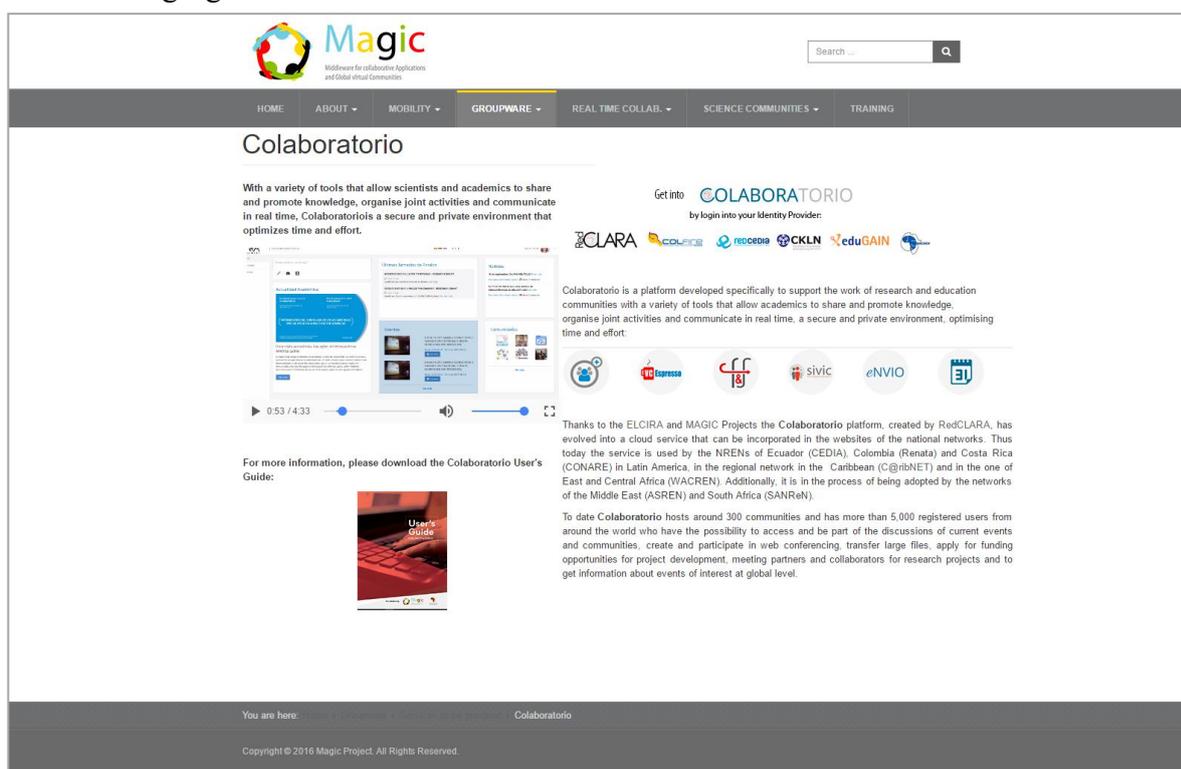


Figure 7: Colaboratorio landing page within the MAGIC project website

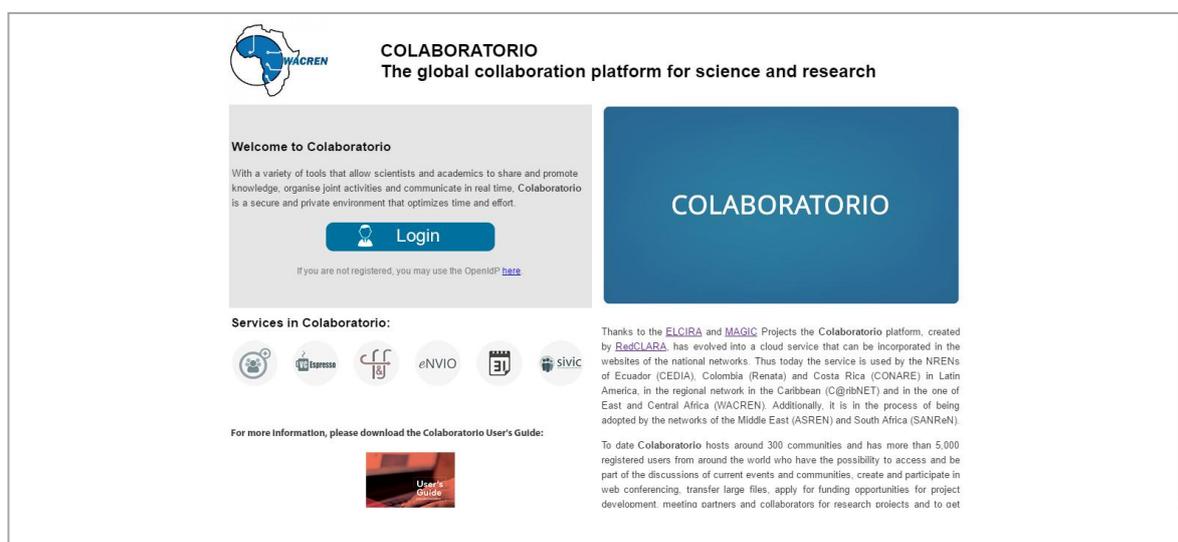


Figure 8: Colaboratorio landing page within the WACREN web environment

Partner Dissemination Channels

Once it was defined that the MAGIC bulletin was not really efficient to communicate and help to disseminate the news produced by the project, the strategy changed and every time WP6 has needed to share an information and/or invitation made by another WP, a news item has been written in English, then published on the website. It has also been translated into Spanish and Portuguese in document format, and shared with all project members together with a picture asking them to share the information with their local communities. This new way of functioning has worked well and within the reported period the project partners have disseminating the project well; all publications were reported in D.6-5.

Brochures and promotional material

In order to serve the different dissemination needs, project brochures, flyers and invitations were printed in English and distributed at international events where MAGIC had representation. The brochures and flyers have been published on the website under the Dissemination section (<http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-brochures>) for download in PDF.

In order to serve the dissemination needs of WP5 at the IST-Africa 2016 Conference, project brochures focused on raising awareness of the Global Science Communities that MAGIC is currently fostering were designed and printed in English (300 copies). A total of 150 invitations were sent out for the session that WP5 carried out at the event.



Figure 9: MAGIC Global Science Community brochure in English.



Figure 10: MAGIC Global Science Community invitation to the session at IST-Africa 2016.

A new MAGIC brochure was developed in order to disseminate progress with platforms for mobility, cloud provisioning and groupware standards and agreements for real-time collaboration. 400 copies of the brochure were printed, 200 were distributed at TICAL2016 (Buenos Aires, Argentina, 13-15 September), 100 at UbuntuNet-Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November 2016), and 100 will be distributed at e-AGE2016 (Lebanon, Beirut, 1-2 December).

In order to serve the dissemination needs of WP5 at the UbuntuNet-Connect 2016 and e-AGE2016 conferences, flyers focused on raising awareness of the Global Science Communities that MAGIC is currently fostering were designed and printed in English (500 copies). A total of 200 were distributed at the UbuntuNet-Connect 2016 Conference, and 300 will be distributed at the e-AGE Conference.



Figure 11: New MAGIC brochure in English.



Figure 12: New MAGIC Global Science Community flyer.

Regarding branded promotional gifts, 300 pen-drives were provided for distribution at IST-Africa 2016.



Figure 13: MAGIC branded pen drives.

Within the reported period MAGIC was represented by project partners at relevant conferences in Europe, Latin America and Africa:

- TNC16 (Prague, Czech Republic, 12-16 June)
- TICAL2016 (Buenos Aires, Argentina, 13-15 September)
- UbuntuNet-Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November)

TNC16 (12-16 June 2016, Prague, Czech Republic)

By means of the “MAGIC + Sci-GaIA + TANDEM: Towards Sustainable e-Infrastructures” session, held during the second day of TNC16, and its presence on the GÉANT booth, the MAGIC Project had significant visibility at the leading European conference for the research and education networking community.

During its session, the EC-funded MAGIC, Sci-GaIA and TANDEM projects joined forces to promote cross-border collaboration. They showcased the development and operation of research

e-infrastructures in the different world regions covered by them, introducing their approaches on these issues and stimulating the discussion about the benefits of developing new world class research e-Infrastructures for the R&D communities. The session recording can be seen at: <https://tnc16.geant.org/web/media/archive/7A>. The presentations given within this session can be downloaded at: <https://tnc16.geant.org/core/session/79>.

Thanks to the collaboration of GÉANT, MAGIC also had the chance of enhancing its outreach by means of its dissemination slots at GÉANT's booth, where the project's benefits were shared with visitors, supported by the presence of the Project's dissemination brochures and promotional gifts (branded vintage puzzles and loudspeakers).

TICAL2016 (Buenos Aires, Argentina, September 13-15):

MAGIC had a stand where 200 MAGIC project brochures were distributed and researchers were informed about the benefits they can get from the applications, services and global science communities.



Figure 14: MAGIC stand in TICAL2016.

UbuntuNet Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November):

At the conference 200 Global Science Communities flyers and 100 MAGIC brochures were distributed. On 4 November, MAGIC was part of the “Session 5: Enhancing Research and Collaboration through regional and global projects”. The session was chaired by Cathrin Stöver - Chief Collaboration Officer at GÉANT-, and MAGIC was represented by Tiwonge Msulira Banda and Tania Altamirano-Lopez (WP5) who explained the Global Science Communities through the presentation “Experiences with Global Science Communities”. Prior to the Conference, there was a workshop on 2 November at which MAGIC had two presentations slots to speak about “End User Engagement Lessons from RedCLARA” and “The MAGIC Global Science Communities”.



Figure 5: Tania Altamirano at the MAGIC presentation in UbuntuNet Connect2016.

WP6 is led by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, GRNET, NITC, RNP, TEIN*CC and WACREN.

1.3 Impact

As the information on expected impacts is relevant as was proposed in the DoA, we will go one by one analysing the advances in the Indicators and expected dates to reach its full achievement.

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoA): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:

<i>Training in the Arab Countries</i>	<i>Number of trained engineers</i> 11
<i>Training in The Caribbean</i>	<i>Number of trained engineers</i> 15
<i>Training in the East and South African countries</i>	<i>Number of trained engineers</i> 22
<i>Training in Mozambique</i>	<i>Number of trained engineers</i> 4
<i>Total so far</i>	<i>Number of trained engineers</i> 52

It is expected additionally, to hold at least 2 workshops by the end of 2016 in Arab States Region and February 2017 in Central Asia where more engineers will be trained.

b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENs and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: *12 countries having signed eduroam agreements with MAGIC
4 new pilot federations*

Advances in the Indicator:

Number of countries committed to eduroam so far:

Latin America 10

Caribbean 1 (Jamaica)

Arab Countries (ASREN) 5 (Algeria, Jordan, Lebanon, Morocco)

East and South Africa (UbuntuNet) 2 (Uganda, Malawi)

West Africa (WACREN) (Senegal, Ghana, Nigeria, Mozambique)

Pilot federations already created and in process of becoming eduGAIN members

Morocco

Algeria

Mozambique

Ouganda

South Africa: SAFIRE

Work in progress towards creating a Federation

Jordan

Lebanon

Mexico

WACREN eduID

c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: *3 world regions incorporated in the pilot federated groupware service*

Advances in the Indicator:

At present the regions involved in the groupware service are: Europe and Latin America, The Arab Countries and West Africa are soon to be included.

d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: 6 countries in 2 regions having incorporated NRENum.net for Global dialing

Advances in the Indicator:

The NREnum.NET deployments in MAGIC count now 8 countries (Ecuador, El Salvador, Mexico, Uruguay, Czech Republic, Sri Lanka, Chile, and Lebanon). Furthermore, 4 world regions were achieved (Latin-America, Europe, Asia, and Middle East)

*Thus 5 countries in LA already joined NRENum.net
1 Country in Asia has already joined*

e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

*5 NRENs using applications built and deployed/hosted by another.
2 NRENs with a pilot cloud applications portal implemented
The number of applications deployed in the pilot test will be at least 2
The Directory of the applications provided by NRENs available for use of other NRENs contains at least 10 applications*

Advances in the Indicator:

Within the Colaboratorio container developed by RedCLARA, the following applications are contained:

*Filesender, developed by UNINET and modified by RENATER is hosted in RedCLARA
MCONF, an Open Source WebConference System modified by RNP and RedCLARA, is hosted in RedCLARA, RNP and soon RENATA, ASREN and NgREN
The Funding & Partners funding database hosted in RedCLARA
These applications are being used by CEDIA (Ecuador), CONARE (Costa Rica), NgREN/WACREN (Nigeria), ASREN, EtherNet and others are coming. The above result*

is added to the existing Colaboratorio implementations in RENATA (Colombia), CKLN (Caribbean), CUDI (Mexico) and the undergoing work with INNOVARED (Argentina) that is on testing phase.

Currently, the following applications are being implemented as shared applications

Docuwiki, a wiki system to be hosted in CESNET

JITSI, a webconference system implemented at RENATER

Etherpad, a collaborative editing system hosted in RENATER

CNC, a cloud storage system developed and hosted in RNP

Other applications are being studied to be included.

Thus, we currently already have over 5 NRENs using shared applications

Over 4 NRENs with the applications portal implemented

The number of new test applications in the pilot will exceed 4

The Directory of applications is already operational in a pilot phase at:

<http://catalogo.redclara.net:8000>

The number of applications currently included are 10. More are expected to be included in the coming months.

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

1 information day on H2020 has been organised in Year 1, 3 more are planned for the last semester of Year 2.

The Database of funding opportunities is complete and providing information on a global at a Global scale with continuous feeding and automatic e-mail distribution for subscribers.

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

Recommendation 1

It is necessary to develop the overall strategy of the project that would account for the capacities, capabilities and limitations of all project participating countries and indicate the procedures and approaches for all of them in order to achieve ultimate project goals.

Comments:

The project proposed a strategy based on a work region by region where the work with individual NRENs is lead in each region by the Regional Network and a companion leader to support its action.

In particular, in &1.3.1 section I of Part B we state the following:

“To ensure maximum impact the training and best practice sharing will be carried out at Meetings of the Regional RENs and for each developing REN, a leader NREN has been selected to ensure regional appropriation and follow-up, following the model developed in Latin America where the leadership of RNP has been key for the successful training and implementation of eduroam and Identity Federations.”

This strategy of working with the NRENs and their Regional organization (the RREN) is repeated in section II of the same paragraph:

“... we propose to create a model for NRENs to provide services to each other using the AAI infrastructure as well as the federated groupware infrastructure discussed in the previous paragraph”

(...)

“The final goal is the creation of a prototype of a worldwide market of collaboration services where NRENs provide services to each other across the world using a unique authentication mechanism and a global federated groupware that eases the use of collaboration applications.”

The goals (KPIs) were established in consultation with each region. The regions took into account the capacities, capabilities and limitations of all the participating NRENs.

Thus, in our view the strategy was defined from the beginning, i.e. to work with the NRENs and their regional organisations (ASREN, CAREN, CKLN, TEIN, UbuntuNet Alliance and WACREN) to reach the NRENs through them. These organisations were also the ones providing the KPIs that they considered possible to achieve according to the degree of development and the resources of each region.

Now that one year of experience has provided us with additional knowledge on how to work with each region, we can further detail and clarify the strategy for each one. This will be done in a separate document that will be provided as “D1.2.5 Reviewed Implementation Strategy”.

Recommendation 2

Training activities should be more targeted and aligned with the established strategy (described in the point above) to address specific needs of each target group (NRENs, focal points, end-

users, researchers, etc.).The same is true for the project developed tools and dissemination materials (see comment below).

Comments:

For MAGIC the target groups, or Focal Points, are mainly NRENs and the Regional R&E Networks (ASREN, CKLN, CAREN, UbuntuNet Alliance, WACREN, TEIN). There is no difference for MAGIC between Focal Points and Regional R&E Networks, as is the case in TANDEM where Focal Points are the potential champions that support the development of NRENs in the WACREN region.

Training for WP2, WP3 and WP4 is focused on technical staff of the Regional R&E Networks (RRENs) and NRENs who will deploy the applications and middleware necessary to connect the applications, enabling the proposed global market of collaborative applications. The approach is federative, following the model of RRENs formed by NRENs. The work of MAGIC cannot extend further than the NRENs, and that is why the technical training is focused on the NRENs at meetings which the NRENs attend. This strategy was proposed in the DoA, Part B, Section 2.2 a), where we explicitly proposed the following:

“The training and dissemination actions will be carried out within the context of international events at which the MAGIC project will be represented both in the form of a booth for dissemination purposes and/or in the form of a presentation that should be given to the event’s audience. These international events will be those specific regional events in which the project’s partners regularly participate. This will ensure a broader participation of MAGIC’s partners with a lower cost for the project. Key events will be the TERENA Networking Conference and regional conferences such as TICAL, UbuntuNet Conference and/or IST Africa, the APAN Conference, e-AGE, among others.”

In the material to be displayed online, the idea has been to generate material that can later be used by the NRENs to train their institutional members: universities, research centres, etc. The project did not propose to train the institutional members of the NRENs using this material, but only to provide them with the material and a platform to deliver it as outreach to end users is typically the responsibility of NRENs. MAGIC therefore enables the NRENs to obtain the material and expertise to carry out in-country training. Furthermore, the provision by MAGIC of in-country training would have significant budgetary implications which are far beyond the budget of the project.

The project description does not include a proposition for dissemination material aimed at the level of technicians that could adopt the tools for their NRENs. We accept the suggestion to develop this material and also will prepare training on the installation of the tools and middleware. This will require an effort that was not budgeted but we consider it very important for the adoption of the technology. This work will therefore be added to WP3.

The only end users that MAGIC works with directly are the User Communities who are proposed as test users of the applications. This group of users is necessarily of a limited scope because the resources of the project do not make it possible to be extended more widely. The group is intended to serve as a test group of the concept of global research communities. The training for this group was intended to be done via webconferences and in some limited conferences where users of the Global Science Communities could attend, an activity that is planned for year 2.

Nevertheless we accept the suggestions to provide, whenever possible, alternative ways for training in the form of videos that could be used beyond the end of the project, providing a more user-friendly way of showing users how to join the communities and use the collaboration applications to build their own communities. This will be done using the MOOC Platform OedX that will be provided as a cloud service by France Numérique, a partner of RENATER, who is in the process of signing an MoU with MAGIC.

Recommendation 3

Further development of the Colaboratorio is justified only in the global context of the project, i.e. across the scientific communities to be established in all participating countries/continents. This tool cannot be justified and/or accepted if developed and/or used only for one project partner (see further recommendations re WP3).

Comments:

Although we understand the admirable intentions behind the above comment and the above recommendation, in this point we have to express a reasonable disagreement with the reviewers. The project Specific Objective b) reads:

“To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services”.

This goal is proposed to be attained by (&1.3.1 II):

“To advance in the agreements and implementation of a middleware capable of managing international working groups across applications. (.....) Our proposal is to build upon existing European proposals such as OpenConext, Perun and HEXAA to define a platform for a federated open groupware management system that will allow NRENs and private providers to offer applications worldwide using the same group structure, easing collaboration and setting up the basis for an open market of collaborative applications with authenticated access of persons and groups”.

“Starting from the pilot developed in ELCIRA, where European and Latin American NRENs are providing services to each other using an access portal, creating in this way a prototype of cloud provisioning between NRENs, we propose to create a model for NRENs to provide services to each other using the AAI infrastructure as well as the federated groupware infrastructure discussed in the previous paragraph. The model shall include mechanisms to disseminate services, to properly define the service characteristics as well as their cost, be this based on cost share or tariffs”.

“The final goal is the creation of a prototype of a worldwide market of collaboration services where NRENs provide services to each other across the world using a unique authentication mechanism and a global federated groupware that eases the use of collaboration applications. This prototype may later be extended to the privately provisioned services by external companies”.

The Colaboratorio is the prototype where user groups are managed and services to user communities are provided, be these provided by RedCLARA (such as MCONF or SIVIC) or by other NREN providers (work is underway to use Etherpad from RENATER and OedX from France Numérique). This prototype is currently interacting with Sympa, a similar system containing different applications developed by RENATER, and PERUN, the user group interface developed by CESNET. The interaction between these platforms using a common protocol (currently VOOT is being tested) is the core of this activity. Thus, the Colaboratorio is the prototype that has to test case the servicing of applications across NRENs with transparency for the user groups created in different countries/regions of the world.

In the KPIs the project did not commit to deploying the Colaboratorio in all world regions, but to make the tools and protocols available for worldwide dissemination of the concept. The tools may later be adopted as the different world regions mature their NREN/RREN system. The central idea is the inter-operation model allowing NRENs from different world regions to share services in a federated authenticated system with the ability to share user group information as well. An extensive use of the Colaboratorio is not at the centre of the KPIs because on one side, there could be other application environments (such as Sympa or PERUN for example) that could expand their user portfolio embracing the middleware that

the project is proposing.

Nevertheless, as RRENs of the different World Regions are evolving, we have received requests from Central Asia to implement the Colaboratorio in Kyrgyzstan and other regions are working on feasibility of implementing the Colaboratorio.

Thus, we think that the original Indicators for this Specific Objective could be modified as follows:

Indicators:

<i>Indicator</i>	<i>Original Value</i>	<i>New Committed Value</i>
<i>3 world regions incorporated in the pilot federated groupware service</i>	<i>3</i>	<i>4</i>
<i>NRENs using applications built and deployed/hosted by another</i>	<i>5</i>	<i>10</i>
<i>NRENs with a pilot cloud applications portal implemented</i>	<i>2</i>	<i>6</i>
<i>The number of applications deployed in the pilot test</i>	<i>2</i>	<i>4</i>
<i>The Directory of the applications provided by NRENs available for use of other NRENs contains at least</i>	<i>10</i>	<i>10</i>

Recommendation 3

The dissemination activities and materials should be more targeted to reach out to the variety of the specific project audiences.

Comments:

As discussed in previous sections, the project has proposed to work with the RRENs and NRENs of several world regions in order to:

“(...) establish a set of agreements (...) aiming at consolidating and completing the building blocks of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities”.

Thus, the key target audiences of the dissemination activities are:

- RREN and NREN directors and technical staff
- Policy-makers and leaders involved in the deployment of NRENs and RRENs
- The Global Science Communities

A second type of audience is the community at large and potential users of the NREN services. Thus, the dissemination activities have been focused on two types of events:

- a) Events attended by NREN technicians and directors: eAGE 2015, TICAL2015, TNC2015, TANDEM workshops, UbuntuNet-Connect and APAN conference.
- b) Events attended by decision makers and NREN builders: IST-Africa 2015, ICT 2015

It was envisaged that during the second year of the project promotional material (brochures, flyers, etc.) would be tailored to different specific audiences and communities. This process of “tailored material delivery” started with the flyers produced for ICT Africa 2016 in May and will continue.

The project website is focused on project partners, not in prospective partners or end users, because the prospective partners are a matter of the regional R&E networks while end users

should be a matter of the NRENs and the universities. This is very important for the work with the NRENs, since they always insist that the end users should be dealt with in a federated way and not directly served by the Regional R&E Networks (RRENs). The only exception to this is the Global Science Communities where the work has been done jointly in order to ensure representative participation of the different NREN partners.

Nevertheless, we recognise that more can be done in preparing dissemination material focused on the NRENs for the deployment of the Colaboratorio and the applications. This material will be included in the website where more work will be devoted to the attraction of potential NREN partners to MAGIC with care being taken to ensure that their participation is not separated from the corresponding RREN involvement.

Recommendation 3

In addition to back-to-back events and co-organized dissemination activities, the project should build synergies with other EC-funded initiatives. TANDEM and SCI-GaIA for instance have a lot in common with MAGIC – communities building, working with focal points, NRENs, expanding e-infrastructures and networks to the less advanced countries and regions. These and other commonalities between the projects should be identified and exported in order to optimize their overall impact.

Comments

The user communities in TANDEM are essentially focused on the construction and funding of the NRENs in the WACREN region, entailing the participation of Focal Points, that could become NREN leaders, and donors and governments who will support them. Thus their goals are different from the MAGIC goals. There will be a user community in Agriculture in TANDEM that is similar to the MAGIC communities and of course synergy is to be built wherever there are opportunities to do so.

The MAGIC project is not focused on expanding the physical infrastructure of the NREN but rather in supporting the development of the service layer. Of course there is synergy there in the sense that services motivate connectivity.

The Sci-GaIA project builds on a series of previous projects (EELA, EELA-2, CHAIN, GISELA, CHAIN-REDS) which have built the Science Gateway where a series of applications from different providers are available as a resource database where the user can request access to each application by asking permission by completing a form and waiting for the result. The access policies from each application are different ranging from free access to commercial providers where the Science Gateway points to the provider for further information on pricing and access modalities.

The use of some of the Sci-GaIA applications to be embedded into the Colaboratorio portal could be relevant providing that the application is made fully available by the application provider. MAGIC will work with Sci-GaIA to generate a test with one or two applications embedded into the Colaboratorio, using groupware tools to enhance access by ‘user communities’, one of the key characteristics of the Colaboratorio.

The Forum application developed by Sci-GaIA is the key tool for community building and is very interesting. Nevertheless, the Discussions area in the Colaboratorio does the same for user communities. The key difference here is that Discussions are available only once you join the user community while in the Forum the open discussion is the key community building tool. MAGIC will discuss with Sci-GaIA the possibility of working to embed the Forum into the Colaboratorio or connecting both tools.

As regards community-building activities, Sci-GaIA does not have activities such as the Global Virtual Days to support the strengthening of communities and a real-time exchange of experiences. For MAGIC these activities are very important in addition to the Information Days on H2020 Calls and the Information System on Global Funding Opportunities. MAGIC is very interested in finding other ways of collaborating and will use the Sci-GaIA Forum

to invite academics to join the GSCs.

It is also important to keep in mind that MAGIC is not focused only on Africa, but includes Europe, the Caribbean, Central Asia, the Asia-Pacific region and Latin America. Consequently, collaboration with Sci-GaIA will be determined by the common goals and the limited resources available in both projects to pursue new activities.

Recommendations concerning Future Work

In the following paragraphs we comment on the Reviewers' recommendations concerning Future Work.

Future Work 1

Sustainability of the project should be addressed in the next period. The project should present a comprehensive plan for how to maintain and expand the work done in the regions. Mainly supported by the sustainability and exploitation plans of the partner NRENs and focal points.

Comments

The MAGIC Project aims to create the basis for the construction of a dynamic market of applications to be shared and provided by NRENs to one another and by external providers. RedCLARA will maintain the Colaboratorio framework and will make the software available in OpenSource as it is considered a key development for user communities to share and access resources.

The same philosophy of a container application that can provide access to other services for the benefit of NRENs is shared by the partners. In particular, RENATER has developed Sympa, an application including e-mail, calendar, mailing lists and video and webconferencing for the use of the French R&E community. This application is adopting the groupware approach and sharing mechanisms that MAGIC is developing. Hence a second platform will be maintained and sustained by RENATER.

The provision of applications that can be embedded into the Colaboratorio and other platforms will depend on the NRENs that provide them. The idea of applications and service-sharing is becoming an important subject in the R&E networking world and in particular at GÉANT.

The development of the middleware will be maintained by the interest of the different RRENs and NRENs of the world in the same way that eduGAIN and eduroam are maintained by the European partners. Groupware will also be supported by RedCLARA and MAGIC is confident that the Asia-Pacific region will also join this initiative.

Support for the continuity of the actions will depend on the Regional R&E Networks: ASREN, CKLN, CAREN, UbuntuNet Alliance and WACREN.

A section describing the Global and Regional initiatives aimed at ensuring that middleware software and services as well as the containing platforms such as Colaboratorio, Sympa and others develop in the future will be included in the Final Report.

Future Work 2

The reviewers suggest to elaborate more of project-tailored KPIs that would monitor communities' expansion and performance in each region and help to draw conclusions about the progress, outputs and outcomes of the project.

Comments

This is a valid observation and a correct recommendation. However, it should be noted that the suggested extension would go beyond the goals of the project. In the proposal MAGIC committed to the following:

“To select three (3) research communities with common worldwide interest. In topics such as Tropical Diseases, Climate Change, Disaster Management and others. Once the

communities are selected, the project will support them with training in the use of the tools as well as with information on funding opportunities and training on how to set up successful proposals. The research groups will also act as evaluators of the tools being provided and will help the design of the interfaces and use mechanisms that satisfy their requirements”.

The project is not focused on building and maintaining large user communities but rather in building a set of collaboration tools and making them available to the Global Science Communities to make their collaborative work easier and more effective and efficient. The purpose of the committed Global User Communities has been to showcase the use of the applications and receive their input on the tools required for effective global collaboration.

It is very important to show the work of Global Communities, but KPIs that monitor the expansion, in our opinion, go significantly beyond the purpose of the project. After seeing the enthusiasm of the Central Asia Health group and the recent work with Asia-Pacific on the same subject, MAGIC is convinced that a KPI on including members from most, if not all, the regions can be achieved within the project lifetime.

However, the actual number of individual members was never intended to be an indicator as for some members of the communities, a too large community could lead to just a few working on it. The work of the user communities was not part of the project either, hence a commitment of the type of work being done or whether it led or not to the preparation of proposals would be impossible to guarantee and is significantly beyond the scope of the project.

Nevertheless, MAGIC does propose an indicator on the participation of the GSC members in Virtual Days as well as a satisfaction survey on the usefulness of the information being provided by the “Funding and Partners” database. MAGIC will submit a proposed set of KPIs in addition to the ones already proposed for Specific Objective 2 above.

Future Work 3

The dissemination events should be well identified, targeted, and in line with the defined strategy.

Comments

Dissemination events have been targeted at NRENs via the following events: APAN, e-AGE, TNC, TICAL, UbuntuNet-Connect, WACREN meetings.

Decision-makers in science and technology and NRENs have been targeted at: ICT 2015, IST Africa-2015 and IST Africa-2016

Future events are intended to continue the focus on NRENs: APAN, e-AGE, CAREN meetings, UbuntuNet-Connect, WACREN meetings.

These events are in line with the already defined strategy to focus the work on NRENs and RRENs.

As regards user communities, it is extremely challenging for MAGIC to attend researcher events, given the wide range and number of such events, except possible remotely. However, MAGIC will endeavour to participate in a limited number of appropriate events in order to recruit more members for the Global Science Communities. Furthermore MAGIC will also attend Sci-GaIA workshops on Open Science in order to reach user communities working in Africa.

Future Work 4

The synergies with other EC funded projects in the domain and geographical focus areas should be also intensified for common benefits.

Comments

Synergies with TANDEM can and will be intensified. In particular MAGIC will work to support the agricultural user community which is being promoted by TANDEM.

As part of the MAGIC project, WP5 will be conducting training on H2020 for African researchers and on the use and expansion of the Funding & Partners database

MAGIC will expand the invitation to join Global User Communities.

Synergies with Sci-GaIA may include the use of their training material when useful for MAGIC purposes. As set out above, efforts will also be made to showcase access to Sci-GaIA applications to be integrated into the Colaboratorio. MAGIC will also offer Sci-GaIA the use of MCONF and other applications for the use of the African Grid Science Gateway.

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

The following tasks have been delayed:

T3.4 Pilot service with one application sharing group information and service catalogue

This task was delayed because of

T3.5 Evaluation of pilot and services, user perception, and implementation effort

T4.4 To integrate the legacy (SIP capable) Global Video network with one open-source web-conferencing system, and a VoIP network based on NRENum.net.

T5.4 H2020 Virtual Information Days to promote participation in International Calls

This task was delayed because of

5.2 Use of resources

The following table shows the amount of resources spent up to October 2016 which amounts to €1,167,757 and is requesting reimbursement for €849,886 This amounts to 63% of the foreseen claims. In general terms we have spent 65% of the manpower and 55% of the travel budget.

Partner	Direct personnel costs	Other direct costs	Direct costs of subcontracting	Indirect costs	Total eligible costs	Requested reimbursement
CLARA	234.110 €	60.350 €	19.844 €	73.615 €	387.918 €	387.918 €
GEANT Limited	6.346 €	4.618 €	- €	2.741 €	13.705 €	13.474 €
GEANT Veriniging	11.298 €	10.819 €	- €	5.529 €	27.646 €	27.646 €
RNP	33.525 €	8.680 €	- €	10.551 €	52.756 €	- €
RENATA	11.248 €	2.624 €	- €	3.468 €	17.340 €	17.340 €
REUNA	14.688 €	3.935 €	- €	4.656 €	23.279 €	23.279 €
CEDIA	1.758 €	3.270 €	- €	1.257 €	6.285 €	6.285 €
CUDI	142.628 €	15.459 €	- €	39.522 €	197.609 €	- €
UBUNTUNET	35.996 €	9.194 €	- €	11.297 €	56.487 €	55.690 €
WACREN	43.565 €	9.318 €	- €	13.221 €	66.104 €	66.104 €
ASREN	66.325 €	7.497 €	- €	18.456 €	92.278 €	72.153 €
CESNET	14.379 €	1.930 €	- €	4.077 €	20.386 €	20.386 €
GRNET	39.888 €	10.464 €	- €	12.588 €	62.939 €	62.939 €
SURFnet	2.297 €	- €	- €	574 €	2.871 €	- €
CSIR	8.786 €	2.880 €	- €	2.917 €	14.583 €	- €
RENATER	28.268 €	6.572 €	- €	8.710 €	43.550 €	43.550 €
NIIF	11.754 €	4.696 €	- €	4.112 €	20.562 €	20.562 €
CKLN	13.922 €	8.584 €	- €	5.626 €	28.132 €	28.132 €
NITC	700 €	2.842 €	- €	886 €	4.428 €	4.428 €
TEIN	2.997 €	20.123 €	- €	5.780 €	28.900 €	- €
Total	724.478 €	193.853 €	19.844 €	229.583 €	1.167.757 €	849.886 €

The following partners are behind in their expenditure for the reasons detailed below:

DANTE and TERENA have become GEANT Limited & GÉANT Association Merging into one organisation, this has distracted their human resources from more active participation in the project. More active participation is foreseen for the last semester of the project.

RENATA has gone through a change in management and a reorganisation of its team. This has made difficult for their staff to contribute more. CLARA has then assumed the leadership in D4.4 and supported the continued support to the expansion of NRENnum and DNSSec. In the last part of the project RENATA is focussing on increased participation in these activities.

UbuntuNet suffered from a slow start and has not been able to completely cope with the lack of personnel to carry on the project activities. They are actively working to overcome this difficulty in the coming months.

CESNET has not been able to dedicate the time foreseen in the first semester of Y2, but they have increased spending in Q7 due to training in Lebanon. And now they will have another person who will work with the team till the end of the project.

RENATER has gone through an internal reorganisation that has kept them away from more active participation, they expect to be able to become more active in the last semester.

NITC late start of the next CAREN phase which is currently just getting to heat up. In February 2017 we will conduct the MAGIC training and a GSC event in Kyrgystan, while more training in synergy with NSRC will be conducted in April 2017 jointly with the CAREN conference.

CKLN has ceased to exist as of September 30, 2016. An amendment request is in progress.

In terms of manpower, the partners have spent a total of 217.4 PMs, i.e., 71% of the total manpower committed which is in line with the time elapsed which corresponds as average to 75% of the total time. The following is the detail of PMs spent by partner:

Partner	WP1	WP2	WP3	WP4	WP5	WP6	TOTAL
CLARA	13,4	0,5	25,6	3,5	19,3	14,3	76,7
GEANT Limited	0,7	0,2	0,1	0,0	0,1	0,2	1,3
GEANT Vereniging	0,4	0,9	0,1	0,0	0,0	0,0	1,3
RNP	0,8	5,4	1,1	1,1	1,5	1,5	11,3
RENATA	0,4	0,0	0,0	7,0	0,0	0,0	7,4
REUNA	0,7	0,6	0,9	2,8	0,0	0,0	4,9
CEDIA	0,2	0,4	0,6	0,0	0,0	0,0	1,2
CUDI	2,4	21,1	7,4	9,4	5,2	5,7	51,3
UBUNTUNET	1,1	1,8	0,1	0,0	4,0	1,7	8,7
WACREN	0,4	2,3	1,1	1,9	2,3	0,8	8,6
ASREN	0,8	9,5	0,9	0,3	4,2	2,3	18,0
CESNET	0,3	1,2	4,1	0,0	0,0	0,0	5,5
GRNET	0,5	2,5	4,4	0,0	0,3	0,3	8,0
SURFnet	0,1	0,0	0,1	0,0	0,0	0,0	0,2
CSIR	0,7	0,0	0,1	0,1	0,6	0,3	1,7
RENATER	1,5	0,6	2,4	0,4	0,0	0,1	5,0
NIIF	0,4	0,0	0,2	0,5	1,3	0,0	2,4
CKLN	0,6	0,3	0,2	0,0	0,9	0,0	1,9
NITC	0,3	0,2	0,2	0,0	0,0	0,0	0,7
TEIN	0,3	0,5	0,3	0,0	0,2	0,4	1,5
Total	25,7	47,9	49,6	27,0	39,8	27,4	217,4

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global vlrtual Communities

Project⁹ Number: 654225

Project Acronym: MAGIC

Periodic Technical Report

Part B

Period covered by the report: from 01/11/2016 to 30/04/2017
Periodic report: 4th

⁹ The term 'project' used in this template equates to an 'action' in certain other Horizon 2020 documentation

1. Explanation of the work carried out by the beneficiaries and overview of the progress

1.1 Objectives

General Objective:

The MAGIC Project seeks to establish a set of agreements for Europe, Latin America and other participating world regions, aiming at consolidating and completing the building blocks of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups which facilitates mobility and the work of global science communities.

Specific Objectives:

a) To foster the deployment of the platforms that enable mobility of people and seamless access to services by promoting the establishment of identity federations interconnected via eduGAIN, creating awareness of privacy and security issues and spreading eduroam by: sharing experiences, carrying out training and making available shared infrastructure to ease the process in the partner world regions.

During the period of this report, there were efforts in technical hands-on workshops, conferences and consulting.

In Africa, The National research and education network of Mozambique (MoRENNet), in the role of eduroam operator, has been working with the mentoring of the RNP to implement an identity federation. More specifically, both initiatives are part of the same international cooperation project initiated in September 2016 and completed in April 2017.

In the Caribbean, several activities were carried out as part of MAGIC's WP2: Platforms for Mobility to support:

- Strengthen the regional technical infrastructure for eduroam
- Increase the number of deployments of eduroam

b) To develop a model for inter-operation between NREN cloud application markets of participating world regions, based on cloud provisioning and taking advantage of applications developed and run by NRENs across different continents to create a model for a worldwide application market for collaboration tools and services

Regarding this objective, the working group completed the integration of two new pilot applications (Etherpad and eduDRIVE/e-DISKO) that use the group inter-operation standards. The applications were adapted to obtain groups/communities information from other domain through a communication based on the VOOT protocol. This protocol is part of the standards proposed in deliverable *"D3.3 Planning and design requirements for the group management and inter-operations standards and pilot implementation"*. The applications successfully uses the group information to securely access files and share access to a community of users in a remote environment. For the case of Etherpad, the organizations that share the implementation were RENATER (France) and RedCLARA (Latin-America). The application is hosted and served by RENATER, and any user with access to Colaboratorio can invite a group from Latin-America to edit a pad at RENATER. Users from Latin-America can access at any time with the proper authentication through the European confederation eduGAIN. For the case of eduDRIVE, application that is called e-DISKO by RedCLARA, The Brazilian NREN RNP host the service, and users from other Latin-America countries, Europe, Middle-East, Asia or Africa, can access if they are connected to eduGAIN. Also, WP3 produced the deliverable *"D3.6 Recommendation on service requirements for cloud providers in Academic cloud infrastructures"*. The document

contains an standard set of requirements that can be use by NRENs if they want to provide services, or bring providers to deliver them. The providers can verify what they need to provide services in the academic clouds in terms of standards supported, privacy, quality of service, location of services, among others.

c) To seek consensus among participating world regions on the importance of interoperability of real-time applications and work towards the adoption of standards such as those proposed by the Global CEO Forum to promote the creation of a worldwide environment for these applications.

In the real-time applications inter-operation, the MAGIC team worked in the integration of the Webconference services to the traditional SIP video network using ENUM dialling. The development includes Ealing from and to a SIP network, so it will allow easier communication between both environments. Webconference solutions are usually oriented to high mobility users without a fixed terminal, on the other hand, the SIP terminal devices are normally in a fixed location with higher bandwidth or connectivity. The development is completed and available for testing. The MCONF web-conference system is nowadays available to more than 10.000 users from regions like Latin-America, Europe, Middle-East, Asia and Africa. In addition to the implementation carried out, the group developed a deliverable with the guidelines to implement this type of unified network. The goal is that users can adopt the MCONF to SIP integration, and bring it to production in their own institutions.

d) To foster the collaborative work of Global Science Communities by actively promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

The last quarter of the project focused on the sustainability of the Global Science Communities as the project was coming to an end. Both virtual and face to face meetings were held with the communities. The face to face meetings were held back to back with major regional events with the aim of anchoring the work of the communities to the regional and national networks.

1.1.1 Work Package 1: Management

The management tasks carried out in this period were as follows:

- ◆ To ensure that all deliverables were submitted in the EC Portal.
- ◆ To distribute the funding received from the European Commission in accordance with the Consortium Agreement.
- ◆ To maintain regular Steering Committee meetings to ensure the correct implementation of the project. These meetings took place in person and by video-conference. Steering Committee Meetings were held on the following dates:
 - 11 November, 2016
 - 13 January, 2017
 - 2 March, 2017
 - 12 April, 2017
 - 19 May, 2017

The minutes of the meetings are available in the wiki of the MAGIC Community maintained on the Colaboratorio portal.

- ◆ To ensure that all Milestones are met.

All Milestones have been met. In the case of MS11 we have reached the indicator of 2 Asian countries, counting Central and East Asia, while Hong Kong University has been also added, it is not a full country now, but it is a very influential city in China. We have also added several other countries outside Asia. In the case of MS 18 we have replaced the proof method that was initially defined as agreements with MAGIC with a stronger means: their activation in the edu roam Federation.

Milestone number	Milestone name	Comments
MS1	Project installation	Kick off meeting in Paris, June 11-12, 2015. Website launched: www.magic-project.eu
MS2	Agreements of MAGIC and GÉANT to work on RTC standards	Agreement signed on 23/10/2016 CEDIA, RedCONARE, Nigeria at the time of the report. After, the following were included too:
MS3	RedCLARA's Collaboration Portal deployed in 2 regions, including the collaboration applications selected	Morocco - MARWAN, Lebanon AUB, Malaysia MYREN, Trinidad and Tobago's TTRENT, CUDI from Mexico 1. First virtual meeting of the Global Science Community on e-Health https://eventos.redclara.net/indico/event/634/ February 2, 2016 2. First virtual meeting of the Global Science Community on Biodiversity https://eventos.redclara.net/indico/event/639/ February 11, 2016 3. First virtual meeting of the Global Science Community on Environment https://eventos.redclara.net/indico/event/640/ February 18, 2016 4. First virtual meeting of the Global Science Community on Remote Instrumentation https://eventos.redclara.net/indico/event/641/ February 25, 2016
MS4	Global Science Community Opening Conference	https://eventos.redclara.net/indico/event/641/ February 25, 2016
MS5	Assessment of group management platforms	Document delivered
MS6	NRENnum.NET Deployed in 3 countries in Latin America	5 new connected countries: CEDIA from Ecuador, RAICES from El Salvador, CUDI from Mexico, REUNA from Chile and RAU from Uruguay
MS7	Global Science Communities established	The communities were established: GSC e-Health, GSC Biodiversity, GSC Environment, GSC Remote Instrumentation. Their space of work is in Colaboratorio.

		<ul style="list-style-type: none"> * Chile (July 8, 2015) * Amman, Jordan (8 to 10 September 2015) * Jamaica (7 to 9 October 2015) * Beirut, Lebanon (December 3 to 4, 2016) * Kyrgyzstan (February 27 - 28, 2017) * Tajikistan (March 1 - 2, 2017) * Mozambique (October 2016)
MS8	Training of focal points for AAI and eduroam completed	
MS9	Training materials to show the uses and benefits of the global collaborative tools	<p>A user guide was developed to support the use of the Colaboratorio platform by the Communities. Material is published at: http://magic-project.eu/index.php/training</p> <p>The activities included the development of an improved version of the system, increasing the number of sources of calls, reviewing the format to feed the system and the information display for users.</p>
MS10	BETA version of MAGIC Information System on Worldwide Funding Opportunities and Partner Search	<p>Work continued with the implementation of alerts by email.</p> <p>One connected in Asia-Pacific: Sri Lanka; one Kazakhstan (Central-Asia), one in the Middle East: Lebanon, One One in Europe: Czech Republic. Furthermore, University of Hong Kong restarted into the service</p>
MS11	NRENum.net Deployed in 3 countries in Asia Pacific	
MS12	Dissemination activities Year 1 complete	<p>All activities were completed on time. See the reports.</p> <ul style="list-style-type: none"> * Amman, Jordan (September 8 to 10, 2015) * Dar es Salaam (April 26 to 28, 2016) * Beirut, Lebanon (December 3 to 4, 2016) * Mozambique (October 2016)
MS13	Training in African region completed	
MS14	Training in the Caribbean completed	<ul style="list-style-type: none"> * Jamaica (7 to 9 October 2015) * Barbados (April 10-12, 2017) <p>UbuntuNet-Connect 2015, Maputo, Mozambique, 19-20 November 2015 https://www.ubuntunet.net/uc2015_cfp</p> <p>IST Africa 2016, Durban, South Africa, 11-13 May 2016 http://www.ist-africa.org/Conference2016/</p> <p>CUDI Spring Meeting 2016, Holiday Inn Hotel, Merida, Yucatán, 25-27m May 2016 http://www.cudi.edu.mx/primavera_2016/</p> <p>Ubuntunet-Connect 2016 , Entebbe, Uganda, from 30 October 2016 to 4 November 2016 https://events.ubuntunet.net/indico/event/1/</p> <p>e-AGE Conference, Lebanon, Beirut, December 1-2, 2016 http://asrenorg.net/eage2016/</p>
MS15	Participation of regional representatives of each global priority area in at least one Regional Best Practice Meeting	<p>WACREN Conference, Abidjan, Côte d'Ivoire, 27-31 March 2017 http://indico.wacren.net/event/46/</p>

Caribbean MAGIC: Enhancing Collaboration in R&E,
 Bridgetown, Barbados, April 11-13 2017
<https://eventos.redclara.net/indico/event/794/>

MS16	Pilot of the group management platforms inter-operating and functioning in at least 2 applications sharing groups across continents	The pilot was deployed with Colaboratorio (Latin-America), FileSender premium (France), and Docuikiwi (Czech Republic) at July. At the end of the project were included eduDRIVE (Brazil) and Etherpad (France) as applications in the pilot.
MS17	Training in the Central Asian region completed	<ul style="list-style-type: none"> * Kyrgyzstan (February 27 - 28, 2017) * Tajikistan (March 1 - 2, 2017) * .vn Viet Nam - September 2015 * .jm Jamaica - Nov 2015 * .ba Bosnia & Herzegovina - December 2015 * .ir Iran - Jan 2016 * .eg Egypt - Feb 2016 * .so Somalia - Feb 2016 * .gh Ghana - Mar 2016 * .ml Mali - Nov 2016 * .bj Benin - Dec 2016 * .zw Zimbabwe - Jan 2017 * .bt Bhutan - Jan 2017 * .np Nepal - Jan 2017 * .kw Kuwait - Mar 2017 * .om Oman - April 2017 * .bb Barbados - April 2017 * .mz Mozambique - April 2017
MS18	eduroam agreements with at least 12 countries from different regions signed (actually these countries have already joined the eduroam Federation)	Support of the XeAP project by TEIN, and GÉANT supported connection of the FLRs
MS19	Training in Asia completed	
MS20	Strategic information to strengthen the worldwide communities	Participants express the importance of collaboration and highlight the need of share experiences from more advance groups to new ones.
MS21	Integration between legacy video network and Webconference is active	The system was delivered with dialling from and to SIP networks, and statistics management system
MS22	Update on the training materials portfolio	User's guide of Colaboratorio, tutorial videos of services and brochure on new services. http://magic-project.eu/index.php/training
MS23	Recommendations for Cloud service providers to participate in a Global Academic Cloud	The document was delivered
MS24	Briefing on the success and challenges the Global Science Communities carried out in the 2 years	<p>Closing sessions were held with Community Champions who pointed as challenges of working in a virtual global environment: a)Language b)Connectivity and c)Lack of e-collaboration culture.</p> <p>On a positive side, there is a general consensus that the Global Science Communities helped bring people from various parts of the world to share experience and learn from each other.</p>

		* Oman - Oman KID (Nov 2015 - joined as eduGAIN member)
		* Korea - KAFE (Nov 2016 - joined as eduGAIN member)
		* India - INFED (Feb 2017 - joined as eduGAIN member)
		* South Africa - SAFIRE (Feb 2017 - joined as eduGAIN member)
		* Singapore - SGAF - applied to join eduGAIN - 14 Dec 2016
		* Uganda - RIF - applied to join eduGAIN - 6 September 2016
MS25	Pilot federations deployed in at least 4 countries	* Mozambique - CAFMoz - applied to join eduGAIN - April 2017
MS26	Implementation guides and video tutorial on line	On line material developed and available at edx.redclara.net
MS27	Dissemination activities Year 2 complete	All activities were completed on time. See the reports.

- ◆ No major problems have occurred during this period, the project ran smoothly and we have been able to recover the delays reported in the previous reports.

As already reported in D1.3, CKLN, the Caribbean Knowledge and Learning Network has left the Consortium because it has been closed by its owners. An amendment has been completed and approved by the EC.

1.1.2 Work Package 2: Platforms for Mobility

Objective 1: Strengthen the regional technical infrastructure for eduroam in the Caribbean

Work completed:

- Installation and configuration of a secondary National Proxy Radius Server (NPRS) for TTRENT (Trinidad & Tobago Research and Education Network) that can be used as a secondary server for other National Roaming Operators (NROs) in the Caribbean.
- Peering and testing of the new NPRS with the eduroam Top Level Radius Server (eTLRS)
- Migration of institutions in Trinidad & Tobago to the new NPRS

Date Completed 2017-03-10

Outcome: The addition of a RADIUS proxy server outside of Trinidad & Tobago to ensure Security, Stability, and Resiliency of the eduroam service regionally.

Objective 2: Increase the number of deployments of eduroam in the Caribbean

Work completed:

- Assessment of institutions regionally to determine which ones have the wireless infrastructure to support deployment of eduroam.
- Assisted institutions with the planning and deployment of eduroam (UWI, UTT, COSTAATT).

Date completed 2017-04-28

Outcome: Deployment of eduroam in 5 additional countries (Anguilla, Barbados, Grenada, Montserrat

and Jamaica) and one additional eduroam pilot in Barbados.

Technicians, academics and researchers in the Caribbean had the opportunity to benefit from “Caribbean MAGIC”, a 3-day series of technical training and scientific discourse from April 10-12 at the University of the West Indies (UWI), Cave Hill Campus in Barbados.

Collaborating with the UWI, MAGIC has hosted a 2-day training session on eduroam, facilitated by GÉANT, Europe's leading collaboration on e-infrastructure and services for research and education. This have target the technical and IT representatives from various universities and colleges in Barbados and the Eastern Caribbean. For further information on Eduroam, and its application in the Caribbean region.

On April 12, the Global Science Communities of MAGIC, in collaboration with the Centre for Resource Management and Environmental Studies (CERMES) at Cave Hill, have hosted an Enviro-Health seminar, enabling a sharing of recent research and initiatives of the researchers, academics and practitioners in the respective sciences of the environment and health.

In the Arab region, ASREN, and in cooperation with its MAGIC partners conducted the following activities towards eduroaming the region in the period of this report:

I. Conferences: MAGIC Project and eduroam mentioned in all ASREN conferences, meetings and workshops:

ASREN annual Conference e-AGE 2016, Beirut, 1-2 December 2016. a side roundtable was allocated for eduroam discussion. The conference was served by eduroam too.

eduroam was on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on these developments.it was also discussed during ASREN monthly VC meetings.

II. Technical and hands-on workshops:

Workshop on Identity Federation Infrastructure: December 3 to 4, 2016, American University at Beirut (AUB), Beirut, Lebanon. The workshop was attended by 22 participants representing Morocco, Algeria, Lebanon, Palestine, Oman, Egypt, Somalia, Malawi and Jordan. The workshop was coordinated with CESNet and GEANT.

III. Webinars and conference calls:

Technical support team was formed from some staff from Lebanon and Jordan to provide technical assistance and support to the staff of other NRENs.

Several Conference calls and webinars organized to exchange knowledge and to follow up with technical staff at NRENs with support of the technical people from GEANT and CESNet in addition to ASREN team.

IV. Follow up:

eduroam was on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on eduroam. it was also followed up during ASREN monthly VC meeting with its partners.

There were two training sessions In Central Asia:

1.eduroam workshop in Kyrgyzstan

Date: February 27 - 28, 2017

Venue: National Information Technology Center, 265a Chui Avenue, Bishkek, Kyrgyz Republic

Attendees: 14 participants from 12 institutions of Kyrgyzstan.

2.eduroam workshop in Tajikistan

Date: March 1 - 2, 2017

Venue: Tajik Technical University named after M.Osimi, Tajikistan

Attendees: 14 participants from 13 institutions of Tajikistan.

1.1.3 Work Package 3: Cloud Provisioning and Groupware Standards

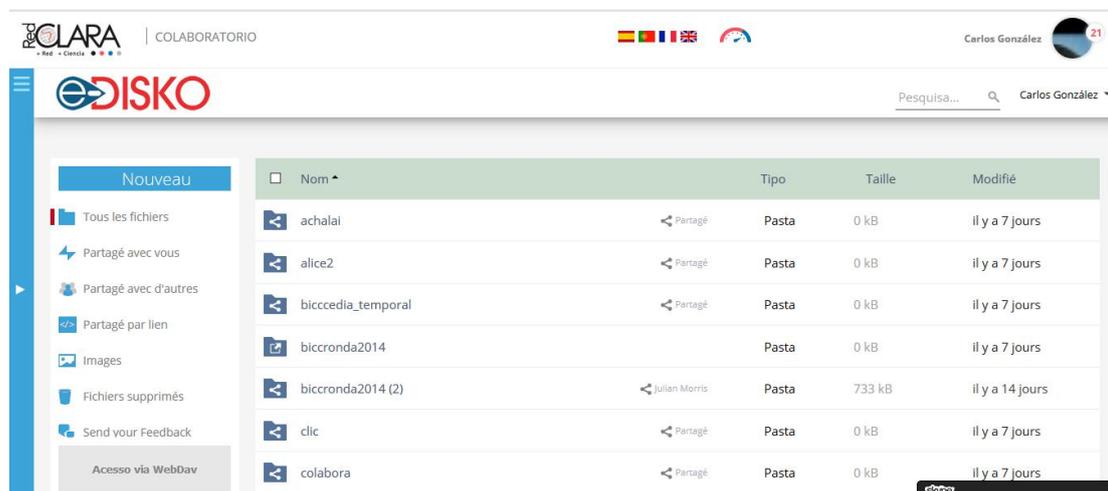
A special effort was invested in deploying new applications from different NRENs and spreading the installation of the Cloud application portal (Colaboratorio) in several regions around the world was made. Thanks to this effort from the different NRENs, services from RNP (Brazil), CONARE (Costa Rica) and RENATER (France) were added this time to increase trifold the number of required applications and double the required number of NRENs using applications developed or deployed by other NRENs.

In this period, also these collaborations between projects were done:

a. With TANDEM - as WACREN has deployed an instance of RedCLARA's Colaboratorio, they were eligible to deploy an integration with the Groupware standard which was beyond the reach of TANDEM project, but thanks to the MAGIC project, the installation could be done successfully.

b. With Sci-GaIA - first, Sci-GaIA supported RedCLARA in the process of modifying the Open-EDX service to allow the connection of it to the SAML Federations. And finally, a pilot integrating the statistical software R, installed in Costa Rica to the Cloud Application Portal (Colaboratorio) was made by the MAGIC project and is currently part of the pilot applications.

Regarding the group management standards and applications integrations, the group achieved to deploy two new application in pilot stage, eduDRIVE and Etherpad. eduDRIVE is a file storage service based on the open-source project ownCloud, and customized with federation standards support (SAML) by the Brazilian NREN RNP. The application is deployed at RNP premisses, and was adapted for and integrated to Colaboratorio. Furthermore, the group added the support for the group management standard implemented in the MAGIC context, so a community in Colaboratorio can have a folder that is automatically shared to their members. The application look and feel is like the following screen shot:



On the other hand, the MAGIC team with the collaboration of the project partner RENATER from France, implemented the Etherpad service. This service is an on line collaborative edition tool that can be used to produce documents in real-time from a web interface. The magic behind this implementation was that it is deployed at RENATER's infrastructure, and is integrated to Colaboratorio using eduGAIN, and the group management standards. The advantage with the traditional Etherpad is that the edit permissions are based on the membership to the community in Colaboratorio that is shared using the VOOT protocol. Etherpad interface is like the following figure:



eduDRIVE and Etherpad can be found in the following pilot deployments portal:

<http://colaboratorio-dev.redclara.net/index1.3.html>

The authentication is already integrated to eduGAIN, so any European or global partner that uses the confederation can use them immediately.

Another important work was carried out in the Caribbean with the deployment of Colaboratorio for the Trinidad and Tobago's NREN TTRENT. The work, completed on March 2017, implemented the platform (Colaboratorio) to support and promote collaboration of scientific and academic groups in the Caribbean and rest of the world._

COLABORATORIO
The global collaboration platform for science and research

Welcome to Colaboratorio

With a variety of tools that allow scientists and academics to share and promote knowledge, organise joint activities and communicate in real time, **Colaboratorio** is a secure and private environment that optimizes time and effort.

[Login](#)

If you are not registered, you may use the OpenIDP [here](#)

Services in Colaboratorio:

VCEspresso eNVIO sivic

For more information, please download the Colaboratorio User's Guide:

Thanks to the **ELCIRA** and **MAGIC** Projects the **Colaboratorio** platform, created by **RedCLARA**, has evolved into a cloud service that can be incorporated in the websites of the national networks. Thus today the service is used by the NRENS of Ecuador (CEDIA), Colombia (Renata) and Costa Rica (CONARE) in Latin America, in the regional network in the Caribbean (C@r@NET) and in the one of East and Central Africa (WACREN). Additionally, it is in the process of being adopted by the networks of the Middle East (ASREN) and South Africa (SANReN).

To date **Colaboratorio** hosts around 300 communities and has more than 5,000 registered users from around the world who have the possibility to access and be part of the discussions of current events and communities, create and participate in web conferencing, transfer large files, apply for funding opportunities for project development, meeting partners and collaborators for research projects and to get information about events of interest at global level.

TTRENT Colaboratorio Portal (<http://colaboratorio.trent.edu.tt>)

Finally, WP3 also designed and implemented a service catalogue / applications directory for MAGIC. This tool provides central information point where NRENS, end-users, and communities can find the services existing in other NRENS and organizations as brokered by the MAGIC project. The application and the service attributes are based on the existing GÉANT service catalogue. The services registered on this catalogue include: Communities, Funding & Partners, SIVIC, e-DISKO, R, MCONF/VCEspresso, eduDrive, Filesender Premium, Etherpad, Docuwiki, Okeanos.

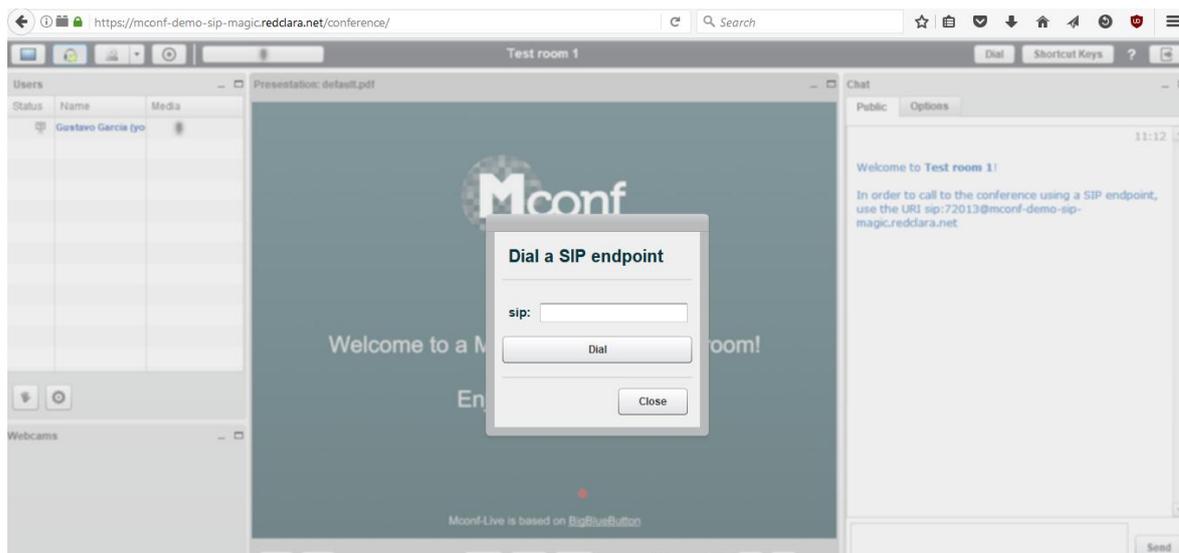
1.1.4 Work Package 4: Agreements for Real Time Collaboration

The work package team continued the work on the NRENum.NET standard promotion, and trying to engage new NRENS to the service.

In the work package 4, the MAGIC team worked in the development of and integration between the Web-conference service (VCEspresso), and the traditional SIP video network. This integration allows to dial from a web-conference to a dedicated SIP endpoint and vice-versa. Full communication of audio and video can be done. The Webconference users will see the SIP endpoint presenter, and the SIP endpoint participants will see each partner logged to the VCEspresso service. Furthermore, the integration allows sharing the screen of the presenter. The development also include a full-featured statistics server used to have quality assurance indicators. The development is documented and architecture manuals have been delivered. In addition to this documentation, the working group developed the deliverable "D4.5 Online course and video tutorial on how to deploy a unified communications network" that describes this implementation. The MCONF pilot deployment can be accessed through the following URL:

<http://mconf-demo-sip-magic.redclara.net>

It can be tested with any standard SIP compliant device by using the "Dial" option in the top-right corner.



For testing inward dialing, the SIP address to dial is shown in the chat window, with a message like:

“In order to call to the conference using a SIP endpoint, use the URI sip:72013@mconf-demo-sip-magic.redclara.net”

In addition, the MAGIC team worked in the deliverable “D4.5 Online course and video tutorial on how to deploy a unified communications network”. This course present the guidelines for the implementation of the MCONF to SIP network integration. The development group presents in video and test guides the architecture elements, and how the interact in order to provide the required services. The course was developed in the OpenEDX platform from RedCLARA in the MOOC (Massive Open Online Course) format. The course can be found in the following link:

<http://edx.redclara.net/>

1.1.5 Work Package 5: Global Science Communities

During the last quarter of the implementation of the project, work on this objective concentrated on sustainability of the Global Science Communities. This was done through both face to face interactions and virtual events with the communities. As part of sustainability of the communities, the project team felt regional as well as national research and education networks are critical players. Therefore, face to face interactions with some communities were held back to back with major regional events.

- During UbuntuNet-Connect 2016 in Entebbe, Uganda, MAGIC Work Package 5 together with UbuntuNet Alliance organised a 1 day End User Engagement Workshop on 2nd November 2016 with the aim of bringing NRENs up at speed with the need for them to support end user communities. At the meeting, RedCLARA, GEANT and NORDUNet – which already have established end user engagement activities - shared their experience with NRENs in the UbuntuNet community.





- At e-AGE 2016 in Beirut, Lebanon on 1 December 2016, MAGIC Work Package 5 in collaboration with ASREN held a session on Biodiversity within the framework of the Global Science Community on Biodiversity. A key anchor at the event was an active member of the

Biodiversity GSC, Dr Ibrahim Fathy Moawad, Associate Professor in the Information System Department at Ain Shams University in Egypt. The session also included several other presentation from stakeholders in Lebanon.

- WACREN 2017 in Abidjan, Cote d'Ivoire on 28-29 March 2017, MAGIC Work Package 5 continued to conduct regional face to face meeting with communities. First, the project team contributed to the workshop with Librarians as Institutional Focal Points, who have been identified in the WACREN region as anchors for community engagement. Then, MAGIC in collaboration with TANDEM and Sci-GaIA held a joint workshop focusing on sustainability of communities being supported by the projects. The conclusion pointed to the critical role played by national and regional research and education networks.

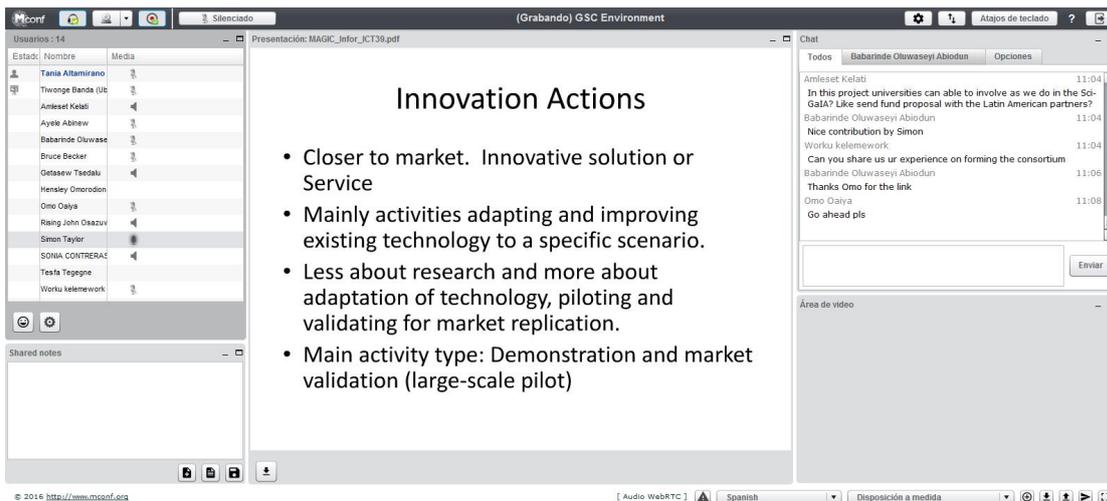


- Caribbean MAGIC, 10-12 April 2017 – Work Packages 2 and 5 teamed up for an 3-day session that begun with 2 days of technical training on eduroam and edugain, followed by a 1 day session with the Environment and Health communities – a session dubbed

Envi-Health – at the Cavehill Campus, The University of the West Indies in Barbados. Dr David Smith, the Champion of the Environment graced the workshop which included several presentations from both Environment and Health communities. A representative from the EU Delegation in Barbados, Mr Marc Thill was part of the opening session and gave a short presentation on H2020 opportunities.

- MAGIC Work Package 5 contributed to the 2nd CAREN Regional Networking Conference, Bishkek, Krygzstan, 25-26 April 2017 through a presentation on Global Science Communities.

Aside from these face to events, Work Package 5 also organised a Horizon 2020 Virtual day focusing on the Africa region on 14 December 2016. The event featured opportunities around the H2020 ICT-39 Call which had just opened then. MAGIC partnered with Sci-GaIA and Africa4Health projects in sharing relevant H2020 experience.

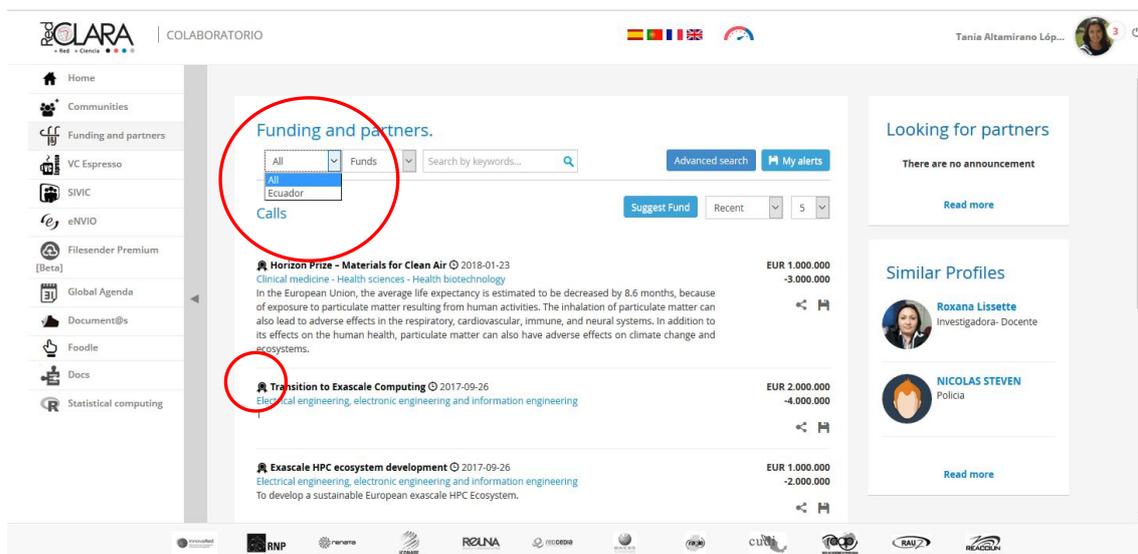


Towards the end, Work Package 5 held closing sessions with Champions of the communities to obtain their feedback on the GSC and how they could be sustained. The feedback received was generally positive. This is reported in detail in D5.3.

Information System on Worldwide Funding Opportunities

During the reported period the activities related to the Funding and Partners service were focused on the development of a local pilot for the National Research and Education Network of Ecuador, CEDIA. This enriched (in terms of content, browse and design) system is deployed as an additional feature in Colaboratorio that could be available for other institutions in the future. This task held along with WP3, included a process of identification of needs, development of the pilot and the presentation of the results to the NREN.

The result is a new option integrated on the main menu of the tool, where users from Ecuador have the opportunity to do a specific search for calls dedicated to their country facilitating the process to identify open calls and partners around the world.



Also the Advanced search option was updated to include more Boolean operators (AND - OR fields) for a more accurate result. In terms of design it was included on the information presented icons that help the

user to identify in an easier and more friendly way the information presented. The icons are dedicated to: scholarships, awards and funding.

This changes are also included in the updating of the training material that is also reported on Deliverable D5.3.

1.1.6 Work Package 6: Dissemination and Training

WP6 supports WP2, WP3 and WP5 on training activities. This consists of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

On-line presence:

MAGIC's on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social inter-phases.

As it has been reported in the past Progress Reports, the Intranet is extensively used by the project partners for all its internal communications and for the different WP interaction.

The Project Website information is regularly updated and a new page was created in order to publish the numerous videos that were recorded by the project members and some academics, explaining the importance of the MAGIC project for them.

The success of the website and the social network presence is statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and to provide feedback on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool. The Facebook page is measured using the tool provided by Facebook itself, and Twitter is measured in terms of followers and retweeted messages.

MAGIC Website

	Nov '16	Dec '16	Jan '17	Feb.'17	Mar.'17	Apr.'17
Número de visitantes únicos	390	355	359	346	303	243
Número de páginas vistas	1042	714	805	677	635	602

MAGIC Website Statistics - Unique visitors and Pages viewed, M19 - M24.

The numbers are consistent with those of the previous months and it is verified that the change of contents in the web site did not increase the number of visitors of the site.

Within the reported period 16 testimonial videos of the MAGIC Project members were publish in the website at <http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-videos>. These videos reflect the spirit of collaboration that MAGIC has lighten up and it is also a testimonial of the use of the application and services within the scope of action of every partner institution.

Social Networks

The MAGIC social network presence was delivered at the end of M02, both in the Facebook and Twitter environments.

By May 04, 2017, "Magic a global connection", the project's presence on Facebook, which went live on-line on 25 June 2015, had 195 likes. The growth of likes since the previous report is of 30 followers. Also

in May 04, 2017, @MACIC_our_voice, the project's presence on Twitter, which was on 5 June 2015, had 130 followers, 28 more than in the previous mid term report, and several interactions (most of them mentions while MAGIC was participating in international events).

Brochures and promotional material done

In order to serve the different dissemination needs, project brochures, flyers and invitations were printed in English and distributed within those international events where MAGIC had representation. The brochures and flyers have been published in the website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format.

In order to serve the dissemination needs of WP5 at the eAGE 2016 Conference, the WACREN Conference and at the Caribbean MAGIC: Enabling Collaboration in Research & Education, project brochures focused on raising awareness of the Global Science Communities that MAGIC is currently fostering were designed and printed in English (500 copies and 300 copies respectively). Also a special invitation for both events was done. It is important to notice that within the context of the WACREN Conference it was carried out the “e-Infrastructures for Worldwide Collaboration: Assessing the present and road mapping the future. Joint workshop”, an initiative of TANDEM, SciGAia and MAGIC, and MAGIC did all the events image for on-site promotion.

Magic
Middleware for collaborative Applications and Global Virtual Communities

A collaboration project to globally connect researchers and academics

Building on the success of the ELCIRA project, RedCLARA -with partners from Africa, Arab States, Asia, Europe, Latin America and The Caribbean- is leading MAGIC, a cooperation project which aims to significantly improve the ability of researchers and academics around the world to collaborate together.

Connect, contribute and collaborate!

MAGIC is fostering the collaborative work of **Global Science Communities** by:

- Actively promoting the participation of researchers from all participating regions in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.
- Promoting and fostering the use of collaboration technologies among worldwide research communities, encouraging the proper and active use of the collaborative platforms, services and tools, by supporting them with training material and activities to learn how to use the tools.
- Using these collaborative platforms to spread knowledge and the practices of the Global Science Communities by sharing information and experiences among experts in the priority fields identified, looking to raise awareness of prevailing issues to wider audiences including policy makers, and also, to foster and improve collaboration among researchers of the MAGIC regions.
- More information at: <http://magic-project.eu/index.php/global-science-communities/what-is-a-global-science-community>

What is a Global Science Community - GSC?

A group of experts (researchers and/or academics) from different parts of the world with a common interest, working together on activities, sharing best practices, knowledge and experiences.

Their activities aims are to provide the opportunity of learning and sharing different experiences related to their thematic areas, contributing and sharing knowledge and exploring the possibility of establishing collaboration. Each MAGIC GSC thematic area is led by a champion, an expert that is the thematic leader.

MAGIC GSC + champions

- e-Health**
Thematic Leader: Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil.
- Biodiversity**
Thematic Leader: José Ramón Martínez, Professor and researcher of the Universidad Autónoma de Santo Domingo (UASD), Dominican Republic.
- Environment**
Thematic Leader: Dr David C. Smith, Coordinator, Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.
- Remote Instrumentation**
Thematic Leader: Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico.

How to participate in a GSC?

To be part of the activities you need to be registered in the Colaboratorio platform and join the Community you are interested in.

Colaboratorio is a platform developed by RedCLARA to support and promote the collaboration of scientists and academic groups initially intended for users in Latin America.

GSC are currently...

- Benefiting from the MAGIC Implementation of an Information System on Worldwide funding opportunities aimed at the end users and the user communities.
- Developing of a set of Worldwide Virtual days to foster collaboration at a worldwide scale on the GSC topics
- Running H2020 Virtual information days to promote participation in International Calls
- Getting training material for the use of MAGIC's provided applications for collaboration
- Deploying virtual meetings and seminars

For More Information please write to the GSC Team leader, Twonge Banda, at twonge.banda@ubuntunet.net

MAGIC Project: <http://magic-project.eu/>

MAGIC is supported by the European Commission

Second MAGIC Global Science Community brochure in English, delivered at eAGE 2016 and WACREN Conference .



3rd MAGIC Brochure , delivered at the Caribbean MAGIC: Enabling Collaboration in Research & Education.

Regarding the branded promotional goodies, within the reported period we did 170 power banks that were delivered during the eAGE2017 together with 50 remaining MAGIC branded umbrellas and brochures..



MAGIC branded power banks, delivered at eAGE2016.

200 MAGIC branded headphones were done and distributed at the Caribbean MAGIC: Enabling Collaboration in Research & Education with brochures.



MAGIC branded headphones.

No goodies were delivered at WACREN Conference, only brochures.

As it was told a few lines before, MAGIC did all the image for on-site promotion for the “e-Infrastructures for Worldwide Collaboration: Assessing the present and road mapping the future. Joint workshop”, an initiative of TANDEM, SciGAia and MAGIC, this image consisted of the following pieces: web banners and web image, vinyl banners of different sizes that were placed in the events venue.



Figure 6: Big vinyl banner made for the scenario back for the e-Infrastructures for Worldwide Collaboration: Assessing the present and road mapping the future. Joint workshop”. All the other pieces made were based on this.

Participation in international events and training

Within the reported period MAGIC has been represented by project partners at relevant conferences in Africa and the Caribbean:

- e-AGE 2016 (Beirut 1-2 December 2016)
- APAN43 (New Delhi, India, 12 - 15 February 2017)
- CAREN Training - Bishkek, Kyrgyzstan, 27-28 February 2017, and Dushanbe, Tajikistan, 2-3 March)
- CAREN Regional conference (Bishkek, Kyrgyzstan, 25-26 April 2017)
- WACREN2017 (Abidjan, Ivory Coast, March 30-31 2017)
- Caribbean MAGIC: Enabling Collaboration in Research & Education (University of the West Indies(UWI), Cave Hill Campus in Barbados, April 10-12, 2017)

APAN43 (New Delhi, India, 12 - 15 February 2017)

MAGIC carried out a training on federated access (main focus), eduGAIN and eduroam. With Terry Smith, AAF (Chair of TF-IAM) and Brook Schofield, GÉANT, as trainers, there were 40 attendees from 10 countries.

CAREN Training - Bishkek, Kyrgyzstan, 27-28 February 2017, and Dushanbe, Tajikistan, 2-3 March)

The CAREN Training held in Bishkek, Kyrgyzstan, run for two days (27-28 February), as well as the one carried out in Dushanbe, Tajikistan (2-3 March). Both training sessions were carried out by Zarlyk Jumabek uulu (CAREN NOC) and Brook Schofield (GÉANT).

In Kyrgyzstan - already a member of the European eduroam Confederation - the participants were 14 engineers from 10 different organisations, while Tajikistan that had zero eduroam infrastructure set up a TJ FLR and connected it to top-level eduroam infrastructure, had 13 engineers from 9 institutions as attendees and signed the European Confederation document to join eduGAIN officially.

CAREN Regional conference (Bishkek, Kyrgyzstan, 25-26 April 2017)

CRNC 2017 was hosted by KRENA, the Kyrgyz Research and Education Network Association, together with the Kyrgyz Turkish Manas University in Bishkek, at the premises of the Kyrgyz Turkish Manas University in Bishkek.

CNRC is organised by the EC-funded CAREN project that provides gigabit capacity connectivity to Central Asian NRENs.

Dr. Ognjen Prnjat of GRNET presented at CAREN main conference, work carried out by the MAGIC project focusing on value-added service sharing in global R&E environments.

e-AGE 2016 (Beirut 1-2 December 2016)

At e-AGE 2016 MAGIC had a great Global Science Community Session on Biodiversity.



Speakers of the Workshop and project members.

The session was chaired by Pascal Hoba, CEO of Ubuntunet Alliance and went in the following order (with links to the presentations):

- Yousef Torman, “MAGIC Project”, Co-Managing Director, ASREN, Jordan
- Tiwonge Banda, “Global Science Communities”, Head of Administration and Finance, UbuntuNet Alliance, Malawi
- Tania Altamirano, “Colaboratorio” Coordinadora General de Comunidades”, Academic Communities Coordinator, RedCLARA, Chile
- Rhea Kahale, “The flora of Lebanon at your fingerprints”, Project Manager, Saint Joseph University, Lebanon
- Ibrahim Fathy Moawad, “Biodiversity Informatics: Scientific Data Management”, Associate Professor, Faculty of Computer and Information Sciences, Ain Shams University, Egypt
- Manal R. Nader, Director, “Mapping Potential Responsible Hunting Areas in Lebanon”, Institute of the Environment, University of Balamand, Lebanon
- Ghassan Soleiman Abu-Sittah, “Where Surgery meets Augmented Reality”, Chief of Plastic & Reconstructive Surgeon, AUB, Lebanon
- All the presentations, a link to the video recording and the event photos can be seen at <http://asrenorg.net/eage2016/?q=content/program>.

The video recording of the session has also been published at https://www.youtube.com/watch?v=NT_8_3r5eKM.

IFI Workshop: under the name of Identity Federation Infrastructure workshop took place at the American University of Beirut (AUB), during 3-4 December 2016, within the same eAGE2016 context. This training session lasted for two days and it covered the Federated Access, eduGAIN and eduroam subjects; the trainers were from CESNET (Michal Prochazka and Jan Oppolzer) and they had 15 participants.



MAGIC project members with the IFI Workshop participants and trainers.

WACREN2017 (Abidjan, Ivory Coast, March 30-31 2017):

Within the Conference, Tania Altamirano and Tiwonge Banda, leaders of WP5, gave 2 presentations about MAGIC Communities and Colaboratorio, and participated in in a panel session. Ognjen Prjnat, representative of GRNET in MAGIC, gave two presentations regarding MAGIC and VI-SEEM projects.



Tania Altamirano speaks about engaging communities in MAGIC, within a panel session at WACREN 2017.

The joint presentation of MAGIC / TANDEM / Sci-GaIA was held on March 28, inside WACREN's week of activities (that begins on March 27), under the title "Welcome remarks and Overview of Achievements from H2020 Projects".

This was not the first time that the three projects got together to promote intercontinental collaboration and to foster the development of global research infrastructures. Joint sessions of the initiatives were also carried out in ICT2015, TNC16, UbuntuNet Connect 2016 and WACREN2016. In WACREN2017, whose main theme was "Catalyzing the quality of higher education and research", the trio will once again shared the development and operation of e-Infrastructures in different regions of the world, stimulating discussions on the benefits of creating World-class digital research structures.

The e-Infrastructures for Worldwide Collaboration: assessing the present and road mapping the future joint workshop was chaired by Tiwonge Banda (Ubuntunet Alliance) and Ognjen Prjnat (GRNET), and had

the presentation of Leandro Guimarães (RNP) entitled as Supporting Global Science Communities in MAGIC. These three representatives were from the MAGIC project.



Leandro Guimarães presents MAGIC at the joint workshop.

There was also a training given by MAGIC and TANDEM entitled Supporting Campus Libraries to embed NREN Services and e-Infrastructure, where a training session on the use of the Colaboratorio platform was carried out by Tania Altamirano (RedCLARA) for 40 attendees; Altamirano also did a second training in the same issue but in a deeper mode to the Librarians Community of Niger for five members.



MAGIC project members from Europe, Latin America and Africa participating at the WACREN Conference.

Caribbean MAGIC: Enabling Collaboration in Research & Education (University of the West Indies(UWI), Cave Hill Campus in Barbados, April 10-12, 2017):

Technicians, academics and researchers in the Caribbean had the opportunity to benefit from “Caribbean MAGIC”, a 3-day series of technical training and scientific discourse carried out from April 10-12 at the University of the West Indies(UWI), Cave Hill Campus in Barbados.

Partnering with the UWI, MAGIC hosted a 2-day training session on eduroam and the technical implementation of the Colaboratorio platform, that reached 15 representatives the technical and IT departments of various universities and colleges in Barbados and the Eastern Caribbean, was lead by Brook Schofield (GÉANT) and Carlos González (RedCLARA).



Brook Schofield training on eduroam at the Caribbean MAGIC training sessions.



Participants of the training session Caribbean MAGIC together with MAGIC representatives..

On April 12, the Global Science Communities of MAGIC, in collaboration with the Centre for Resource Management and Environmental Studies (CERMES) at Cave Hill, had an Enviro-Health seminar, enabling a sharing of recent research and initiatives of the researchers, academics and practitioners in the respective sciences of the environment and health. With 25 participants, the training sessions on community building and the use of Colaboratorio, were carried out by Tania Altamirano, Tiwonge Banda, Colleen Wint and Carlos González. The Counsellor Head of Cooperation of the Delegation of the European Union to Barbados, the Eastern Caribbean States, the OECS and CARICOM/CARIFORUM, Marc Thill, attended this activity given its high importance for the region.



In the center of the photo, with jacket and tie, the Counsellor Head of Cooperation of the Delegation of the European Union to Barbados, the Eastern Caribbean States, the OECS and CARICOM/CARIFORUM, Marc Thill, with the participants of the Caribbean MAGIC.

WP6 has been lead by RedCLARA with contributions from ASREN, CKLN, CUDI, GÉANT, GRNET, NITC, RNP, TEIN*CC and WACREN.

1.2 Impact

As the information on expected impacts is relevant as was proposed in the DoA, we will go one by one analyzing the results achieved in the Indicators.

- a) Adoption of European infrastructure standards eduoam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project will create the basis for a deployment of eduoam and eduGAIN in each region involved in the project.

Indicator (DoA): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:

- 1) Mobility Federated Services and Nrenum.net, Venue: Viña del Mar, Chile

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

2) Federated Access and eduroam workshop in the Caribbean, Venue: West Indies, Jamaica
Attendees: 16 participants from 11 institutions .

3) Workshop on Joining eduroam and Identity Federation, Venue: Amman, Jordan
Attendees: 13 participants representing five Arab countries

4) Federated Applications (FedApps) Training session, Venue: Dar es Salaam
Attendees: 22 engineers from 14 NRENS.

5) Workshop on Identity Federation Infrastructure, Venue: Beirut, Lebanon.
Attendees: 22 participants from 9 NRENS

6) eduroam workshop in Kyrgyzstan, Venue: Bishkek, Kyrgyz Republic
Attendees: 14 participants from 12 institutions of Kyrgyzstan.

7) eduroam workshop in Tajikistan, Venue: Dushanbe, Tajikistan
Attendees: 14 participants from 13 institutions of Tajikistan.

Total trained engineers during the project 112

b) Coordination with several continents in basic infrastructure deployment

The project includes the collaboration of NRENS and Regional Networks in Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements, human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENS and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries having signed eduroam agreements with MAGIC
4 new pilot federations

Advances in the Indicator:

Number of countries already active in eduroam having become part of the eduroam federation: 15

- * .vn Viet Nam - September 2015
- * .jm Jamaica - Nov 2015
- * .ba Bosnia & Herzegovina - December 2015
- * .ir Iran - Jan 2016
- * .eg Egypt - Feb 2016
- * .so Somalia - Feb 2016
- * .gh Ghana - Mar 2016
- * .ml Mali - Nov 2016
- * .bj Benin - Dec 2016
- * .zw Zimbabwe - Jan 2017
- * .bt Bhutan - Jan 2017
- * .np Nepal - Jan 2017

- * .kw Kuwait - Mar 2017
- * .om Oman - April 2017
- * .bb Barbados - April 2017

Pilot federations already created and in process of becoming eduGAIN members: 7

- * Oman - Oman KID (Nov 2015 - joined as eduGAIN member)
- * Korea - KAFE (Nov 2016 - joined as eduGAIN member)
- * India - INFED (Feb 2017 - joined as eduGAIN member)
- * South Africa - SAFIRE (Feb 2017 - joined as eduGAIN member)
- * Singapore - SGAF - applied to join eduGAIN - 14 Dec 2016
- * Uganda - RIF - applied to join eduGAIN - 6 September 2016
- * Mozambique - CAFMoz - applied to join eduGAIN - April 2017

Work in progress towards creating a Federation

5

*Jordan
Lebanon
ASREN
Mexico
WACREN eduID*

- c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project will include several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This will ease the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

The following 3 regions have deployed a federated groupware service:

Europe: CESNET (Czech Republic), RENATER (France)

Latin-America: RedCLARA (Latin-America)

Africa: WACREN (West and Central African)

- d) Concertation in the development of worldwide services

The project will work jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This will make it possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: 6 countries in 2 regions having incorporated NRENum.net for Global dialling

Advances in the Indicator:

In work package 4, the MAGIC team succeeded to incorporate 9 new countries in 5 regions to the NRENum.net service.

- Ecuador (Jul/2015),
- El Salvador (Sep/2015),
- Mexico (Oct/2015),
- Uruguay (Nov/2015),
- Czech Republic (Dec/2015),
- Sri Lanka (Dec/2015),
- Chile (Jan/2016)(Aug/2016).
- Lebanon (Aug/2016)
- Kazakhstan (April/May 2017)

These countries were spread 4 regions, divided in four deployments in Latin-America, one in Europe, one in Middle-East, and one in Asia. As it is seen, the milestone number was achieved. Nevertheless, it is worth mentioning that the group expected to have 3 deployments in Asia and was not fulfilled. The group identified some barriers like internal NREN governance that make difficult to achieve the required consensus on the standards.

e) Application-sharing among NRENs and the global academic community.

The project will select applications being provided by NRENs and will propose a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

5 NRENs using applications built and deployed/hosted by another.

2 NRENs with a pilot cloud applications portal implemented

The number of applications deployed in the pilot test will be at least 2

The catalogue of the applications/services provided by NRENs available for use of other NRENs contains at least 10 applications

Advances in the Indicator:

The project team reached the number of 10 NRENs using applications built and deployed/hosted by another. The following table show the provider and customer NRENs relation. It is worth mentioning that Colaboratorio integrates several applications like Funds and partners, the web-conference, and the communities' management service among others.

		Provider					
		CESNET (Czech Republic)	RedCLARA (Latin- America)	RENATER (France)	UNINETT (Norway)	RNP (Brazil)	CONARE (Costa Rica)
Customer NREN	CEDIA (Ecuador)		Colaboratori o			VCEspresso	
	CONARE (Costa Rica)					VCEspresso	
	CUDI (México)		Colaboratori o				
	RENATA (Colombia)		Colaboratori o				
	RedCLARA (Latin- America)	Docuwiki		Sympa, Etherpad, Filesender Premium	Foodle	VCEspresso , e-DISKO	R
	TTRENT (Trinidad and Tobago)		Colaboratori o			VCEspresso	
	WACREN (West and Central Africa)		Colaboratori o	Sympa		VCEspresso	
	MyREN (Malaysia)		Colaboratori o				
	AUB (Lebanon)		Colaboratori o				
	MARWAN (Morocco)		Colaboratori o				

8 NRENs have adopted RedCLARA's Colaboratorio as the cloud applications portal (see the previous table) 3 from Latin-America, 1 from the Caribbean, 2 from Africa, 1 from Middle-East and 1 from Asia Pacific.

7 applications were deployed exclusively as part of the project: 3 in the first stage (CESNET's Docuwiki; RENATER's Sympa and Filesender) and other 4 in the second stage: Open-Edx in RedCLARA's infrastructure, RENATER's Etherpad, CONARE's R (Web Access Component) and RNP's e-DISKO.

11 applications are listed in the Catalogue:

- 4 by RedCLARA Communities, Funding & Partners, SIVIC, e-DISKO, R
- 2 by RNP: mconf (webconference) and eduDrive
- 2 by RENATER: Filesender Premium and Etherpad
- 1 by CESNET: Docuwiki.
- 1 by GRNET: Okeanos.

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide

valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).*

The number of information days will be at least two (2) each year depending upon the number of existing calls.

Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

2 information days on H2020 were organised in Year 2 and 2 has been already organised in Year 1.

The Database of funding opportunities is complete and providing information on a global at a Global scale with continuous feeding and automatic e-mail distribution for subscribers.

g) Growth of the use of the Funding and Partners system

In order to measure the usefulness of the Funding and Partners Database and its impact in the research community we have measured three indicators

Indicators:

Number of Uploaded funds

Number of Alert e-mails sent

Number of clicks on the alerts

Advances in the Indicators:

# of Uploaded funds	# of Alert Mail Sent	# of Clicks on the alerts sent:
April 2016: 250	April 2016: 25,850	April 2016: 350
April 2017: 870	April 2017: 38,000	April 2017: 1,352

2. Update of the plan for exploitation and dissemination of result (if applicable)

No update is necessary

3. Update of the data management plan (if applicable)

No update is necessary

4. Follow-up of recommendations and comments from previous review(s) (if applicable)

Recommendation 1.

We have prepared a Report explaining in details the strategy of the project. The document named "D1.2.5 Reviewed Implementation Strategy" is being forwarded to the reviewers for their analysis.

Recommendation 2:

We did accept the suggestions to provide, whenever possible, alternative ways for training in the form of videos that could be used beyond the end of the project, providing a more user-friendly way of showing users how to join the communities and use the collaboration applications to build their own communities. The MOOC Platform OedX that is provided as a cloud service by France Numérique, a partner of RENATER, who is in the process of signing an MoU with MAGIC, is the one in which two courses (one of them in two languages) have been done: 1) Servicio NRENum.net (course 1 in Spanish), NRENum.net Service (the same in English); 2) How to deploy a unified communications network (Webconference to SIP endpoints). Under the <http://edx.redclara.net/> URL, these courses are available through the MAGIC Project website, under the Training tab.

Recommendation 3:

Regarding this recommendation, the MAGIC project made very significant advances completing the implementation of Colaboratorio in the following non LA countries:

- a) Morocco - MARWAN
- b) Lebanon AUB
- c) Malaysia MYREN
- d) Trinidad and Tobago TTRENT

Colaboratorio has been deployed in countries of Africa, Asia, and Middle-East, apart from the new countries of regions where already existed (Latin-America and the Caribbean).

Another are in which the MAGIC project achieved globalization, is the integration of group managers and applications. The pilot implementations contain applications from RENATER (France) with Sympa, Etherpad and Filesender Premium, RedCLARA (Latin-America) with Colaboratorio and SIVIC, RNP (Brazil) with eduDRIVE, and Czech Republic with Dokuwiki.

The Sci-GaIA team provided assistance to RedCLARA that lead to deploy the "R" application. R is the statistical computing software that runs in university clusters. The MAGIC team worked with the National High Technology Center (CENAT) from Costa Rica who provides the computing cluster that runs the "R" application, and RedCLARA integrated it to Colaboratorio in a similar fashion of how Sci-GaIA does it. With this result, the next step will be to share the resources to the Sci-GaIA environment using their Future Gateway API. The "R" application is included in the MAGIC catalogue, and published through the

Colaboratorio environment. In addition, the Sci-GaIA team supported RedCLARA, and provided example code in order to integrate the MooC platform OpenEDX to the eduGAIN confederation. This functionality is crucial to guarantee global access to this resource for European and global partners.

In terms of dissemination, specific dissemination material (brochures and flyers) were developed and delivered for very specific target audiences where WP5 participated leading different activities in Global Science Communities.

Also a big effort has been done in order to get video testimonials from the different project partners and researchers (end users) of the different world regions where they explain why MAGIC is important for them. The 16 testimonial videos have been published in the project's website at <http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-videos> and both in Twitter and Facebook, generating an important interaction with the broad R&E public.

Recommendation 4:

D5.1 was re-written to include the recommendations of reviews. The revised deliverable that was missing, especially the strategic planning and guidelines for the set-up, work and expansion of the Global Science Communities.

Where practically possible, the project worked with existing communities, but it was realized that this exercise requires a lot of time since existing communities have their set objectives. One needs to be there with them at the planning phase to draw any meaningful participation of organised communities.

The project also intensified interactions with Sci-GaIA and TANDEM projects with the aim of increasing community synergies. Sci-GaIA communities joined the MAGIC H2020 Info Day in December 2016. MAGIC joined the TANDEM community of institutional Focal Points (Librarians) in Ivory Coast in March 2017.

Recommendation 5.

A The work on this deliverable should include detailed guidelines for training foreseen in T5.5 (on the cloud based collaboration and communities building). A new version of the document should be developed with the goal to provide guidance for training on communities' engagement, initiation, building, maintenance, support and expansion.

Recommendation 6. Communities have been expanded during year 2, in absolute numbers, geographically, and in terms of distribution of events. While it was important to measure the impact of the communities, it is too early to evaluate this after just one year. As part of sustainability, Regional RENs and NRENs will continue where they can to sustain the activities of the GSCs and may evaluate their impact at a later stage.

Future Work 2

During the second period of the project the growth of the communities was related to the development of activities with the members. GSC E-Health and Environment are the communities that included more members and are the both that headed two of the biggest events: e-Health Ground Rounds and the Seminar "Enhancing Collaboration in Research & Education" in Barbados. Regarding the Founding and Partners service it was an increase of the calls available for consultation in the system, fostered by the despatch of alerts to the registered users in Colaboratorio. At the end the system included a new pilot that allows to filter the information for a local NREN, CEDIA from Ecuador, with a more accurate search tool that includes more Boolean search operators.

Future Work 3:

The dissemination events have been targeted at NRENs: ASREN, WACREN.

This events are in line with the already defined strategy to focus the work on NRENs and RENs.

As for user communities, we had special actions with Librarians within the WACREN Conference in Adbijan (March), and in the Caribbean (April) with Health and Environment communities.

Future Work 4:

The synergies with TANDEM and SciGAia have been very intense within the reported period, where MAGIC managed all the visuals of the “Joint Workshop carried out in Adbijan in March 2017, and WP5 carried out training and panel sessions.

5. Deviations from Annex 1 (if applicable)

5.1 Tasks

In the case of work package 4, the task 4.1 committed 6 new countries with NRENum.NET across the world, and ideally one per region. In the amount of countries and regions, the work package team achieved the goal with 8 countries in 4 regions. Nevertheless, we shall notice that one of the goal was to have 3 of these implementations in the Asia-Pacific area where, counting Central Asia we have got to 2. This deviation is largely due to the fact that most Asian countries have complex decision making processes and there was not fully agreement in the need for NRENum.NET for the project time line. Further work in promoting and showing how easy is to implement NRENum.NET could overcome this barrier.

5.2 Use of resources

The following table shows the amount of resources spent up to April 2017 which amounts to €1,775,534 and is requesting reimbursement for €1,355,972.

Participant	(A) Direct personnel costs	(B) Other direct costs	(C) Direct costs of subcontracting	(F) Indirect costs (=0,25* (A+B+E))	(H) Total eligible costs (=A+B+C+D+F+G)	(K) Requested Reimbursement
CLARA	372,052 €	105,256 €	23,883 €	€ 119,327	€ 620,518	620,328 €
GEANT Ltd.	8,069 €	5,343 €	0 €	€ 3,353	€ 16,765	16,494 €
GEANT Association	24,952 €	20,880 €	0 €	€ 11,458	€ 57,291	57,291 €
RNP	44,700 €	8,680 €	0 €	€ 13,345	€ 66,725	0 €
RENATA	22,292 €	2,624 €	0 €	€ 6,229	€ 31,145	31,145 €
REUNA	19,491 €	7,728 €	0 €	€ 6,805	€ 34,024	34,024 €
CEDIA	2,206 €	6,137 €	0 €	€ 2,086	€ 10,429	10,429 €
CUDI	189,196 €	15,459 €	0 €	€ 51,164	€ 255,819	0 €
UbuntuNet	68,306 €	24,304 €	0 €	€ 23,153	€ 115,763	114,967 €
WACREN	58,087 €	11,802 €	5,518 €	€ 17,472	€ 92,879	92,879 €
ASREN	101,325 €	11,687 €	0 €	€ 28,253	€ 141,265	95,547 €
CESNET	26,917 €	3,894 €	0 €	€ 7,703	€ 38,514	38,514 €
GRNET	81,066 €	13,035 €	0 €	€ 23,525	€ 117,626	117,626 €
SURFNET	3,372 €	0 €	0 €	€ 843	€ 4,216	0 €
CSIR(SANREN)	10,010 €	2,880 €	0 €	€ 3,222	€ 16,112	0 €
RENATER	48,543 €	6,572 €	0 €	€ 13,779	€ 68,893	68,893 €
NIIFI	14,125 €	4,696 €	0 €	€ 4,705	€ 23,526	23,526 €
CKLN	13,922 €	8,584 €	0 €	€ 5,626	€ 28,132	28,132 €
CAREN NOC	2,100 €	2,842 €	0 €	€ 1,236	€ 6,178	6,178 €
TEIN*CC	3,649 €	20,123 €	0 €	€ 5,943	€ 29,715	0 €
Total	€ 1,114,381	€ 282,525	€ 29,401	€ 349,227	€ 1,775,534	€ 1,355,972

The following problems/issues can be reported

DANTE and TERENA have become GEANT Limited & GEANT Association Merging into one organisation, hence their contributions and expenses have to be summed up.

RENATA has gone through a change in management and a reorganisation of its team. Despite this fact they managed to catch up their work and reach 70% of their effort but did not manage to attend the main meetings, hence their travel budget remained largely unspent.

UbuntuNet suffered from a slow start. Despite this, they managed to catch up with their work, notably in WP5. Their use of resources attained 90% of the total. They made a very large effort in travelling for training and user communities workshops.

CESNET has not been able to dedicate the time foreseen in the first semester of Y2, but they have increased spending in Q7 due to training in Lebanon. They have reached 80% of spending.

RENATER has gone through an internal reorganisation that has kept them away from more active participation, they increased their spending in Q7 and Q8, but could only reach 55% of spending.

NITC late start of the next CAREN phase which is now in work. In February 2017 they conducted the MAGIC training, while more training in synergy with NSRC was conducted in April 2017 jointly with the CAREN conference. They were not able to attend most meetings, hence they over spent in man power, but they reached only 19% expenditure in travelling.

NIIFI has merged into KIFU as of 1 September 2016 and due to this reorganisation and the associated staff shortage, the level of their contribution and their amount of expenses in the last two quarters (Q7 and Q8) have been somewhat lower than originally anticipated.

CKLN has ceased to exist as of September 30, 2016. RedCLARA took over the activities of CKLN to continue its work in the Caribbean after an Amendment was approved by the EC.

RedCLARA has increased its effort to cope with the needs of the project in order to support the WPs where man power was missing or extra effort was needed. Also additional travelling was needed to support the Caribbean development as well as the extra effort in Global User Communities Workshops.

In terms of manpower, the partners have spent a total of 308 PMs, i.e., 101% of the total manpower committed, albeit with small deviations between the partners, The following is the detail of PMs spent by partner:

	WP1	WP2	WP3	WP4	WP5	WP6	Total Person/ Months per Participant
CLARA	16.8	0.7	30.0	4.3	30.2	17.9	100.0
GEANT Ltd.	0.9	0.2	0.1	0.0	0.1	0.2	1.6
GEANT Associati	0.7	2.3	0.1	0.0	0.0	0.0	3.1
RNP	1.0	7.1	1.5	1.5	2.0	2.0	15.0
RENATA	0.9	0.0	0.0	10.0	0.0	0.0	10.9
REUNA	0.9	0.6	1.2	3.7	0.0	0.0	6.5
CEDIA	0.5	0.6	0.6	0.0	0.0	0.0	1.7
CUDI	5.1	29.4	8.7	11.9	6.2	6.9	68.2
UbuntuNet	1.1	2.4	0.1	0.0	10.7	3.2	17.4
WACREN	0.5	3.0	1.5	2.5	3.0	1.0	11.5
ASREN	1.0	14.5	1.2	1.8	5.5	4.1	28.1
CESNET	0.4	2.6	6.7	0.0	0.0	0.0	9.7
GRNET	0.6	3.8	9.4	0.0	0.5	0.5	14.9
SURFNET	0.2	0.0	0.2	0.0	0.0	0.0	0.3
CSIR(SANREN)	0.8	0.0	0.1	0.1	0.7	0.3	1.9
RENATER	1.7	0.8	5.4	0.4	0.0	0.1	8.5
NIIFI	0.6	0.1	0.2	0.6	1.5	0.1	3.1
CKLN	0.6	0.3	0.2	0.0	0.9	0.0	1.9
CAREN NOC	0.7	0.3	0.3	0.0	0.4	0.4	2.1
TEIN*CC	0.3	0.5	0.3	0.0	0.2	0.4	1.7
Total Person/Months	35.3	69.1	67.8	36.8	61.8	37.3	308.0

5.2.1 Unforeseen subcontracting (if applicable)

None

5.2.2 Unforeseen use of in kind contribution from third party against payment or free of charges (if applicable)

None

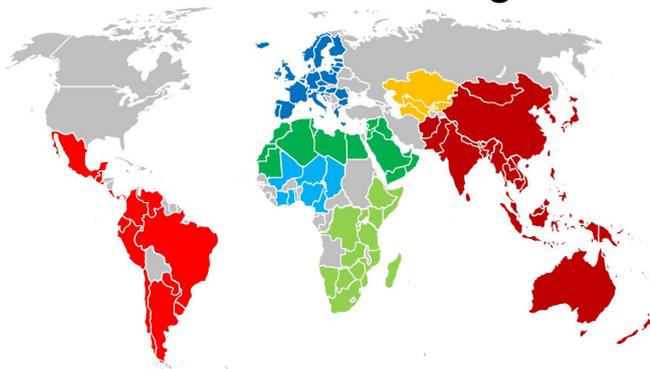
1. Executive Summary

MAGIC aims at promoting the sharing of applications between Research and Education Networks (NRENs) by means of:

- a) Promoting the deployment of the platforms that ease the access of end users to the applications they need by providing them with:
 1. A global identity that ensures the service provider that the end user is the person with the right to access the service. This is done thru the creation, operation and maintenance of Identity Federations associated to the Global Meta-Federation: eduGAIN.
 2. Access to a globalized roaming service for WiFi connectivity in campuses around the World, i.e. automatic access to the Internet in any associated University campus around the World for students, professors, researchers and all the academic community.
- b) Facilitating the sharing of applications run by NRENs worldwide. This would create value by providing access to end users of a large set of applications tailored to the academic community and at the same time it would provide those applications with a worldwide market of users and a large developers community to enhance and improve those applications. To do this we:
 1. Agree on standards for groupware that allow groups of users (user communities) to access applications run in servers across the world without the burden of re-creating the lists of users in each new application.
 2. Build a prototype of applications container where the user communities can build their workspace to ease their collaborations including in the same workspace applications developed/run by NRENs across the World. These applications can be provided in cloud mode thru the network, or locally by taking advantage of Open Source codes. Two containers have been tested: Colaboratorio by RedCLARA and Sympa by RENATER.
 3. Build a catalogue of applications that are ready to be included in this and other containers as well as applications that can be shared worldwide that are run by NRENs for the benefit of their users and can be also accessed by users of other NRENs. This catalogue follows the lines of the GÉANT Catalogue.
- c) Promoting technologies that favour the inter-operation of real time applications such as room videoconferencing (H.323), Web-Videoconferencing and Voice applications. To do this we:
 1. Promote the deployment of NRENnum, the technology allowing the use of the existing and deployed DNS (Domain Name Server) system to resolve identification between SIP numbers and actual machines running the service to create global dialling schemes.
 2. To develop an Open Source prototype ensuring the integration of legacy H.323 video networks with modern Web-Videoconferencing and voice applications through SIP dialling that uses NRENnum.
- d) To develop a set of Global Science Communities that take advantage of the technologies promoted in this project and serve as a test group while promoting the participation of Latin American and other regions' researchers in European Commission Calls and those of other international funding agencies with high impact in the participating regions and other networking activities.

For the promotion of the deployment of Federations of Identity connected to eduGAIN and the academic Wi-Fi roaming eduroam, we have focused our action through training of the NREN technicians and promotion of the advantages of the technologies in meetings and conferences where the NRENs meet regionally and Worldwide. In order to maximize impact, our strategy has been to take advantage of the regional organisations that group NRENs in the participating World regions, namely: ASREN for the Arab Countries, CAREN for Central Asian countries, UbuntuNet Alliance for East and South Africa, CKLN for The Caribbean, TEIN for South and East Asia, GÉANT for Europe and RedCLARA for Latin America.

MAGIC Partner Regions



We have conducted 7 training workshops in Chile (July 8, 2015), Amman, Jordan (8 to 10 September 2015), Jamaica (7 to 9 October 2015), Beirut, Lebanon (December 3 to 4, 2016), Kyrgyzstan (February 27 - 28, 2017),

Tajikistan (March 1 - 2, 2017), Barbados (April 10-12, 2017) with 112 technicians trained who work for 78 NRENs in 78 non European countries as shown in the map “MAGIC Partner Regions”.

To support the training that those NRENs will have to provide to their members institutions we have developed on line training material in the form of documentation, presentations and videos. We have also collaborated with NSRC, GEANT and REFEDS to make their videos available to Spanish and Portuguese populations (the original version is already in English).

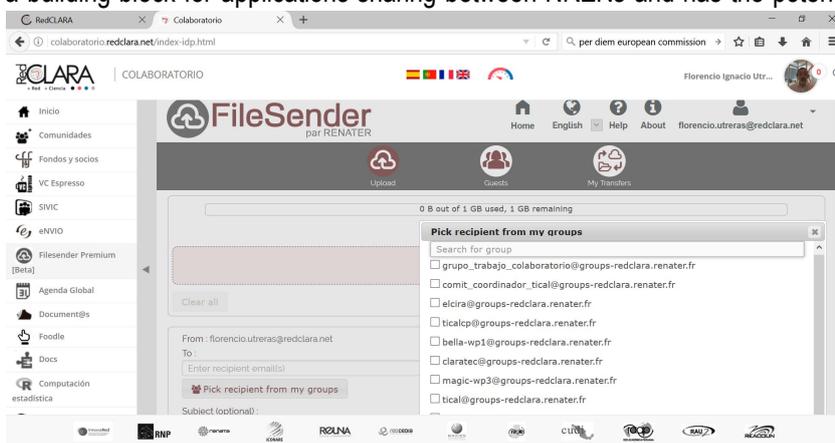
As a result of this effort 16 new countries have joined eduroam and 7 new federations have been established while 5 more are in different status of their implementation process. The map of coverage of eduroam in the world is becoming increasingly dense, making the roaming of Internet access for academic and researchers a reality Worldwide. The process is going in the same sense for eduGAIN. As the different regions mature the long term effect of the MAGIC actions will prove to have been crucial for this worldwide implementation of these two enabling technologies. In this way, access of academic and researchers to the content and applications is becoming truly mobile across the World.

In order to ease the use of applications aimed at group collaboration, such as web conferencing, document sharing, meeting scheduling and others, users create user groups in social networks or other platforms such as Sympa (RENATER) or Colaboratorio (RedCLARA). Within each platform, the user groups are able to share information between the applications, for example, a PowerPoint presentation made at a Web conference can be shared within the group using a wiki or a virtual disk accessible to all members of the group. In this project, we aimed at agreeing on a set of standards to handle the user group information, such as user group name, list of users, platform, etc. The standards chosen had to be inter operable, i.e., such that information on these user groups can be shared across platform, allowing for example a Biodiversity user group created within the Colaboratorio platform to be recognized as in the Sympa or other platform. This enables the groups to use applications available in another platform without going through the burden of creating again the user group and establishing all administrative permissions.

We have chosen Colaboratorio and SYMPA as the basic technologies for GMF (Group Management in Federations) while VOOT has been selected to carry on the integration. As a key result of this project, we have implemented a test bed where user groups built in the Colaboratorio can now use applications in the SYMPA environment as easily as authenticating as user of a user group in the Colaboratorio. This allows automatically to extend the number of applications provided to the users of both platforms through general agreements between the platform providers. This combination of technologies is a building block for applications sharing between NRENs and has the potential

to allow users across the World to take advantage of collaboration applications developed and run elsewhere without leaving its familiar environment or having to open a new account somewhere else.

As an example, we see in the figure how the FileSender application hosted in RENATER allows to send a file to user groups within the RedCLARA environment.



The pilot has been deployed in two NRENs in Europe and Latin America, while the Colaboratorio platform has become operational in 10 NRENs of Asia, The Arab Countries, West and Central Africa, the Caribbean and Latin America while several other are in testing status in South and East Africa, The Arab Countries and Central Asia. In these deployments the user can now use 11 applications, 8 of which were integrated or developed within the MAGIC project. A catalogue of applications was built and recommendations for NRENs and external providers to publish their applications in the catalogue and to be able to be integrated in the Colaboratorio framework was established.

In this way NRENs and RRENs will have access to an enormous set of applications being developed worldwide by other RRENs, NRENs who at the same time will have access to a larger user base and collaborations to enhance and expand their applications using the Open Source principle.

The work in objective c) aimed at disseminating and training on NRENum technology which allows to use the existing and DNS system (Domain Name System) which is used day to day to translate names such as www.magic.eu into IP numbers that are understood by the Internet routing machines. The DNS system is a solid dependable system, hence the idea of using it to translate videoconference names and numbers into IP numbers to ease the identification of services such as Videoconference Rooms (H.323), web conference systems, VoIP calls (softphones, IP phones) and mobile devices. The idea is to use a standard E.164 numbering scheme (telephone system numbering) to identify all devices and thus make dialling though all these systems alike.

We developed training material in the form of on line material including video presentations to allow anyone interested in deploying NRENum to do it in just a few minutes. We also made dissemination presentations in several meeting in Africa, Latin America and Asia and provided support for the deployment of new NRENum domains. As a result of this effort, 9 countries have joined the NRENum.net community from Asia, Central Asia, Europe and Latin America.

The other important challenge that we faced in this project regarding the video conferencing facilities is the integration between Videoconference Rooms (H.323) and web conference systems. Commercial systems exist for this, but the academic community has strong interest in Open Source solutions. Thus, with the support of our Brazilian partner we developed an open source gateway to integrate MCONF and the H.323 systems using SIP dialling. This solution is now available for all partners to include in their MCONF solution.

In order to put this technology to work with end users across the World, in Objective d) we fostered the development of 3 Global Science Communities (GSC) by starting from existing communities, where available, in three major scientific topics of global interest: Biodiversity, Environment and e-Health. The fourth one, Remote Instrumentation was supported following a request from the community in Mexico. The communities succeeded in attracting researcher from Africa, the Arab Countries, Europe, the Caribbean and Latin America. We worked with these communities using the proposed collaboration tools available through the Colaboratorio platform. Using these tools, we organized Global Science 20 events by web conference on topics of their interest and 4 web conference based Virtual Information Days on H2020 calls. The number of researchers attending these conferences were in some cases up to 75 at the same time, proving the efficiency of the tool and its capacity to support such a large number of users. All interactions of the GSCs were carried out through the Colaboratorio tools which are also integrated with e-mail lists facilitating in this way the use, in particular for people on the move.

The other cornerstone of the support to the user communities is the Funding and Partners Database, an application developed to facilitate access from users to funding opportunities around the World. This includes H2020 and Erasmus calls, but also opportunities from the German agencies DFG and DAAD, the US agency NSF and many others. The collecting and organisation of these funding opportunities is made by a specialist every day and the application alerts the 3500 registered users according to their profile. The application framed into the Colaboratorio also allows for specific searches and the possibility of seeking for potential partners among the platform registered users. This tool is a great attractor for users to stay and register in the Colaboratorio environment. The use of the applications has increased from 350 views of specific funding opportunities to 1352 in one year, a 4-fold increase.

In order to reach the community of NRENs we have participated in the main conferences of the Regional Research and Education Networks namely: ASREN's e-AGE, GEANT's TNC, RedCLARA's TICAL, Ubuntunet Alliance Conferences, CAREN Conference, WACREN conferences and IST Africa 2015 and 2017 conferences. In all these conferences we have distributed leaflets and give away as well presented in workshops and panels. In particular we have joined forces with SciGaia and TANDEM to create awareness through joint activities in TNC and IST Africa events.

The dissemination tools also include the website: <http://magic-project.eu> where we have included a large series of video testimonials and dissemination material. We also make intensive use of social networks to make sure that the NREN community and the end users at large are aware of the possibilities opened by MAGIC.

2. Overview of the Results and their Exploitation and Dissemination

2.1. Platforms for Mobility

As said in the Executive Summary, in this set of activities we aimed at promoting the deployment of the technological platforms that ease the access of end users to the applications they need. i.e., the platforms that support the academics, students and researchers when they move within their country, region or worldwide. To carry out this work, we have worked with regional partners through their Regional Research and Education Networks (RRENs), which are also named as “Focal Points”. This strategy was very important, since working by regions is the only way to reach all countries in the regions and also because the RRENs are the organisations that will continue the work after the project ends and hence will ensure sustainability of the effort.

During the first year (2015-2016), the activities of this work package were focused on planning, dissemination and training. Looking deeper inside the project regions:

In the beginning of MAGIC Project, during TICAL 2015 (July 8, 2015) in Viña del Mar, Chile was presented the Mobility Federated Services and Nrenum.net workshop. There were 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

In the Arab Region, ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organized in cooperation with the MAGIC and EUMEDCONNECT31 projects, and was designed for staff of National Research and Education Networks (NRENS) and Universities.

The workshop was attended by 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan. The training was conducted by ASREN in cooperation with CESNet of the Czech Republic. The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN.

After the first workshop, there were more two events: one in Dar es Salaam regarding Federated Applications (FedApps) Training. This session was held on 26-28 April 2016, as part of UbuntuNet Alliance’s strategy for deployment of AAI in the region, during this first event, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training. The training - supported by the MAGIC project - was facilitated by UbuntuNet Alliance and SANReN, South Africa. This training was attended by 22 engineers from 14 NRENS.; and the second in Beirut, Lebanon “Workshop on Identity Federation Infrastructure” December 3 to 4, 2016, American University at Beirut (AUB), Beirut, Lebanon. Twenty-two participants representing Morocco, Algeria, Lebanon, Palestine, Oman, Egypt, Somalia, Malawi and Jordan attended the workshop. The workshop was coordinated with CESNet and GEANT.

ASREN annual conference e-AGE 2015, Casablanca 7-8 December 2015. A special session and a booth on MAGIC federation and eduroam. Oman and Morocco received ASREN Trophy for success on IdP implementation. In the next year conference, e-AGE 2016, in Beirut, 1-2 December 2016. A side roundtable was allocated for eduroam and IdP discussion. Algeria was recognized for its success in federation start up.

eduGAIN and eduroam used to be on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENS on these developments. It was also discussed during ASREN monthly VC meetings.

UbuntuNet Alliance has continued to promote deployment of the service in the region, and during the Federated Applications training in Dar es Salaam in April 2016, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training.

In The Caribbean, it was conducted on October 7 to 9, 2015, a Federated Access and eduroam workshop in West Indies, Jamaica. There were 16 participants from 11 institutions. Technicians, academics and researchers in the Caribbean had the opportunity to benefit from “Caribbean MAGIC”, a 3-day series of technical training and scientific discourse from April 10-12 at the University of the West Indies (UWI), Cave Hill Campus in Barbados.

Collaborating with the UWI, MAGIC has hosted a 2-day training session on eduroam, facilitated by GÉANT, Europe's leading collaboration on e-infrastructure and services for research and education. This have target the technical and IT representatives from various universities and colleges in Barbados and the Eastern Caribbean. For further information on eduroam, and its application in the Caribbean region.

In the end of project, in 2016 – 2017, there were two sessions in Central Asia, the first one in Kyrgyzstan and the second in Tajikistan.

Date	Activity	Venue	Qty of participants
May-15	Kickoff Project		
July-15	Mobility Federated Services and Nrenum.net workshop	Viña del Mar, Chile	11 participants
September-15	First workshop on Joining eduroam and Identity Federation	Amman, Jordan	13 participants
October-15	Federated Access and eduroam workshop	West Indies, Jamaica	16 participants
December-15	Workshop on Identity Federation Infrastructure	Beirut, Lebanon	22 participants
	e-AGE 2015 (special session and a booth on MAGIC federation and eduroam)	Casablanca, Morocco	
April-16	Federated Applications (FedApps)	Dar es Salaam, Tanzania	22 participants
December-16	e-AGE 2016	Beirut, Lebanon	
February-17	eduroam workshop in Kyrgyzstan	Bishkek, Kyrgyz Republic	14 participants
March-17	eduroam workshop in Tajikistan	Osimi, Tajikistan	14 participants
April-17	Caribbean MAGIC	Cave Hill, Barbados	

➡ **The project has trained 112 engineers**

From May to October 2016, work package 2 focused on consulting in eduroam and AAI implementation. Unfortunately, MAGIC project manager, Florencio Utreras, has reported that he has received a letter from CKLN's Director, Ken Sylvester informing that CKLN closed at the end of September 2016. The European Commission has been informed of the situation and consultations are underway to decide on the avenues to take as what regards the contract with the EC and the work that CKLN had committed. Although there was no Caribbean representant anymore, MAGIC Project team has maintained the support to the institutions of that region. The result of this effort was the installation and configuration of a secondary National Proxy Radius Server (NPRS) for TTRENT (Trinidad & Tobago Research and Education Network) that can be used a secondary server for other National Roaming Operators (NROs) in the Caribbean. Peering and testing of the new NPRS with the eduroam Top Level Radius Server (eTLRS). Migration of institutions in Trinidad & Tobago to the new NPRS; Assessment of institutions regionally to determine which ones have the wireless infrastructure to support deployment of eduroam, and assisted institutions with the planning and deployment of eduroam (UWI, UTT, COSTAATT).

The addition of a RADIUS proxy server outside of Trinidad & Tobago to ensure Security, Stability, and Resiliency of the eduroam service regionally. Deployment of eduroam in five additional countries (Anguilla, Barbados, Grenada, Montserrat and Jamaica) and one additional eduroam pilot in Barbados.

Beside those actions, in Central Asia, at the beginning of July, in Bishkek, Kyrgyzstan, it was signed a contract between the European Commission and GÉANT, that guarantee the launch of the 3rd phase of the EU-funded Central Asia Research and Education Network (CAREN) project which resumes regional R&E connectivity after the previous project phase ended in August 2015. Just after that, CAREN has signed an agreement on the collaboration between CAREN and MAGIC. Between October 27 and 28 the 1st TEIN-CAREN joint workshop was held in Bishkek, Kyrgyzstan.

In the Arab region, it has been noticed an expansion of eduroam coverage in the countries that have already had eduroam implemented, like Algerian, Morocco and Lebanon. In addition, Jordan has implemented eduroam at one university with five campuses.

2.1.1. Relevant action in Mozambique

A strategic action in Africa was made between RNP and MoRENet (Mozambican NREN). Since 2013, MoRENet has been working with the Brazilian NREN (RNP) within an international cooperation framework, which comprises training activities, exchanging good management and governance practices of networks, technical visits and, more recently, information exchange under technical and operational management. Because of this collaboration activity, a work plan comprising four phases was developed.

Preparation: In this phase, RNP and MoRENet have elaborated an implementation plan of the Project, which has

detailed all work that would be done to implement an Identity Federation and eduroam. This phase also comprises the elaboration of structural documents required to implement the federation and the eduroam-roaming operator, which also includes the signature of adherence term to eduroam international and the MAGIC project;

Federation Implementation: corresponded to the implementation of the federation of authenticity and authorization in Mozambique, which comprised a one-week-online-training as well as an assisted support performed through web conference.

eduroam implementation: as previously exemplified, this phase corresponded to the implementation of the eduroam-roaming operator in Mozambique, which included a one-week-online-training as well as an assisted support performed through web conference;

Month	Performed Activities
September	Planning and schedule
September	Preparing and conducting online training
October	Definition of the name of the Mozambican federation (CAF-Moz)
October	Signing of the memorandum of understanding (MoU) of MAGIC Project
October	Writing Polycies
October	Writing the term of adhesion
October	Drafting of the technical specifications document
October	Writing the file "Metadata Registration Practice Statement"
November	Web page development of the Mozambican federation
November	Writing Polycies (version in English)
November	EduGAIN Policy Acceptance Signature
November	Inclusion of Caf-moz in REFEDS
November	Inclusion of Caf-moz in eduGAIN
November	Start up of federation core configuration
December	Review the federation core installation procedures
January	Installing the federation core
January	Elaboration of the federation XML file (Metadata feed)
January	Installing and Setting Test SP
March	Validation of the federation XML file in eduGAIN
March	Installation and Setting of the first IdP of the federation

Mozambique implementation timeline

The first phase of the Project was concluded six weeks after the first formal meeting of the project. More specifically on October 28th, 2016, with the conclusion of the following tasks:

- Webinars about federation and eduroam;
- Elaboration of the Project implementation;
- Infrastructure availability in the MoRENet client institution;
- Term of adhesion signed by MoRENet;
- Elaboration of structural documents.

The elaboration of structural documents has proved to be an essential activity that assists both the communication among the new service, MoRENet clients as well as the international eduroam and eduGAIN service, to which the federation and Mozambique roaming operator (RO) had the intention to integrate because of a RNP suggestion. Due to this directive, the following documents were elaborated:

- Agreement-signing-memo among MAGIC and MoRENet;
- Elaboration of the Use Policy of the eduroam-roaming operator;
- Web Page for the eduroam-roaming operator in Mozambique;
- Elaboration of the document with eduroam technical specification;
- Elaboration of adhesion term for eduroam client institutions;
- eduroam statement signature.

During a meeting held on October 28th 2016, one of the most significant activities of the second phase of the project, corresponded to the implementation of the federation: one-week-online-training.

2.1.2. Countries eduroaming:

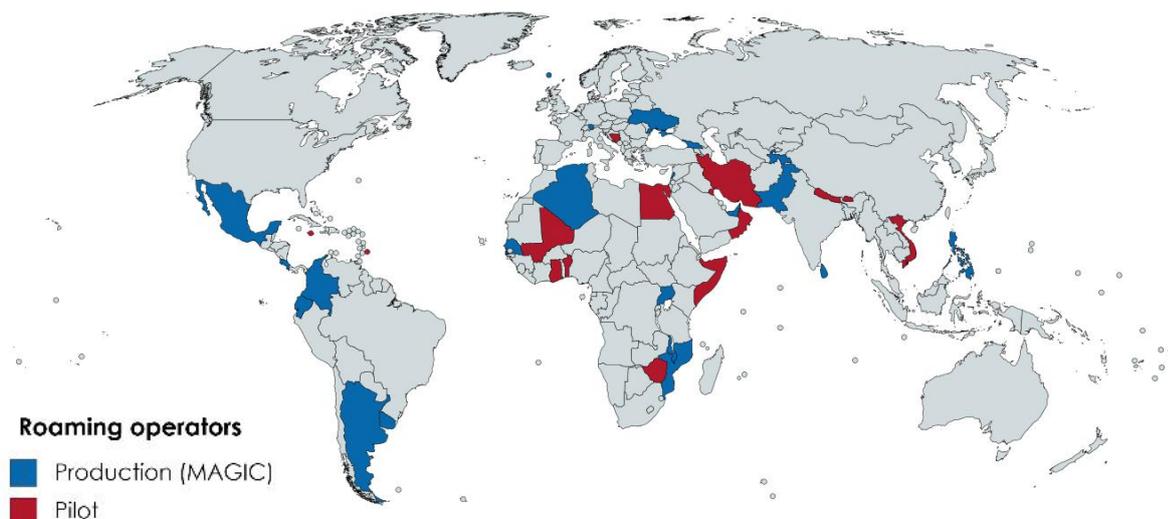
In June 2015, when MAGIC started, there were 74 countries eduroaming and 13.390 hotspots, a year later, in June 2016, MAGIC and worldwide eduroam efforts changed those numbers into 77 countries and 17.937 hotspots (Georgia, Ukraine and Uruguay, were added in the MAGIC scope). In April 2017, eduroam counted with 89 countries.

eduroam in Africa: Since MAGIC started the eduroam status in Africa is growing, today there are 6 production deployments - Kenya, Morocco, Uganda, South Africa, Zambia, Algeria - and 10 Pilot deployments - Zimbabwe, Somalia, Ghana, Malawi, Nigeria, Senegal, Egypt, Sudan, Tanzania, Tunisia.

- | | |
|-------------------------------------|---|
| 1. Bosnia & Herzegovina (Dec, 2015) | 11. Mali (Nov, 2016) |
| 2. Vietnam (Sept 2015) | 12. Ghana (Mar, 2016) |
| 3. Bhutan (Jan, 2017) | 13. Somalia (Feb, 2016) |
| 4. Nepal (Jan, 2017) | 14. Zimbabwe (Jan, 2017) |
| 5. Iran (Jan, 2016) | 15. Benin (Dec, 2016) |
| 6. Oman (Apr, 2017) | 16. Mozambique (April, 2017) |
| 7. Egypt (Feb, 2016) | 17. Uruguay (Pilot in ELCIRA production in MAGIC) |
| 8. Kuwait (Mar, 2017) | |
| 9. Jamaica (Nov, 2015) | |
| 10. Barbados (Apr, 2017) | |

New pilots and production territories

Below are marked the countries that are eduroaming worldwide:



eduroam scenario, in numbers, before and after MAGIC Project



Just remembering that membership of the European Confederation is within the scope of this group and not reported to the GeGC (Global eduroam Governance Committee). Same with the Latin American Confederation (CLATe).

So, as result of MAGIC project, there are 15 new pilots and 22 new territories - all supported by MAGIC with 4 in Europe, 6 in CLATe and 3 in combination with the XeAP project within TEIN*CC/TEIN/APAN/AARNet.

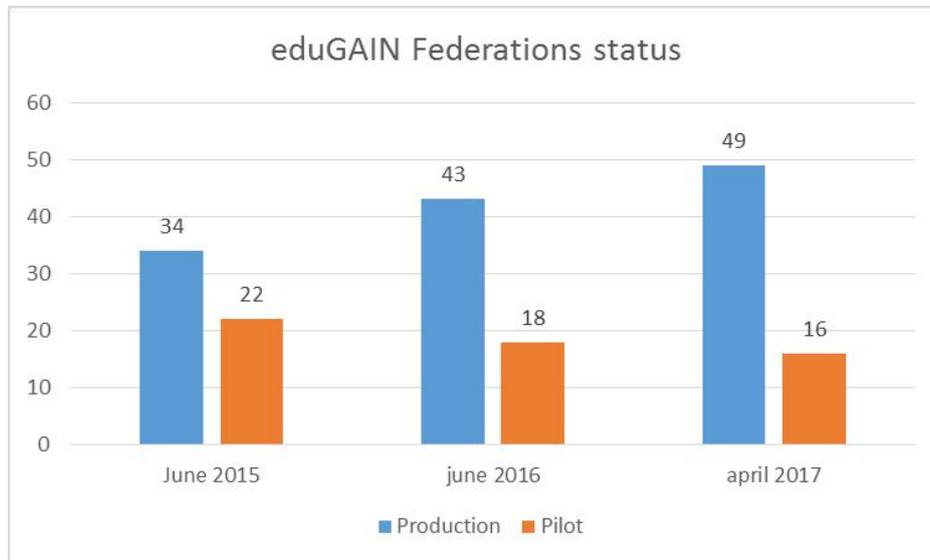
The actual eduroam world map:

Roaming Operators	89
Pilots	26



2.1.3. Expanding eduGAIN

Regarding AAI, when MAGIC started there were 34 Federations in production and 22 in pilot in the world (June 2015), a year later (June 2016) the work carried out by MAGIC's WP2 has change these numbers into: 43 Federations in production and 18 in pilot (Zambia, Romania, Serbia, Macedonia, Bulgaria and so on). At the end of MAGIC project, eduGAIN had 49 federation in production with the eduGAIN Steering Group approval, to admit the South African Identity Federation (SAFIRE) as the first fully participating member from Africa.



This advance is result of many training sessions, speeches in conferences and in some regions even consulting. This shows that when a project is running with feasible goals it is possible to motivate partners to reach them. In the MAGIC project, although the goals were challengeable, the project team have motivated their partners in order to implement AAI, infrastructure and governance. This represents that specific project helps to create an effort to improve, in a very short time, the maturity level in some areas, in this case, Identity Management.

In Latin America, CUDI (Mexican NREN) keep pushing forward the AAI in Mexico. Currently the Mexican Identity Federation has a federated service implemented by CUDI. Work is also under way on the implementation of a service at the University of Colima, which is expected to be available by the end of December 2016. CUDI is also working on federating some of the applications found on its collaboration platform, which is also expected to be available by the end of 2016. Mexican NREN implemented a discovery service (DS) for the Mexican Federation of Identities, in which are added the CUDI's IdP and the University of Colima.

Below are marked the countries in eduGAIN worldwide at: <https://technical.edugain.org/status>

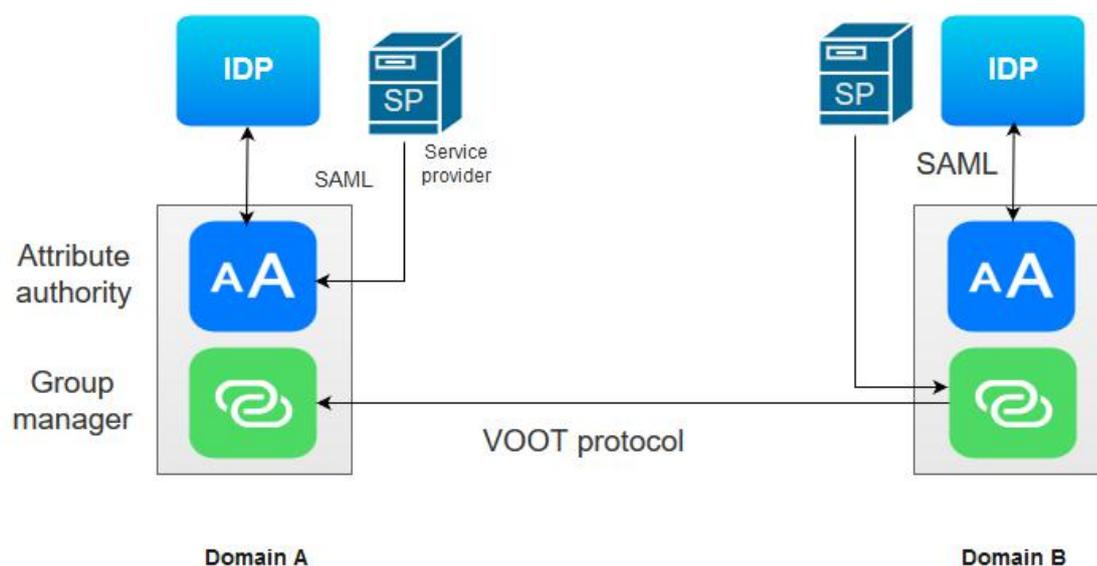


2.2. Cloud Provisioning and Groupware Standards

Within the first six months of the project, the MAGIC group carried out an study and assessment of the standards available for Group Management in Federations or groupware standards. The goal was to select one protocol and define the way that two domains can share end-users' group membership information for applications usage. The above means to have a way that applications became aware of the group an end-user belongs to, even if the information resides in another domain. In practical applications this can be used to authorize access or share resources in applications without the need for end-user to manually re-create groups. The study of the protocol options were consigned in the deliverable "D3.2 Assessment of the existing Group Management Standards and Value Services for Global Communities" completed by October 2015.

During the months of September 2015 to in January 2016, the MAGIC project team evaluated the groupware standard alternatives and the possible applications to implement a pilot case. The evaluated technologies included SCIM, HEXAA, PERUN, and VOOT for group managers, and Colaboratorio, Webconference (MCONF/Jitsi), Cloud storage, Zimbra, Wiki and eLearning platforms as possible services. The result from this evaluation found that the best alternative for group management was to use a combination of SAML attributes with the VOOT standard. The VOOT protocol was selected because it is simpler than SCIM, and the attributes are more adapted to NREN needs. The SAML part was accepted because it is the native protocol in the academic federations, and it has the concept of an Attribute Authority, which is a component that can store the group membership information and share it through a SAML protocol transaction. The VOOT acronym stands for Virtual Organisation Orthogonal Technology (VOOT), and is an extension of the SCIM standard to manage virtual organizations.

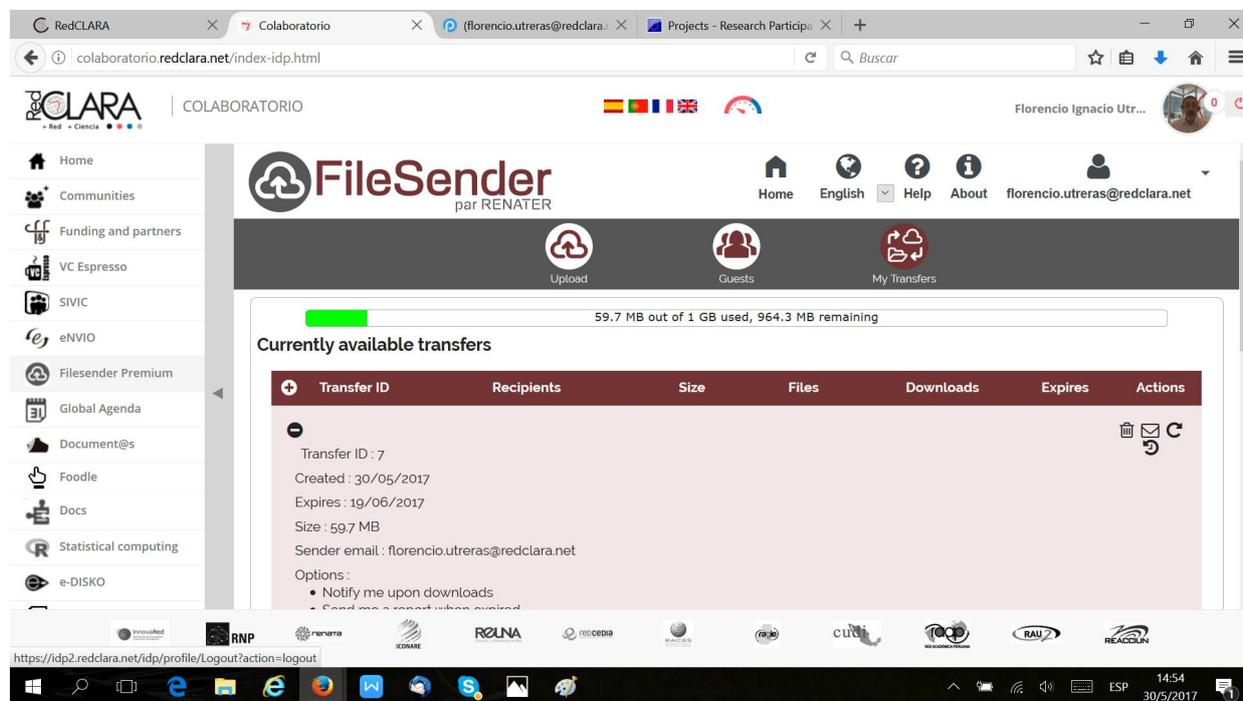
The work was concluded in January 2016 in a presence meeting at Vienna, in which the project work package members agreed the standards and the technical solution. The overall architecture of the selected solution was described in this picture:



In the services area, the MAGIC project selected the services: Dokuwiki, an online collaborative web edition tool also known as wiki; Colaboratorio, the cloud services environment from Latin-America that has the function to create and administer communities for the end-user and connect applications to them; The FileSender Premium, a big file transfer service used to send files that can't be transferred using regular email service; eduDRIVE (e-DISKO), a file storage service based on the open-source software called ownCloud and adapted to the academic federations by the Brazilian NREN RNP.

During the period between January and August 2016, the group worked in the first pilot implementations of the applications to test the VOOT and SAML standards. Due to the global nature of the MAGIC project, the providers were selected in different regions. Dokuwiki was provided by CESNET from the Czech Republic, Colaboratorio from Latin-America, and FileSender Premium from France. The goal was to probe that and integration like this could be

achieved even between different environments with its own technologies. The first pilot applications integration was completed. In the Dokuwiki integration, the end-user is allowed to create a web page that can be edited. The permissions to edit the file are assigned by Dokuwiki depending on the members of the end-users' group defined in Colaboratorio, and obtained through a VOOT protocol API call. The SIVIC reservations system in Colaboratorio, was adapted to permit an end-user to schedule a conference, and invite all the members of a group by selected the group name from a list. In a similar fashion, the FileSender premium was modified to allow sharing a file through a selection of a group. All the members in the group would see the shared link with the option to download it. The project show how in a global scale, the academic providers can integrate their platforms to authenticate, and authorize based on groups defined in other parts of the world.



RENATER's FileSender Premium integrated into the Colaboratorio

Another important result was the spread and deployment of the Colaboratorio instances in different parts of the world. The Colaboratorio service is a communities management environment that integrates applications for scientific and academic collaboration. Colaboratorio joins the community space with applications oriented to the community collaboration. For instance, a user from a community can start a web conference in the community room, and record the session. The recording file will be stored in the communities space in the system and accesible to the community members. In the MAGIC time-line, the first countries in adopting Colaboratorio were Nigeria (NgREN), Ecuador (CEDIA), and Costa Rica (CONARE) during the first six months of the project (up to September 2015). The work continued, and Colaboratorio was deployed in the NRENs from Morocco (MARWAN), Lebanon (AUB), and Mexico (CUDI) during 2016. Finally, during the first 5 months of 2017, the MAGIC group achieved the implementation of Colaboratorio in Trinidad and Tobago (TTRENT), and Malasya (MYREN). It is worth noticing that the Colaboratorio service integrates communities from all of these countries in a single environment. The above means that communities from a region like Latin-America, could be consulted from other like Asia, and users would be able to join any community without worrying about the community location. This increases the opportunity to find partners and formalize global research groups, partners or projects across regions. Nowadays, with the MAGIC advances, Colaboratorio is present in the regions of Latin-America, Asia, Middle-East and Africa.



COLABORATORIO
The global collaboration platform for science and research

Welcome to Colaboratorio

With a variety of tools that allow scientists and academics to share and promote knowledge, organise joint activities and communicate in real time, Colaboratorio is a secure and private environment that optimizes time and effort.

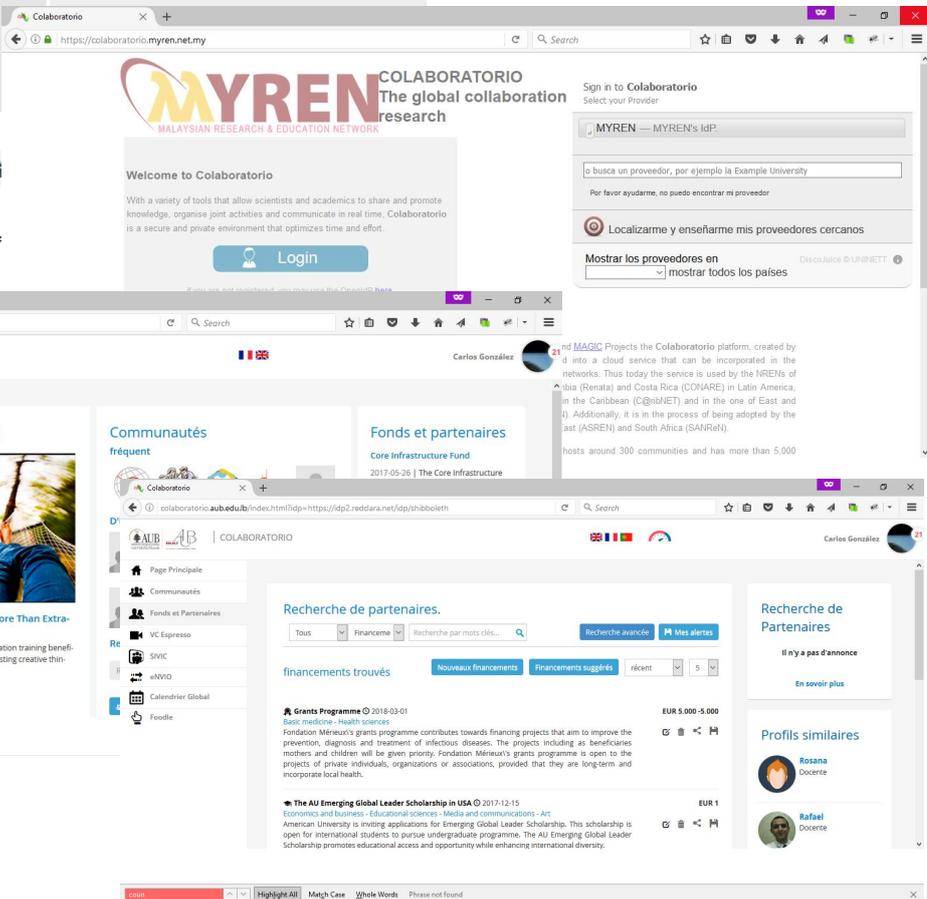
[Login](#)

If you are not registered, you may use the OpenIdP [here](#).

Services in Colaboratorio:



For more information, please download the Colaboratorio Guide:



Colaboratorio Deployments

In Collaboration with RENATER, the Colaboratorio service was translated to French language. Under progress work is done to achieve translation to Arab language and other Colaboratorio implementations, in Ethiopia, Kyrgyzstan, and Egypt. With the lunched collaboration, it is expected to translate Colaboratorio to Russian language also.

The MAGIC effort do not stopped there, and the group look for other applications that could be in the pilot of group management. In this context, the applications eduDRIVE provided by RNP, and Etherpad from RENATER France were implemented between January and May 2017. The eduDRIVE service is a file storage service, similar to Dropbox, with the advance of being provided with open-source software, and the academic community. The eduDRIVE was integrated to Colaboratorio with the name e-DISKO, and was modified with two main features: a) The user can share a file to a group by selecting the name, and b) the user can create a community store space in which only the members of the group or community can access the files. In the case of Etherpad, the implemented scenarios were similar, with the group's invitation, and the permission of edition a single pad by the members of a community.

In the last semester, the MAGIC project completed other important result that was the MAGIC Service Catalogue. The Catalogue is a tool used to list the cloud academic services provided by the NRENs or commercial providers, and their attributes list including privacy, service levels, policies, invoice and support among many others. The MAGIC team based on the GEANT's Service Catalogue what will allow future integration to search and found applications in different parts of the world. The applications registered in the catalogue were 11:

MCONF/VCEspresso, Envio, Funding and Partners, FileSender Premium, SIVIC, Dokuwiki, Okeanos, Colaboratorio (Communities), e-DISKO, R, and Etherpad. GRNET has supported the launch of the WACREN Cloud Pilot - Open Call, available at <http://wacren.net/en/news/wacren-cloud-pilot-open-call>. The initial work and deployments were carried out in Nigeria, one of the WACREN member countries.

Finally, in the context of adding applications, and achieve synergies with other projects, the MAGIC team contacted the SciGaIA partners. They kindly provided the necessary for MAGIC to implement the “R” application in the Colaboratorio environment. Provided by the National High Computing Center (CENAT) from Costa Rica, the “R” is an statistical computing application that runs in big computing clusters, and allows an end-user to send tasks to the computing facilities at the CENAT.

2.3. Agreements for Real Time Collaboration

The agreement on real-time collaboration aimed to promote and achieve further adoption of the global real-time communities standards. The Global Real Time Communications (GRTC) working group defined the ENUM dialing standard as the way forward as dialing method to integrate video and voice networks. A unique dialing method is the way forward to get really transparent, easy and unified communications between multi-vendor video-conference systems. In this line of work, the NRENum.NET service was created in August 2006 as a global ENUM service provided by GÉANT. The NRENum.NET service allows to easy use of the Internet domain name services (DNS) for translating GDS standard numbers (+1232090399), like the ones used in the telephone network, to SIP URI addresses (`sip:2983130@redclara.net`) that can be used in video-conference and audio network connectivity.

In the first months of the project, up to July 2015, the MAGIC project signed an agreement with eduCONF, the real-time services project from GÉANT. The agreement setup the basic agreements in order to advance in the key elements for the real-time communications integration. The main elements were: a) To have NRENum.NET as the global standard for dialing services, b) To share and integrate video-conference resource directories using web services APIs, c) Promoting DNSsec to enhance security in the NRENum.NET infrastructures.

The NRENum.NET as a global standard agreed that the NRENum.NET is the way forward in the dialing infrastructures. This technology will replace the Global Dialing System (GDS) services based on complex gatekeeper infrastructures. This agreement was the base start in order to align forces, and follow common paths in order to achieve better standardization.

In July 2015, the MAGIC project carried out a workshop on NRENum.NET service implementation. The session took place in Viña del Mar (Chile), and have the 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru. The goal in this session was to prepare and engage the Latin-American NRENum.NETs in the NRENum.NET service, so they could start with the country delegation process. In the following months, the MAGIC obtained the returns from this session because we got the NRENum.NET implementation on 4 countries of the five that participated.

With the MAGIC project work, the NRENum.NET service got promotion and was spread in other parts of the world. The MAGIC group developed training material in the OpenEDX platform so technical representatives from different institutions can be trained on implementing the NRENum.NET services. The format of the training is like a Massive Open Online Course (MooC). It includes audio and video resources that explain how to deploy the DNS infrastructures, fill out the requirements and ask for the country prefix delegation to GÉANT. The NRENum.NET courses were developed in English and Spanish versions, and can be located through the OpenEDX platform from RedCLARA in the Colaboratorio environment.

The MAGIC project achieved in the first semester of 2016 that the following NRENum.NETs join to the NRENum.NET service: Ecuador (CEDIA), El Salvador (RAICES), Mexico (CUDI), Uruguay (RAU), Sri Lanka (LEARN) and Chile (REUNA). All of these countries completed the service implementation by setting up their Domain Name System (DNS) services, complete the registration steps to join the NRENum.NET service, and carry out the testing to enable it.

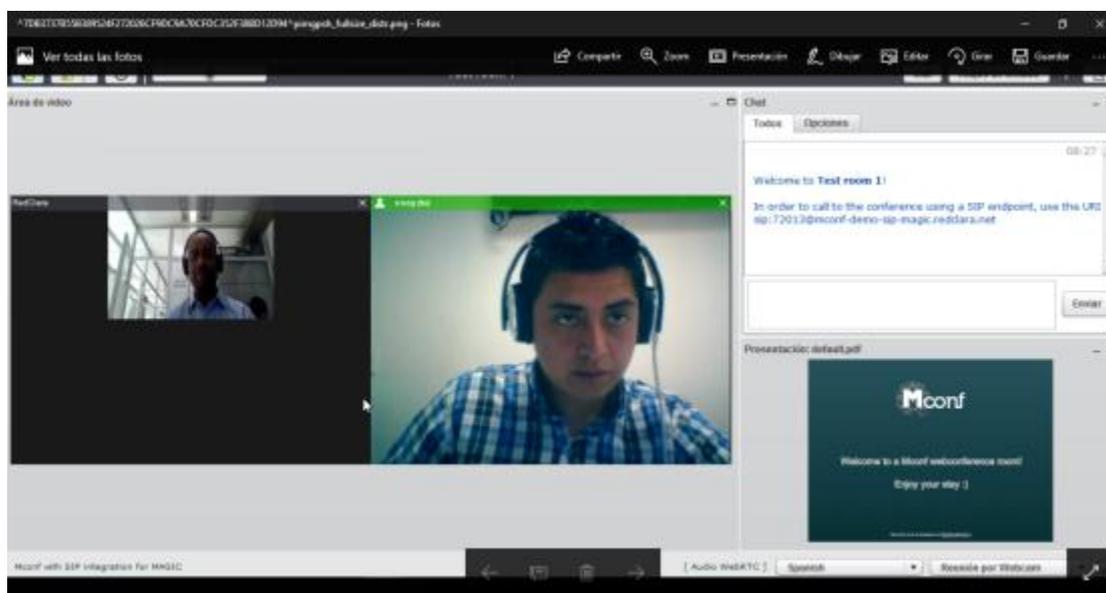
The MAGIC project also focus efforts on strength security on NRENum.NET infrastructures, by promoting the adoption of secure domain name services (DNSsec). The MAGIC provided training material, and achieved to secure the DNS zones of the NRENum.NETs. The developed material was developed and can be found in the MooC platform `edx.redclara.net`.

In January 2016, a representative from RedCLARA carried out an NRENum.NET promotion session in the 41 Asia Pacific Advanced Network (APAN) Meeting. The event took place in Manila, Philippines, and counted with the participation of several Asian countries. In the MAGIC session participated members from TEIN*CC and the NRENs from Japan, South Korea, China and Malaysia.

During the period up to September 2016, the MAGIC project promoted the implementation of the secure DNS or DNSsec, in the NRENs that already have the NRENum.NET service in place. The result was that secure DNS zones of the NRENum.NET service were implemented in Ecuador (CEDIA), El Salvador (RAICES), Perú (RAAP), Colombia (RENATA), and Czech Republic (CESNET). The mentioned NRENs deployed their DNSsec systems, and provided the proper encryption certificates to be connected with the NRENUM.NET root tree.

The MAGIC team continued the work complete the scope, and have 3 additional countries in other regions that implement NRENum.NET service. At the end of the project, the achievement was of 9 new NRENum.NET members globally divided in 5 in Latin-America, 2 in Asia Pacific/Central Asia, 1 in Europe, and 1 in Middle-East. The following NRENs have joined the NRENum.NET service: Ecuador (CEDIA), El Salvador (RAICES), Mexico (CUDI), Chile (REUNA), and Uruguay (RAU), Sri Lanka (Asia/Pacific), Lebanon (Middle East), Czech Republic (Europe), and Kazakhstan (Central Asia). Even as the goal was to have three members in the Asia-Pacific region, the MAGIC team successfully accomplished to add Central-Asia and Middle-East as other implementation regions.

The project developed between January and April 2017, the integration of the web-conference system MCONF to SIP video platforms. This integration allows dialing from a running web-conference in MCONF to any SIP capable device, like a hardware based video-conference terminal. The features developed involved the bi-directional transmission of audio and video, having the speaking person at the hardware SIP device video in the Webconference (speaker switching mode), the capacity to see multiple web-conference participants at the SIP end-point, sharing the content from the SIP endpoint to the web-conference, sharing the content from the web-conference to the SIP end-point, dialing from the web-conference using DTMF tones, and the testing with an ENUM dialing based network. From the end-users perspective the usability of the system will be improved, and the barrier of the need of having all users in the same conference system will be removed. The new system is expected to benefit thousands of users of the MCONF system, and of course, the MAGIC partners that will be able to implement this system without cost.



Webconference and H.323 rooms interacting through the Gateway developed by MAGIC

As support of the previous development, the MAGIC team developed training material for the implementation of the unified network based in MCONF. The training explains the architecture of the system, its components and the resources that need to be used in order to achieve a final implementation. Since the month of May 2017, this material is open for access in the Colaboratorio's OpenEDX platform.

2.4. Global Science Communities

a) Global Science Communities

To establish the Global Science Communities the team took, as input, the topics identified by the ELCIRA project and then cross checked the information with the needs and interests identified by the participating regional organisations. The priority areas are: e-Health, Environment and Biodiversity.

In addition, the project team agreed to include Remote Instrumentation as requested by an existing group in Mexico because it was a community initiated priority topic and because the group had shown interest, enthusiasm and willingness to enhance the work developed earlier by their members as well as to have the opportunity to learn and share knowledge with peers from around the world.

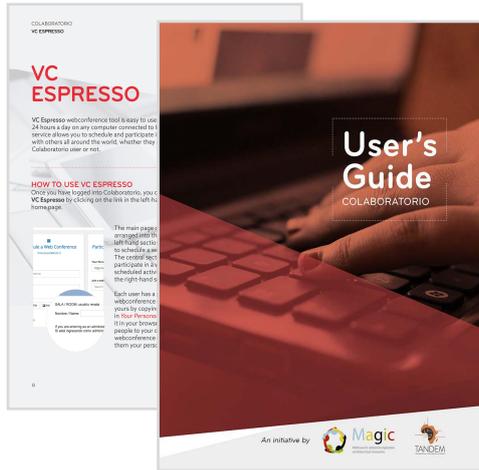
The project team proceeded and identified people from within the selected priority areas to act as community champions – to provide guidance and direction in the field. The table below shows the four communities established, their respective champions and the membership as at the end of the project.

	<p>Global Science Community on e-Health Champion: Prof. Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil. Members 2017: 77</p>
	<p>Global Science Community on Biodiversity Champion: Prof. José Ramón Martínez, Professor and researcher of the Universidad Autónoma de Santo Domingo (UASD), Dominican Republic. Members 2017: 35</p>
	<p>Global Science Community on Environment Champion: Dr David C. Smith, Coordinator Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica. Members 2017: 32</p>
	<p>Global Science Community on Remote Instrumentation Champion: Prof. Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico Members 2017: 17</p>

The activities of the GSCs were focused on addressing emerging and trending topics in the particular fields of the communities. The events both virtual and face to face and each had a different format, objectives and results. In total, 24 events were held during the life time of the project, 16 of which were virtual, whereas the rest were face to face, held back to back with major international events. Four of virtual events were related to the H2020 Programme and were aimed at promoting the funding programme and its upcoming calls, requirements and procedures on how to submit proposals. All virtual events were recorded and the video recordings and slides are available for consultation from the event specific websites.

Additionally, activities include training on the use of collaborative tools with both community members and participants in the conference and informative days in order to enhance the use of the collaborative platform and strength the appropriation of the platform. This activity also fostered the work developed by WP3 related to the deployment of local versions of Colaboratorio, which is the case of the Colaboratorio in Lebanon and Morocco. Training materials were developed in order to offer material that could be disseminated among the research communities and their peers. A PDF user guide and training videos in different languages are available at:

<http://magic-project.eu/index.php/training>



List of WP5 Virtual and Face-to-Face Activities

1. June 17-24, 2015
Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020
<https://eventos.redclara.net/indico/event/495/overview>
2. December 15, 2015
Politics and models of implementation of Open Access in the world took place
<https://eventos.redclara.net/indico/event/623/>
3. February 2, 2016
Global Science Community on e-Health Opening Conference
<https://eventos.redclara.net/indico/event/634/>
4. February 11, 2016
Global Science Community on Biodiversity Opening Conference
<https://eventos.redclara.net/indico/event/639/>
5. February 18, 2016
Global Science Community on Environment Opening Conference
<https://eventos.redclara.net/indico/event/640/>
6. February 25, 2016
Global Science Community on Remote Instrumentation Opening Conference
<https://eventos.redclara.net/indico/event/641/>
7. May 5, 2016
Global Science Community on Biodiversity: Experience from around the World

- <https://eventos.redclara.net/indico/event/661/overview>
8. May 11-13, 2016
IST-Africa 2016 Conference , Durban, South Africa
<http://www.ist-africa.org/conference2016/>
 9. June 30, 2016
Webinar on Science Communication
<https://eventos.redclara.net/indico/event/719/>
 10. July 8, 2016
Info Day, Horizon 2020 - 'Health, demographic change and wellbeing'
<http://ec.europa.eu/research/index.cfm?pg=events&eventcode=314FDE2A-B120-5C11-0BC24DEE2CA8115E>
 11. September 6, 2016
Global e-Health Grand Round: eHealth (Health informatics, Telemedicine and Telehealth)
<https://eventos.redclara.net/indico/event/713/page/5>
 12. September 13-15, 2016
TICAL 2016, Buenos Aires Argentina
<http://tical2016.redclara.net/>
 13. September 13, 2016
Global e-Health Grand Round: Cardiology I
<https://eventos.redclara.net/indico/event/713/page/4>
 14. September 20, 2016
Global e-Health Grand Round: eHealth (Health informatics, Telemedicine and Telehealth)
<https://eventos.redclara.net/indico/event/713/page/6>
 15. September 27, 2016
Global e-Health Grand Round: Child and Adolescent Health
<https://eventos.redclara.net/indico/event/713/page/7>
 16. October 4, 2016
Global e-Health Grand Round: eHealth (Health informatics, Telemedicine and Telehealth)
<https://eventos.redclara.net/indico/event/713/page/8>
 17. October 11, 2016
Global e-Health Grand Round: Cardiology II
<https://eventos.redclara.net/indico/event/713/page/9>
 18. November 2, 2016
Workshop on End User Engagement at UbuntuNet-Connect 2016 Conference Entebbe, Uganda
<https://events.ubuntunet.net/indico/event/1/>
 19. December 1, 2016
Biodiversity Session at e-AGE 2016
Beirut, Lebanon
<http://asrenorg.net/eage2016/>
 20. December 14, 2016
Horizon 2020 Info Day on ICT-39 Call
<https://events.ubuntunet.net/indico/event/9>
 21. March 28-29, 2017
e-Infrastructures for Worldwide Collaboration: assessing the present and road mapping the future
Abidjan, Ivory Coast
<https://indico.wacren.net/event/51/>

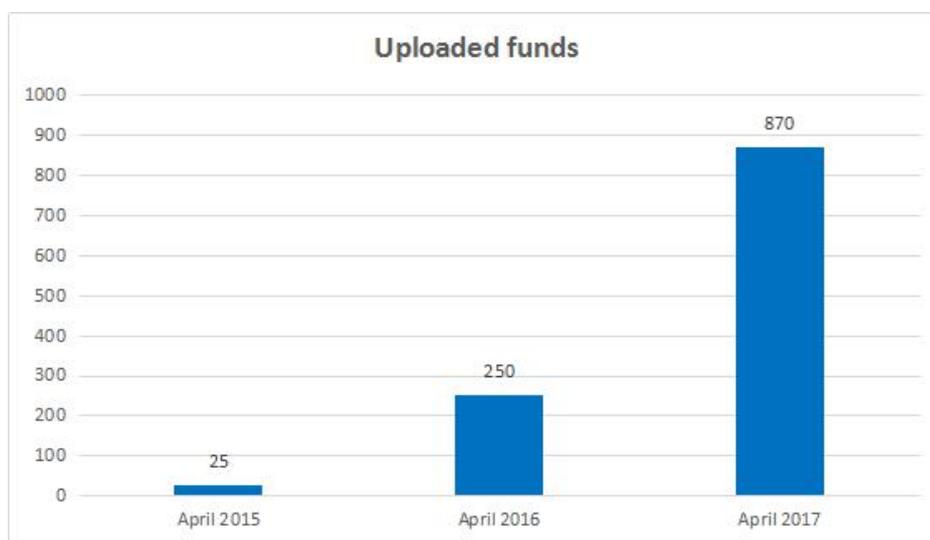
22. March 27-28, 2017
Supporting Campus Libraries to embed NREN Services and e-Infrastructure - WACREN 2017 conference - Catalysing Quality Higher Education and Research
Anidjan, Ivory Coast
<https://indico.wacren.net/event/50/>
23. April 10-12, 2017
Enviro-health - Caribbean MAGIC: Enhancing Collaboration in Research and Education
<https://eventos.redclara.net/indico/event/794/overview>
24. April 25-26, 2017
Central Asia Research and Education Network (CAREN) – 2nd CAREN Conference
<https://icaren.org/2nd-careen-regional-networking-conference/>

A survey of MAGIC virtual events was launched with the purpose of obtaining information from the communities on the challenges of working collaboratively. The survey was open to members of the GSCs and also the wider community. The survey also aimed at collecting suggestions on improving the virtual collaboration experience.

b) Information System on Worldwide Funding Opportunities

The Funding Opportunities Database and Partner Search application developed by the ELCIRA Project was extended during the lifetime of MAGIC and has become a trusted platform providing valuable funding and partner information for the global communities and other worldwide research groups. The activities related to the Funding and Partners service included improving the feeding and delivery processes of information to the users.

The modification in the system included a reviewing the format to feed the system and the information display for users. This modification allows to increase the number of sources of calls and to display accurate and useful information in every search.



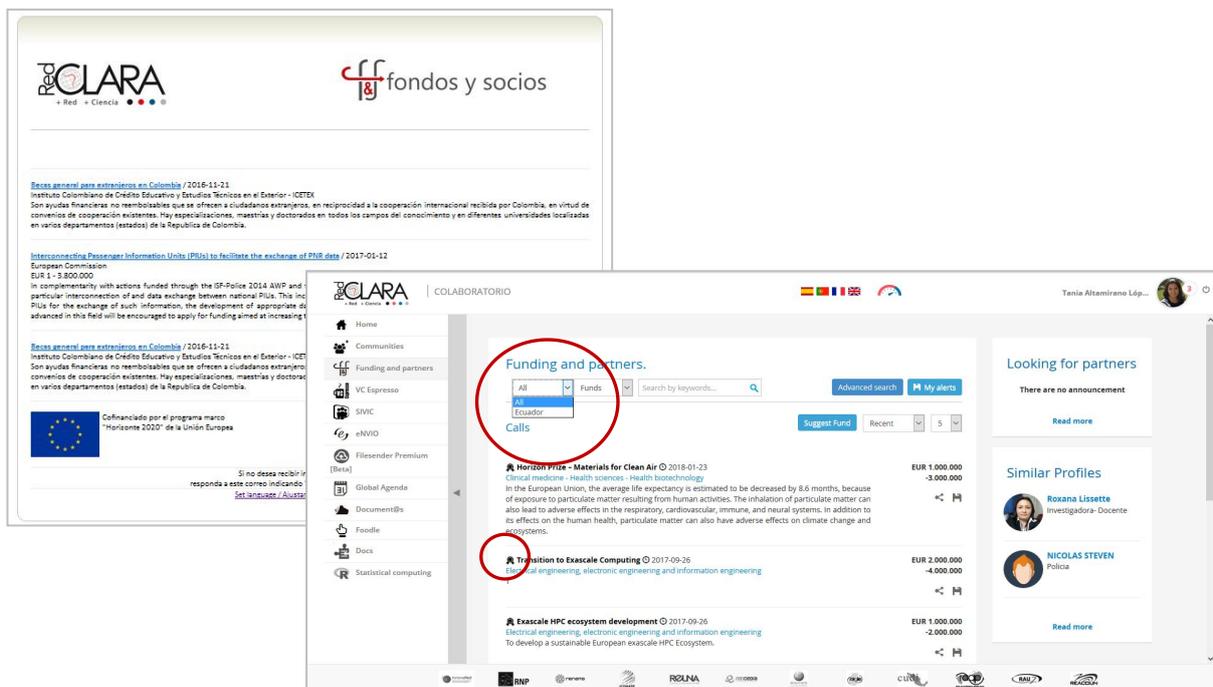
The work continued with the implementation of alerts by email, which are sent to all registered users in the Colaboratorio. The alerts are filtered and sent based on the interests of the users in accordance with the user's profile.



A pilot for the Funding and Partner Application was done with the National Research and Education Network of Ecuador, CEDIA. The pilot involves a local platform where the NREN is able to customise the system and feed it with their country specific calls for the domestic research and education community. This enriched (in terms of content, browse and design) system is deployed as an additional feature in Colaboratorio that could be available for other institutions in the future. This task held along with WP3, included a process of identification of needs, development of the pilot and the presentation of the results to the NREN.

The result is a new option integrated on the main menu of the tool, where users from Ecuador have the opportunity to do a specific search for calls dedicated to their country facilitating the process to identify open calls and partners around the world.

Also the Advanced search option was updated to include more Boolean operators (AND - OR fields) for a more accurate result. In terms of design it was included on the information presented icons that help the user to identify in an easier and more friendly way the information presented. The icons are dedicated to: scholarships, awards and funding.



Funding&Partners Application for fund search Worldwide

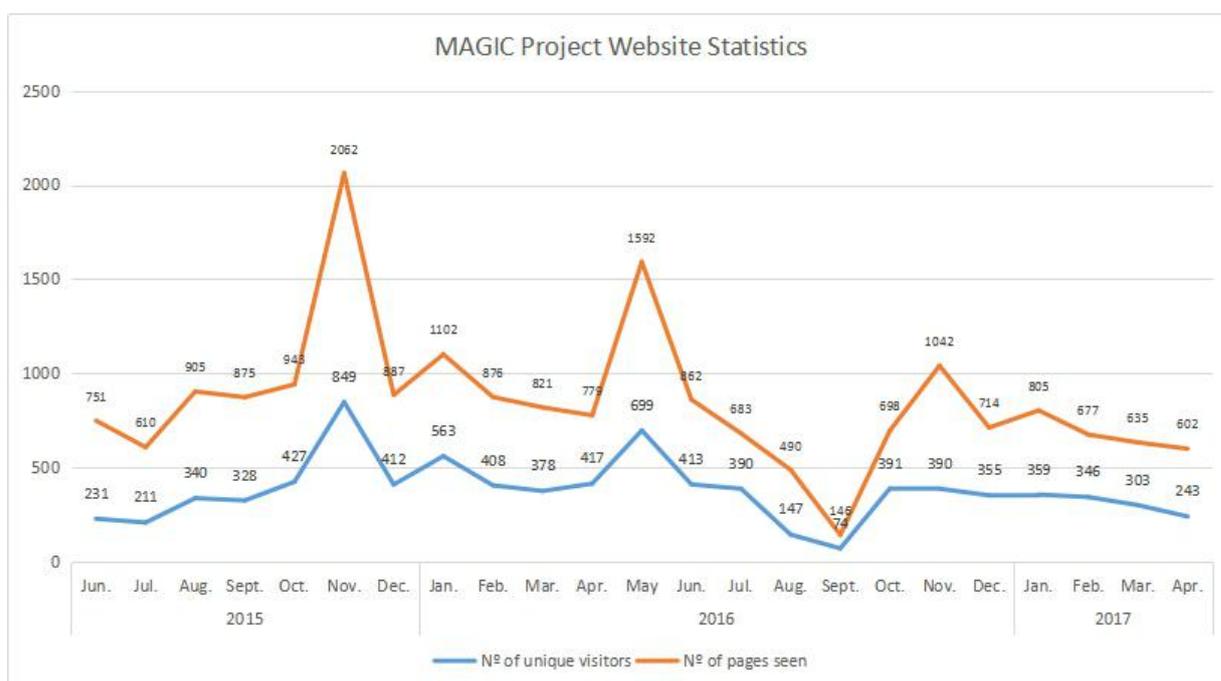
2.5. Dissemination and Training

The activities carried out by WP6 were divided in 5 different items, each one of them composed by a number of different actions and activities. The results of them are briefly exposed in the following paragraphs.

Promotion, awareness-raising and positioning:

- Planning of dissemination and co-ordination of training activities - Results and Exploitation:
 - D6.1 First Dissemination and Training Plan Baseline
 - The MAGIC Brand: Logo, presentation, deliverables and documents templates, vinyl banners were done and all the were templates published and available for their download from the website
- On-line presence: MAGIC's on-line presence consists in its Intranet, which is based in Colaboratorio, its Website, Facebook and Twitter social interphases.
 - Regarding its Intranet, has been extensively used by the project partners for all its internal communications and for the different WP interaction.
 - Creation and management of the project's website: depicting information related to the project development, advances, achievements, training activities, etc., the website was on-line on 8th June 2015. After the first review (July 2016), and following the reviewers recommendations the navigation map was changed (August 2016) in order to better show to the website users and visitors, how to get the project's benefits, the changes didn't modify the site statistics, which is not surprising given the project's focus which is not in the website use but in the services and applications, the site it is just another entrance to that and the first visible face of the project. The website general statistics are the following ones:

MAGIC project Website	2015								2016								2017						
	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Nº of unique visitors	231	211	340	328	427	849	412	563	408	378	417	699	413	390	147	74	391	390	355	359	346	303	243
Nº of pages seen	751	610	905	875	943	2062	887	1102	876	821	779	1592	862	683	490	146	698	1042	714	805	677	635	602



- Creation and management of the project's social media channels: Most of the interactions through these two channels are with worldwide NRENS and researchers.
 - ◆ Facebook: "Magic a global connection", the project's presence on Fb, went live on-line on 25 June 2015, has 198 likes by May 29, 2017.
 - ◆ Twitter: @MACIC_our_voice, the project's presence on , was on-line on 5 June 2015, has 142 followers by May 29, 2017.
- Promotional Videos: 16 promotional videos where scientists and members of the project give their testimonials about the importance of MAGIC for them, were published in the website and profusely disseminated through the social media channels.
- Internal communications and dissemination of project's advancements:

- ◆ Colaboratorio: MAGIC's intranet was done in this collaborative platform and it has been widely used by the project partners.
- ◆ Newsletters: under the name of "MAGIC TIME" five editions of the newsletter were delivered to all the project members, three in 2015 and 2 in 2016 (January and May), all of them can be checked out at <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>. After the last edition it was defined that the MAGIC bulletin was not really efficient to communicate and help to disseminate the news produced by the project, the strategy changed and every time WP6 needed to share an information and/or invitation made by other WP, a news was written in English, then published in the website, and translated into Spanish and Portuguese in a document format, and shared with all the project members together with a picture asking them to share the information with their local communities. This new way of functioning worked fine, the project partners did a good job disseminating the project; most of their publications were reported in WP6 deliverables.
- Production of online and physical dissemination material tailored to different audiences/users and project needs: within the project lifetime the following pieces were done and delivered, tailoring different audiences:
 - Printed material: Within the project lifetime we did and delivered at relevant international eventos, the following pieces:
 - 1st project brochure:
 - ◆ Printed in:
 - Spanish (1000 copies)
 - English (1500 copies)
 - Portuguese (1000 copies)
 - ◆ Published in all these languages plus French in the website.
 - ◆ Global Science Communities Flyers (400 copies)
 - ◆ Global Science Communities invitations (150 copies)
 - ◆ Global Science Communities 2nd Flyer (150 copies)
 - ◆ 2nd project brochure in English (500 copies)
 - Branded material (give-away goodies): Within the project lifetime we did and delivered at relevant international events, the following pieces:
 - ◆ 400 Umbrellas
 - ◆ 1000 Speakears for mobile devices
 - ◆ 1500 Vintage puzzles
 - ◆ 200 Pendrive-key holders
 - ◆ 300 Pendrives
 - ◆ 200 Power banks
 - ◆ 200 Headphones

All these pieces were distributed in the following events, the numbers showed in the table are of the pieces delivered in each one of those events.

Pieces	TICAL2015	RNP2015 Forum	ICT2015	Ubuntu Net Connect 2015	e-AGE 2015	TNC16	TICAL2016	IST-Africa 2016	Ubuntu Net Connect 2016	e-AGE 2016	WACREN Conference	Caribbean MAGIC
Printed material												
1st MAGIC Brochure in Spanish	600	50	100			100	150					
1st MAGIC Brochure in Portuguese		300	130	200				200			170	
1st MAGIC Brochure in English		100	500	200	300	300			100			
Global Science Communities Flyer							200	200				
Global Science Communities printed invitations								150				
Global Science Communities 2nd Flyer										150		
2nd MAGIC Brochure in English							200	100	100	100		
Global Science Communities Brochure												200
Branded material												
Umbrellas	257	60							33	50		
Speakers			500	250								
Puzzles			700	300								
Pendrives-key holders					200							
Pendrives								300				
Power banks										200		
Headphones												200

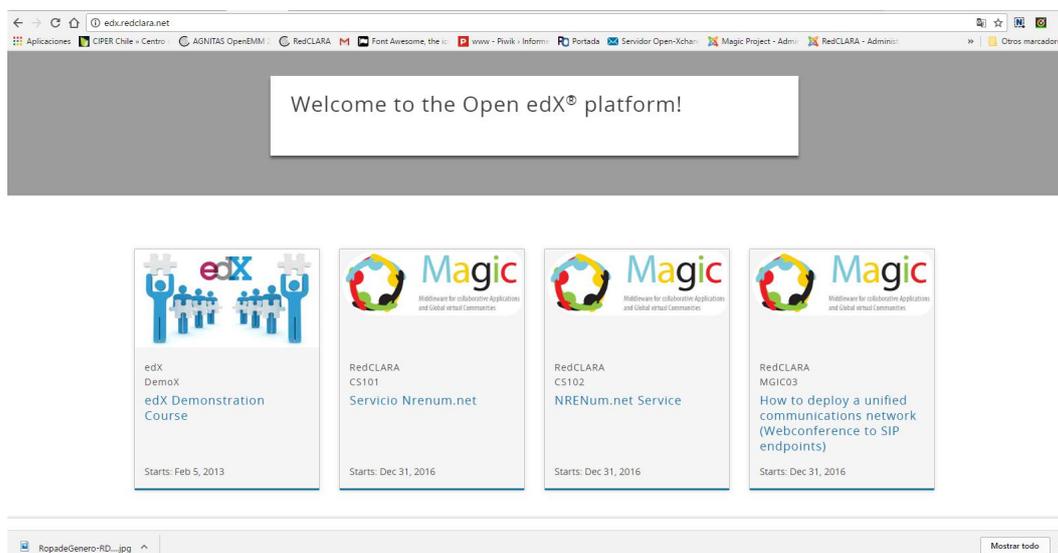
- Participation in specific international events to promote the advances and successes of the project. MAGIC

participated at:

- 6-8 May 2015, Lilongwe, Malawi: IST-Africa 2015; RedCLARA representatives.
- 11-12 June 2015, Paris, France: MAGIC Kick off.
- 15-18 June 2015, Porto, Portugal: TNC2015 on GÉANT stand, GÉANT representatives.
- 6-8 July 2015, Viña del Mar, Chile: TICAL2015. Exhibition booth.
- 25-27 August 2015, Brasilia, Brazil: RNP2015 Forum. Exhibition booth with RNP.
- 20-22 October 2015, Lisbon, Portugal: ICT2015. Joint exhibition booth with TANDEM and Sci-GaIA + Networking Session.
- 16-20 November 2015, Maputo, Mozambique: Sci-GaIA Workshop on Open Science and UbuntuNet Connect 2015 Conference. Representatives from RedCLARA, RNP, GRnet, CKLN. Presentations.
- 7-8 December 2015, Casablanca, Morocco: e-AGE 2015. Exhibition booth and presentations. Representatives from RedCLARA, GRnet, GÉANT, TEIN and ASREN.
- 24-29 January, Manila, The Philippines: APAN41. Representative from RedCLARA. Presentation.
- 15 March 2015, Dakar, Senegal, second joint Sci-GaIA - TANDEM - MAGIC Workshop on Promoting Open Science in Africa (in the framework of the WACREN Conference 2016). Representatives from RedCLARA, GRNet, UbuntuNet Alliance and WACREN. Presentations.
- 11-13 May 2016, Durban, South Africa: IST-Africa 2016. Representatives from UbuntuNet Alliance, CKLN and RedCLARA. WP5 session "Global Science Communities - That's MAGIC!".
- 2-16 June 2016, Prague, Czech Republic: TNC16. Two slots of participation in the GÉANT dissemination booth + a full session together with TANDEM and SciGaia: "MAGIC + Sci-GaIA + TANDEM: Towards Sustainable e-Infrastructures".
- 13-15 September 2016, Buenos Aires, Argentina: TICAL2016. Promotion stand.
- 30 October 2016 to 4 November, Kampala, Uganda, UbuntuNet Connect 2016: Workshop and presentations.
- 1-2 December 2016, Beirut, Lebanon: e-AGE 2016. Global Science Community Session on Biodiversity.
- 25-26 April 2017, Bishkek, Kyrgyzstan: CAREN Regional conference. Presentation
- March 30-31 2017, Abidjan, Ivory Coast: WACREN2017. Presentations and panel sessions.

Training:

- All the user communities activities and training face-to-face sessions and on line training material published, received the support of WP6 by means of dissemination support, and coordination of some issues related to the training needs. As those events were listed by the other WP, there is no need to repeat the list here.
- The MOOC Platform OedX that is provided as a cloud service by France Numérique, a partner of RENATER, is the platform in which two courses (one of them in two languages) have been done: 1) Servicio NREnum.net (course 1 in Spanish), NREnum.net Service (the same in English); 2) How to deploy a unified communications network (Webconference to SIP endpoints). Under the <http://edx.redclara.net/> URL, these courses are available through the MAGIC Project website, under the Training tab.



The MAGIC MOOC Platform

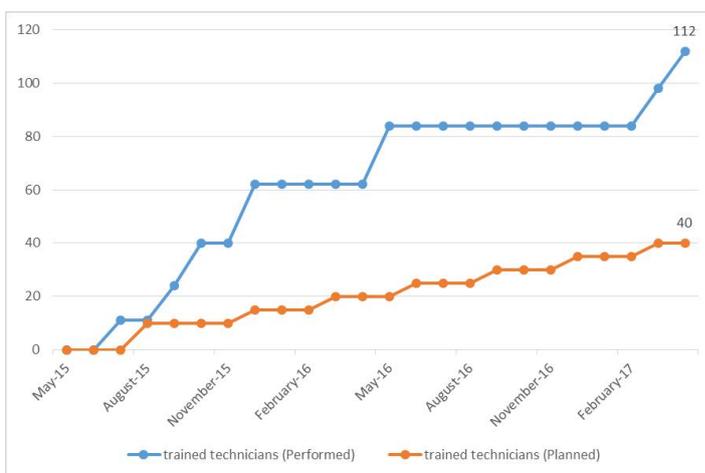
3. Socio-economic Impact of the Project

- a) Adoption of European infrastructure standards eduroam and eduGAIN in several developing countries. Globalisation of these standards.

Following the strategy of extensive training carried out at regional meetings followed up afterwards with training material on an e-learning platform, and the availability of a service platform to lower the barrier of hardware and software deployment plus the leadership of a local NREN in each region, the project has created the basis for a deployment of eduroam and eduGAIN in each region involved in the project.

Indicator (DoA): Number of trained technicians in AAI from Africa, the Arab Countries, the Caribbean, Central Asia and Asia Pacific is over 30.

Advances in the Indicator:



- 1) *Mobility Federated Services and Nrenum.net*, Venue: Viña del Mar, Chile
Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.
- 2) *Federated Access and eduroam workshop in the Caribbean*, Venue: West Indies, Jamaica
Attendees: 16 participants from 11 institutions.
- 3) *Workshop on Joining eduroam and Identity Federation*, Venue: Amman, Jordan
Attendees: 13 participants representing five Arab countries
- 4) *Federated Applications (FedApps) Training session*, Venue: Dar es Salaam
Attendees: 22 engineers from 14 NRENs.
- 5) *Workshop on Identity Federation Infrastructure*, Venue: Beirut, Lebanon.
Attendees: 22 participants from 9 NRENs
- 6) *eduroam workshop in Kyrgyzstan*, Venue: Bishkek, Kyrgyz Republic
Attendees: 14 participants from 12 institutions of Kyrgyzstan.
- 7) *eduroam workshop in Tajikistan*, Venue: Dushanbe, Tajikistan
Attendees: 14 participants from 13 institutions of Tajikistan.

Total trained engineers during the project 112

- b) Coordination with several continents in basic infrastructure deployment

The project included the collaboration of NRENs and Regional Networks in The Arab Countries, South and East Africa, West and Central Africa, Asia, the Caribbean, Europe and Latin America on the development of agreements,

human capacities and a network of collaborators that will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools as well as a means to application-sharing across the NREN world with the potential to include the commercial market serving NRENs and the university/research community. This basic infrastructure is eduroam, eduGAIN and the proposed agreement for the interoperable groupware management system.

Indicators: 12 countries entering eduroam thanks to MAGIC
4 new pilot federations

Advances in the Indicator:

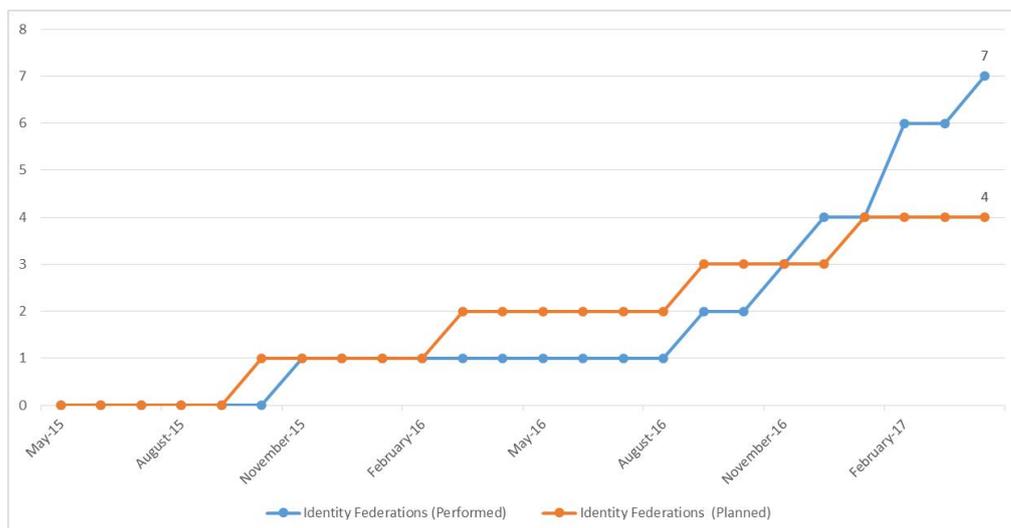


Number of countries already active in eduroam having become part of the eduroam federation: 15

- * .vn Viet Nam - September 2015
- * .jm Jamaica - Nov 2015
- * .ba Bosnia & Herzegovina - December 2015
- * .ir Iran - Jan 2016
- * .eg Egypt - Feb 2016
- * .so Somalia - Feb 2016
- * .gh Ghana - Mar 2016
- * .ml Mali - Nov 2016
- * .bj Benin - Dec 2016
- * .zw Zimbabwe - Jan 2017
- * .bt Bhutan - Jan 2017
- * .np Nepal - Jan 2017
- * .kw Kuwait - Mar 2017
- * .om Oman - April 2017
- * .bb Barbados - April 2017

Pilot federations already created and in process of becoming eduGAIN members: 7

- * Oman - Oman KID (Nov 2015 - joined as eduGAIN member)
- * Uganda - RIF - applied to join eduGAIN - 6 September 2016
- * Korea - KAFE (Nov 2016 - joined as eduGAIN member)
- * Singapore - SGAF - applied to join eduGAIN - 14 Dec 2016
- * India - INFED (Feb 2017 - joined as eduGAIN member)
- * South Africa - SAFIRE (Feb 2017 - joined as eduGAIN member)
- * Mozambique - CAFMoz - applied to join eduGAIN - April 2017



Work in progress towards creating a Federation: 5

*Jordan
Lebanon
ASREN
Mexico
WACREN eduID*

- c) Facilitation of standards to develop a global interoperable market of collaboration services for academia and other interest groups. Potential to ease the creation of a global market.

The project has included several world regions in the discussion for Open Standards in Real Time Collaboration and Service Delivery, including Groupware Management. This is easing the way for a global adoption of these standards which will help the creation of a global market for collaborative and other applications, be these provided by one NREN, or by external providers, to the academic community.

Indicators: 3 world regions incorporated in the pilot federated groupware service

Advances in the Indicator:

The following 3 regions have deployed a federated groupware service:

Europe: CESNET (Czech Republic), RENATER (France)

Latin-America: RedCLARA (Latin-America)

Africa: WACREN (West and Central African)

Moreover, the Colaboratorio platform already deployed in Malaysia, Kyrgyzstan and Lebanon, among others represents the seed for the integration of those regions into de federated groupware services.

- d) Concertation in the development of worldwide services

The project has worked jointly with the GÉANT project as well as the GSD and GRTC groups of the Global CEO Forum in order to promote and pilot the agreements reached for Real Time Collaboration standards as well as application sharing and service delivery. This has made possible to include in these agreements several world regions that have been absent from these forums, such as Africa, Central Asia and the Caribbean

Indicators: 6 countries in 2 regions having incorporated NRENum.net for Global dialling

Advances in the Indicator:

In work package 4, the MAGIC team succeeded to incorporate 9 new countries in 5 regions to the NRENum.net service.

- Ecuador (Jul/2015),
- El Salvador (Sep/2015),
- Mexico (Oct/2015),
- Uruguay (Nov/2015),
- Czech Republic (Dec/2015),
- Sri Lanka (Dec/2015),
- Chile (Jan/2016)(Aug/2016).
- Lebanon (Aug/2016)
- Kazakhstan (April/May 2017)

These countries were spread 4 regions, divided in four deployments in Latin-America, one in Europe, one in Middle-East, and one in Asia. As it is seen, the milestone number was achieved. Nevertheless, it is worth mentioning that the group expected to have 3 deployments in Asia and was not fulfilled. The group identified some barriers like internal NREN governance that make difficult to achieve the required consensus on the standards.

e) Application-sharing among NRENs and the global academic community.

The project has selected applications being provided by NRENs and proposed a model for application-sharing so that NRENs may become providers of one to the other and/or to/from Regional Networks to take advantage of efforts made in one part of the world in benefit of another one. In particular, this will boost the use of academic applications developed by NRENs by adding a significant number of potential users to them and favouring in this way collaboration and economies of scale.

Indicators:

5 NRENs using applications built and deployed/hosted by another.

2 NRENs with a pilot cloud applications portal implemented

The number of applications deployed in the pilot test will be at least 2

The catalogue of the applications/services provided by NRENs available for use of other NRENs contains at least 10 applications

Advances in the Indicator:

The project team reached the number of 10 NRENs using applications built and deployed/hosted by another. The following table show the provider and customer NRENs relation. It is worth mentioning that Colaboratorio integrates several applications like Funds and partners, the web-conference, and the communities' management service among others.

		Provider					
		CESNET (Czech Republic)	RedCLARA (Latin-America)	RENATER (France)	UNINETT (Norway)	RNP (Brazil)	CONARE (Costa Rica)
Customer NREN	CEDIA (Ecuador)		Colaboratorio			VCEspresso	
	CONARE (Costa Rica)					VCEspresso	
	CUDI (México)		Colaboratorio				
	RENATA (Colombia)		Colaboratorio				
	RedCLARA (Latin-America)	Docuwiki		Sympa, Etherpad, Filesender Premium	Foodle	VCEspresso, e-DISKO	R
	TTRENT (Trinidad and Tobago)		Colaboratorio			VCEspresso	
	WACREN (West and Central Africa)		Colaboratorio	Sympa		VCEspresso	

MyREN (Malaysia)		Colaboratorio				
AUB (Lebanon)		Colaboratorio				
MARWAN (Morocco)		Colaboratorio				

8 NRENs have adopted RedCLARA's Colaboratorio as the cloud applications portal (see the previous table) 3 from Latin-America, 1 from the Caribbean, 2 from Africa, 1 from Middle-East and 1 from Asia Pacific.

7 applications were deployed exclusively as part of the project: 3 in the first stage (CESNET's Docuwiki; RENATER's Sympa and Filesender) and other 4 in the second stage: Open-Edx in RedCLARA's infrastructure, RENATER's Etherpad, CONARE's R (Web Access Component) and RNP's e-DISKO.

11 applications are listed in the Catalogue:

- 4 by RedCLARA Communities, Funding & Partners, SIVIC, e-DISKO, R
- 2 by RNP: mconf (webconference) and eduDrive
- 2 by RENATER: Filesender Premium and Etherpad
- 1 by CESNET: Docuwiki.
- 1 by GRNET: Okeanos.

f) Worldwide research communities using collaboration tools to improve their daily work

The project will foster the use of collaboration technology among worldwide research communities working in three (3) selected areas. This will serve as a proof of concept and support dissemination by developing NRENs among their researchers of the potential of the use of these tools for their collaboration work across the world. The project will also extend the Funding Opportunities Database and Partner Search application developed by the ELCIRA Project to cover the developing regions and provide valuable funding information for the defined global communities and others. Finally, the project will support dissemination of funding opportunities available in the H2020 project and other funding opportunities through regional Virtual Information Days that follow the EC Information days and other international call for proposals.

Indicators: *The number of global research communities selected for special support will be three (3).
The number of information days will be at least two (2) each year depending upon the number of existing calls.
Finally, the database of funding opportunities will be a key result for all researchers to find collaboration opportunities worldwide.*

Advances in the Indicator:

4 global research communities have been selected and are active: Biodiversity, Environment, e-Health and Remote Instrumentation

4 information days on H2020 were organised

The Database of funding opportunities is complete and providing information on a global at a Global scale with continuous feeding and automatic e-mail distribution for subscribers.

g) Growth of the use of the Funding and Partners system

In order to measure the usefulness of the Funding and Partners Database and its impact in the research community we have measured three indicators

Indicators:

- Number of Uploaded funds*
- Number of Alert e-mails sent*
- Number of clicks on the alerts*

Advances in the Indicators:

# of Uploaded funds	# of Alert Mail Sent	# of Clicks on the alerts sent:
April 2016: 250	April 2016: 25,850	April 2016: 350
April 2017: 870	April 2017: 38,000	April 2017: 1,352

4. Conclusions on the project

The project was able to carry on a worldwide effort in the promotion and deployment of key technologies to support the work of researchers, academics and students thanks to a Federated Strategy where the tasks have been performed in close collaboration by the RRENs (Regional Research and Education Networks) and more advanced partners. This model follows the work already used in the deployment of research networks around the World, where RRENs play a key role in the deployment of such infrastructures at the regional level, supporting the work of NRENs (National Research and Education Networks) at the national level.

Moreover, this regional strategy is key in sustainability of the effort as now are the RRENs and their associated NRENs who will relieve the challenge of continuing the expansion of the technology in their region taking advantage of the training material left by MAGIC as well as the 112 engineers that the effort succeeded to train. And last, but not least, the collaboration network allowing NRENs and RRENs to interact and continue this collaborative effort in favour of the user communities.

We have been able to work in this way with 8 regions of the World as shown in the table below:

Region	Regional Organisation	Supporting NREN
Southern and East Africa	UbuntuNet Alliance	CSIR
West and Central Africa	WACREN	RENATER
Central Asia	CAREN NOC (NITC)	GÉANT
Asia	TEIN*CC	GÉANT
Arab Countries	ASREN	GRNET
The Caribbean	CKLN	RNP
Latin America	CLARA	

For each region we have supported, through the different projects partners as well as the Supporting NREN for each region, activities in training, dissemination, community building and deployment. The success of this strategy has led us to go beyond expectations in most indicators and achieving the proposed results across the different work packages.

Through the support of the partners and this regionalised management, we have been able to overcome different difficulties, such as complex economic scenarios in Brazil and Colombia, or even the withdraw of one partner who was in charge of the Caribbean region. The support of the group has carried out the work with great success in terms of indicators and within budget and time.

Particular points to be underlined for each work packages are:

WP2

For the second time a project funded by European Commission, has helped to disseminate identity federations and euroam. In the first project, ELCIRA, the effort was only in Latin America and showed a very successful model to encourage NRENs to invest in this kind of technology in order to provide better and safer services. Using the same mindset, MAGIC project was designed, but globally.

Obviously, as the project scope has growth a lot, it was mandatory to expand the project team and the interactions between world regions. The project was executed with one project leader (RedCLARA), Work package coordination

(RNP), Focal Points (UbuntuNet, WACREN, CAREN, TEIN*CC, ASREN, CKLN and RedCLARA) and NRENS partners. With that, it is possible to observe how global this project was, with multicultural interactions, training and workshops conducted by distant partners, i.e., let us remember the Kyrgyzstan training in February, 2017. This training was conducted by GÉANT, with material developed by CESNET for MAGIC Project in Central Asia. Without a project like MAGIC, it is almost impossible to execute this kind of dissemination.

The results of all this effort will be harvested now and in the near future, as there are many NRENS that are still working to implement AAI and eduroam in their regions, this will lead to continuous increase in the number of adoptions of the technology in the near future.

WP3:

The MAGIC project succeeded in defining a set of standards for group management in federations, and carried out successful deployment in four different application scenarios. These implementations are the basis for a new level of integration in the academic federations, and will allow providers to take group based decisions like authorizing, inviting, or sharing. All of this without caring where in the world the group definition is located. The possibilities are infinite, we can imagine a group of physicians being authorized to access medical repositories, a group of physicists sharing results to a global audience registered in a group just in one step, among many others.

The spreading of Colaboratorio as a global communities platform was empowered by the MAGIC project. The new deployments in different continents opens the possibilities on creating communities of different parts of the world, look for partners and resources, use applications group aware and share documentations, schedule meetings, organize and record webconferences or use a MOOC Platform to deliver training material. Furthermore, with the new group capabilities, the Colaboratorio environment will be easily integrated to new commercial or academic platforms promoting the use by the researchers, academics and students

WP4:

The MAGIC project achieved completed its goals on number of institutions adopting the NRENum.NET standards. The NRENum.NET is expected to become the first really global dialling infrastructure at global scale, and the MAGIC project carried out an important role to promote and spread it. It is a work in progress, and will require lots of efforts, specially in the Asia Pacific region where the required level of agreement was not fully achieved.

MAGIC's work was easier to carry out in the secure DNS promotion scope, and the goal was achieved. Most of the NRENS invited found that securing infrastructures is a need and is a top priority. Promotion of a secure DNS environment shall continue, and an on line promoting strategy combined with a right advisory team could achieve a faster deployment in the near future.

In the unified communications area, the integration between MCONF (Webconference) and SIP traditional networks (in particular H.323 used in large videoconference rooms) will benefit to a community of thousands of users globally, more than 11.000 just in Latin-America. In addition, worldwide NRENS will benefit with an MCONF implementation due to its open-source nature. This Open Source Gateway is a great value for the global NREN community.

WP5

The MAGIC project has shown that it is possible for researchers and academics with common interest to collaborate at a global level. This is made simple with good internet connectivity provided and supported by research and education networks. The MAGIC project supported the communities with a virtual collaborative platform (Colaboratorio), a means of information exchange and best practice sharing (virtual events) and in some cases face to face meetings for human networking. The role of community champions cannot be over-emphasized. They play a critical role of elder and coordinator.

The 16 virtual events that the project organised were a major output of the of the Global Science Communities because they provided a forum for the communities to interact. Members of the MAGIC-supported global science communities in e-Health, Biodiversity, Environment and Remote Instrumentation were able to come together regularly and share experience and best practice. They were also able to stay on top of things in their respective fields by having a platform where they could discuss emerging issues. One peculiar thing with the Global Science Communities was that they removed isolation of researchers as researchers and/or academics in remote locations,

who would otherwise be cut off, were able able to stay connected, collaborate and learn from others in their fields of expertise and interest.

Support for Global Science Communities needs to continue and research and education networks should coordinate them at regional or global level in the same way the Global NREN Public Relations Network coordinates research and education networking publicity and dissemination activities at the global level. While community champions have proved to be very important in animating the communities, perhaps going down to regional champions would ensure that there is increased participation at regions rather than relying on research and education networks alone.

WP6

MAGIC was able to reach researchers, scientists, engineers, NREN leaders, from all over the world through its participation in relevant international conferences, both in the form of its participation through dissemination booths and of presentations, panel sessions and workshops. This face-to-face outreach, was crucial to take the message of the importance and utility of the MAGIC project developments, training and communities to the target audiences, and results such as the addition of RENAM, EtherNET and InnovaRed to the project is a proof of that. These face-to-face efforts were well complemented with the on-line communications display throughout the project's website and Facebook and Twitter channels, that through the project partners websites, bulletins, newsletters and social media channels and interactions contributed to amplify the project's outreach, and what is also very important, the project and the project's brand recall (this particular issue was instantiated by two sentences that were used as slogans in the social media and face-to-face environments: "Do you believe in MAGIC?" and "We believe in MAGIC").

The project members helped to enlarge MAGIC's outreach throughout the publication of reports and articles about the project and its advancements by means of their own communication channels such as the GÉANT's CONNECT magazine and the RedCLARA's DeCLARA bulletin, that regularly reported about the project in their different editions, not to mention their websites and the project partners websites.

There was also a very consistent collaborative work with SciGAia and TANDEM with collective activities in the context of the EC ICT2015, UbuntuNet Connect 2015, and e-Infrastructures for Worldwide Collaboration: Assessing the present and road mapping the future. Joint workshop (WACREN Conference 2017).

The success of MAGIC dissemination and of the project itself can be measured through the testimonials of project's participants and scientists that recorded videos with their testimonies about their experiences with MAGIC and with the use of the MAGIC developments, that were sent to WP6 for its publication both in the project's website and social media channels (see: <http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-videos>).

In terms of training the numbers that have been given in the upper paragraphs are quite sufficient to describe the success that MAGIC had in this area, which is also complemented (and after the project's end will continue to be) by the MAGIC on-line courses in NRENum.net and Webconference to SIP endpoints, which are freely and fully available for worldwide technicians.

Periodical Progress Report

MAGIC Deliverable: D2.1 - Roadmap for the delivery and deployment of National AAls in Project regions (Revised version)

Document Full Name	Roadmap for the delivery and deployment of National AAls in Project regions (Revised version)
Date	29-09-2016
Activity	WP2 – Platform for mobility
Lead Partner	RNP
Document status	Final revised version
Classification Attribute	Public
Document link	

Abstract: This deliverable provides a roadmap for the deployment of AAls in the countries concerned in the Project. It also includes the funding/business models for national identity federations and their interoperation with the eduGAIN interfederation service.



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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	WP2 Coordinator	29/09/2016	RNP
Revised by	Antônio Carlos Fernandes Nunes	RNP Project Coordinator	30/09/2016	RNP
Revised by	Florencio Utreras	RedCLARA/CEO	02/10/2016	RNP
Revised by				
Aproved by				



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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

This deliverable provides a roadmap for the deployment of Authentication and Authorization Infrastructures (AAls) in the countries concerned in the Project. It also includes the funding/business models for national identity federations and their interoperability with the eduGAIN interfederation service.

1.2. EXPERIENCE BACKGROUND

RNP [R1] is a non-profit company supported by the Brazilian government and dedicated to promoting the development of technologies in the field of networks and innovative applications in Brazil.

RNP operates the national advanced networking infrastructure for cooperation and communication in education and research. Besides interconnecting all the federal government institutions of higher education and research, this network provides a laboratory for the experimental development of new applications and network services, allied with communication and collaboration services for the benefit of the organisations using it. This Brazilian National Research and Education Network (NREN) enables interaction and cooperation between people and resources in the country and abroad.

1.3. RELEVANT PROJECTS:

RNP has participated in a number of projects in partnership with European institutions, such as ALICE, Mercosur Digital, EELA, EELA-2 and RINGrid, and actively participates in ALICE2 and FIBRE.

RNP has played a key role in the success of Europe Latin America Collaborative e-Infrastructure for Research Activities project (ELCIRA) (<http://www.elcira.eu>). In particular its activities in the deployment of eduoam in Argentina, Chile, Colombia, Costa Rica, Ecuador and Mexico, and the creation of the federations linked or in process to be linked to eduGAIN in Argentina, Chile, Colombia, Ecuador and Mexico.



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Figure 1: ELCIRA project poster.



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2. DOCUMENT AMENDMENT PROCEDURE

All changes should be sent to the author, with a copy to WP2 mailing list. The revisions shall be sent to WP2 and MAGIC ALL mailing list, in order to allow to all members review the entire document, mainly their region chapter.

3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean

4. EXECUTIVE SUMMARY

This document reviews the actual status of AAI and eduroam in MAGIC partners regions and formalize what was discussed during the kick-off meeting, as well as the information gathered after the Review Meeting to complete the planning ahead (road) and complete the roadmap view of all regions covered in this project.

5. DESCRIPTION OF WORK

Benefiting from the Brazilian experience in the ELCIRA project, coordinating efforts to create AAI and eduroam in Latin America, RNP coordinates WP2. Aiming at the promotion and consolidation of the foundations for creating a framework for authentication and authorisation in Africa, the Caribbean, Asia and for Latin America, CUDI will support RNP in the inclusion of new NREN and its members, particularly those participating in the SCALAC1 initiative. The WP is structured to enable other RENs to establish their own regional federation initiatives. This Work Package will also facilitate integration with the European initiatives under TERENA activities such as TF-EMC2 and REFEDS, and will make the necessary arrangements to make it possible to join the eduGAIN interfederation service.



6. PROJECTS PARTNERS AND ROADMAP

6.1. ASREN: THE ARABS STATES REGION



ASREN [R2], the Arab States Research and Education Network, is a non-profit international organization, registered in Dusseldorf, Germany, on 3rd of June, 2011, under the umbrella of the League of Arab States. ASREN is the association of the Arab region National Research and Education Networks (NRENs), as well as their strategic partners that aims to implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the research and education communities and to boost scientific research and cooperation in member countries through the provision of excellent e-Infrastructures and e-services.

6.1.1. Current Status of the Region

Before MAGIC project starts, ASREN region has AAI implementation at ASREN, Jordan (launched mid-2015), TRC, Oman (ready before MAGIC start), pilot in AUB, Lebanon and JUNet, Jordan and planning to implement in Palestine and Egypt.

Regarding eduroam, the service is successfully implemented in Saudi Arabia, United Arab Emirates and Morocco.

6.1.2. Roadmap in ASREN

- Algeria and Morocco are the most suitable candidate countries for Federations. Jordan still needs to appoint people – not ready yet. No response yet from Oman. Egypt good technical resources but not currently able to commit;
- Qatar is working on eduroam;
- Workshop on Joining eduroam and Identity Federation to be held at Talal Abu Ghazaleh University, Amman, 8-10 September 2015.



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Details of 1st Workshop on joining eduroam and Identity Federation



Introduction

The Arab States Research and Education Network (ASREN) in cooperation with EUMEDCONNECT3 and MAGIC Projects will conduct a workshop dedicated for staff of National Research and Education Networks (NRENs) and Universities on eduroam, Federated Access and eduGAIN:

- **eduroam:** is the secure, world-wide roaming access service that allows any user from an eduroam participating site to get network access at any institution connected to eduroam.
- **Federated Access:** effective and secure management of authentication and identity information to build a trusted environment where users can be identified electronically using a single identity to login and access variety of available resources and applications worldwide.
- **eduGAIN:** is a service that interconnects identity federations around the world, simplifying access to content, services and resources for the global research and education community.





Program		
Day 1: eduroam	Day 2: Identity Federations	Day 3: Policies
1.eduroam description <ul style="list-style-type: none"> - From federation-level RADIUS server operator point of view - From institution point of view 2.eduroam deployment <ul style="list-style-type: none"> - Free RADIUS server - Radsecproxy - Federation-level RADIUS server - Institutional RADIUS server 	1. Understand how identity federation works <ul style="list-style-type: none"> - From federation operator point of view - From institution point of view 2. Federation operator <ul style="list-style-type: none"> - Metadata management 3. Identity provider deployment <ul style="list-style-type: none"> - Shibboleth v3 IdP - Metadata - Connecting to the federation 4. eduGAIN <ul style="list-style-type: none"> - Benefits - How to connect 	1. eduroam <ul style="list-style-type: none"> - Brief description - eduroam compliance statement - European eduroam Confederation Policy Declaration 2. Identity Federation <ul style="list-style-type: none"> - Brief description - Identity Federation Policy - Metadata Registration Practice Statement (MRPS) 3. eduGAIN <ul style="list-style-type: none"> - Brief description - eduGAIN Policy Framework Constitution - eduGAIN Policy Framework Policy Declaration

Figure 2: ASREN 1st Workshop on joining eduroam and Identity Federations.



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Outcome of the Workshop

- Participants will have a working RADIUS and a Shibboleth server. They will be able to technically connect NREN and institution to the eduroam infrastructure. They will be able to connect institutional identity provider to the national identity federation and to eduGAIN.
- Participants will have an overview of eduroam, identity federations and eduGAIN. They will be able to prepare the necessary policies and agreements, which can be signed with regional parties. Agreements will be signed and announced during ASREN's annual conference e-AGE 2015 in Morocco 10-11 December 2015.

Who Should Attend?

- Head of IT from NREN and Universities;
- Head of IT departments from institutions;
- IT administrators;
- NREN IT administrators.

Prerequisites:

- Knowledge of local legislation concerning privacy issues;
- Skills in OS administration (Windows/Linux);
- Basic knowledge of PKI (Public Key Infrastructure).

Required Equipment

The following are required for first and second days:

- Machine with public IP and DNS hostname located at the institution and root/administrator privileges for that machine;
- Valid and trusted X.509 certificate for the machine (will be used for SSL connections);
- Notebook;
- VirtualBox installed on the notebook for those who will not have machine at institution ready.



Trainers

Michal Prochazka



Received his M.Sc. degree from the Masaryk University in Brno in 2009. He works at Masaryk University and CESNET mainly focusing on IT security and identity and access management area. In security area the major focus is targeted on authentication methods in distributed environments.

Issue of federated identity and the concept of identity federations is one of his major scope within the identity management area. For three years he has been leading project Perun – identity and access management system. He is also involved in several projects like CHAIN-REDS, MAGIC, ELIXIR and EGI. In last two projects he is a member of AAI task forces. He was helping with building the eduroam and the identity provider on Masaryk University.

Jan Oppolzer



Jan Oppolzer received his bachelor's degree in electrical engineering and master's degree in telecommunications engineering from Czech Technical University in Prague. He currently works for Network Identity Department at CESNET as a member of Authentication and Authorization Infrastructure team. Among his responsibilities are running Shibboleth IdP for CESNET, operating Czech academic identity federation eduID.cz including technical support for members and developing web-based federation metadata tool to allow easy and user-friendly metadata management. He is also a steering group delegate in international interederation called eduGAIN and a REFEDS member.



6.2. WACREN: THE WEST AND CENTRAL AFRICAN REGION



WACREN [R3] is the West and Central African Research and Education Network. Incubation of the regional network started at AfNOG 2006 and at the Regional Workshop on Research and Education Networks organised by the Association of African Universities (AAU) in Accra in November 2006. The need to build organizational and technical capacity within constituent NREN countries was identified as a requirement for a viable network.

A regional consultative meeting held in November 2009 as a pre-event to the Open Access Conference 2009. The AAU was given the mandate to identify a Task Team to coordinate activities of working groups to produce documents for the establishment of the RREN.

Following the meeting of representatives of 11 countries in West Africa and Central Africa (Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Gabon, Ghana, Mali, Niger, Nigeria, Senegal, Togo) in initiative of Research and Education Networking Unit (RENU) of the Association of African Universities (AAU), it was taken to the establishment of the first Board of Directors of WACREN, composed of nine (9) members and presided by Professor Tiemoman KONE.

6.2.1. Current Status in the Region

Currently nine formally established NRENs:

- GARNET – Ghana;
- snRER – Senegal;
- MaliREN – Mali;
- Niger- REN – Niger;
- GabonREN – Gabon;
- NgREN – Nigeria;



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- TogoRER – Togo;
- RITER - Côte d'Ivoire;
- RerBenin – Benin (eduroam deployed).

As seen in the picture, eduroam is in a pilot phase only in Benin. No Identity Federation yet in preparation in the region.



Figure 3: eduroam status in July 2015.



Figure 4: Federation status in July 2015.



6.2.2. Roadmap in WACREN

- During the kickoff meeting, the WACREN's delegates have raised doubts about any possibilities for ID federations, but they said also that already have federation activity on going. Expect to have a couple of federations;
- eduroam is a little more complicated and can suffer from concern idea that an expensive commodity can be shared with others. This argument has arisen in Brazil; the issue is to demonstrate that the users in roaming do not represent impact in the bandwidth of internet provider;
- The focal point of WACREN are going to support the implementation of eduroam and AAI in all NRENs of North Africa region. It is already identified some interested by Nigerian NREN, who already included in its website this information (<http://ngren.edu.ng/services/upcoming-services>)

6.3. CKLN: THE CARIBBEAN REGION



The Caribbean Knowledge and Learning Network (CKLN) [R4] is an inter-governmental agency of the Caribbean Community, CARICOM. The Heads of Government of CARICOM mandated CKLN with the responsibility to build a broadband fibre optic network called C@ribNET, connecting all CARICOM member states, with further connections to the rest of the world.

6.3.1. Current Status in the Region

In the Caribbean, there are a number of emerging NRENs - Barbados, Jamaica, Trinidad and Tobago, the Bahamas, the Organisation of Eastern Caribbean States (OECS), Suriname, Belize, while others are getting started. The NREN in the Dominican Republic, RADEI, is the only one in the Caribbean that is currently a registered organisation.



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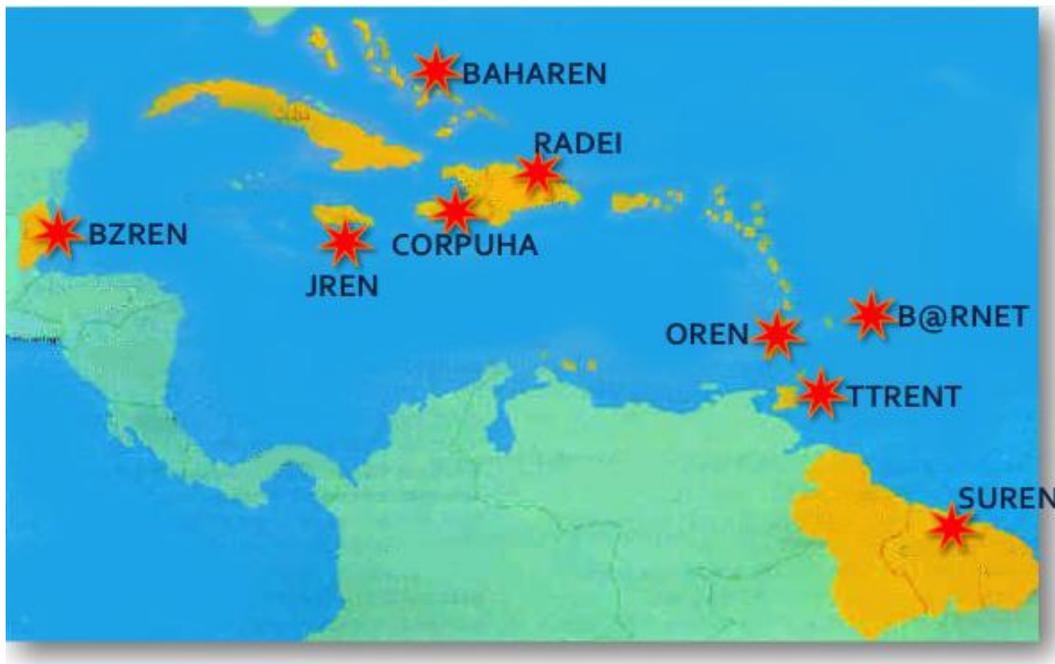


Figure 5: Caribbean NRENs.

Training has been done in Trinidad and eduroam implementation. The delegate of CKLN thinks of doing a federation on higher level for the region as there are not well-established NRENs in the region to establish federations and countries are small.

Legislation could be an issue for regional federation, e.g. data protection. So single regional federation may not be a simple solution.

Nowadays, in the Caribbean region, only Trinidad and Tobago has eduroam deployed and there is no Federation implementation.



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Figure 6: Federation status in July 2015.



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Figure 7: eduroam status in July 2015.

6.3.2. Roadmap in CKLN

- Countries that were indicated as potential countries to join eduroam are: Jamaica, Dominican Republic and Barbados;
- Some hotspots showed in the eduroam map besides Trinidad & Tobago, represents France not Caribbean countries;
- Provide a Workshop, similar to what is planning to be done in Amman, on joining eduroam and Identity Federation in September;
- During the workshop, it will be discuss with participants the best federation model to be adopt in the region. As we have a lack of technical staff, the project aim the best solution to operates and provide support for final users.
- Bellow some information about region implementation:



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Jamaica

- Institution: The University of the West Indies (UWI) - Mona Campus
- **Activities:**
 - Training – delivered on the workshop of October/2015
 - eduroam preparation – currently in progress
 - eduroam pilot tests – July/2016
 - eduroam implementation – September/2016
 - AAl preparation – July/2016

Barbados

No institution committed yet
Promoting session planned for June/2016

Dominican Republic

No institution committed yet
Promoting session planned for June/2016

6.4. TEIN*CC THE ASIAN COUNTRIES



TEIN [R5] (Trans-Eurasia Information Network) is a high speed network for research and education which connects 20 countries in Asia and 34 countries in Europe. This network is actively being used for international joint researches in cutting-edge areas, including information telecommunications and bioengineering. TEIN*CC is established to manage the 4th phase of the TEIN project and the latter was adopted as one of the ASEM projects.

The early phases of the TEIN projects were managed by DANTE (<http://www.dante.net>), a not-for-profit organization based in the United Kingdom. In October 2010, at the ASEM8 Summit that was held in Brussels, Belgium, Korea was granted the operation right to manage the 4th phase of the TEIN project. The project was launched in 2012, with financial supports from the EC as well as members of the participating countries.

The organization of TEIN*CC consists of the Governors' Meeting and the Steering Committee, who are elected representatives from the member states. There is also an Executive Office, which is located at the DMC Hi-Tech Industry Center in



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Seongam-ro, Mapo-gu, and Seoul. The Executive Office consists of both the domestic and international staff, namely the President, the Executive Officer and 11 other staff.

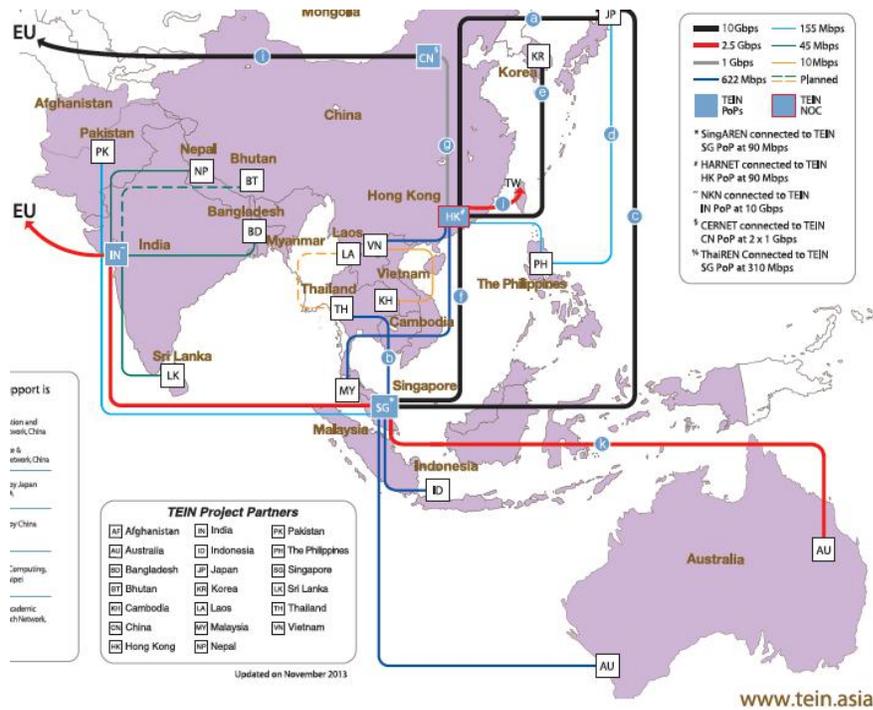


Figure 8: Tein*CC connectivity.

6.4.1. Current Status in the Region

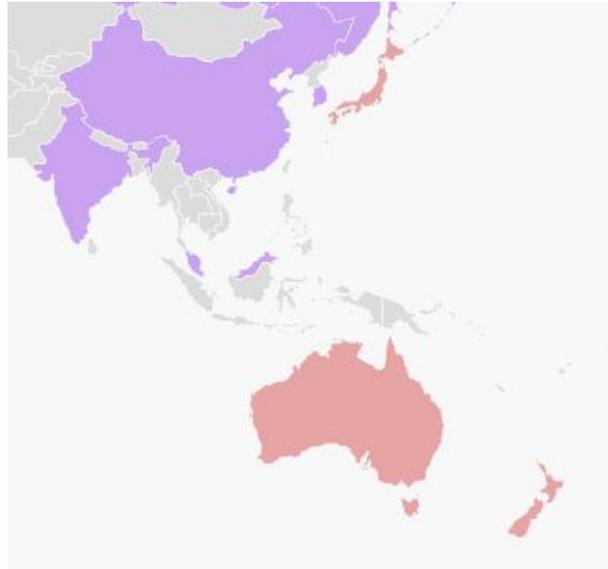


Figure 9: Federation status in July 2015.



Figure 10: eduroam status in July 2015.



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Country	eduroam	AAI
Afghanistan		
Australia	OK	AFF
Bangladesh		
Bhutan		
Cambodia		
China	OK	Pilot
Hong Kong	OK	
India	OK	Pilot
Indonesia		
Japan	OK	GakuNin

Country	eduroam	AAI
Korea		Pilot
Laos		
Malaysia		
Nepal		
New Zealand	OK	Tuakiri
Pakistan		
Philippines	OK	
Singapore		
Sri Lanka	OK	
Thailand	OK	
Vietnam		

6.4.2. Roadmap in TEIN

- Aim for APAN meeting hosts to implement eduroam. Some pilots are happening in the region. Moreover, quite a few id federations starting in the region. Three federations have declared they wish to do something, so support should be given to ensure they progress;
- Next APAN meeting, 10th – 15th August in Malaysia and id taskforce will be held there, there will be a delegate of MAGIC attending to this event and talking about AAI and eduroam implementation
- TEIN project on eduroam to deploy in five more countries;
- One possible synergy between projects is try to merge effort with H2020 project that AARNET is part of, with TEIN*CC. During the GeGC meeting, the deputy of Australia have raised the concern of double work aiming the same objective, so in this part of MAGIC project TEIN*CC will coordinate the work with AARNET to prevent effort in the same countries.



6.5. CAREN: THE CENTRAL ASIAN REGION



Launched in January 2009, the Central Asian Research and Education Network (CAREN) [R6] project aims to:

- establish and operate a high-capacity regional R&E network in Central Asia based on broadband Internet (with minimum link capacities of 34 Mbps);
- improve intra-regional connectivity across Central Asia by replacing existing low-capacity satellite connections with terrestrial fibre;
- facilitate R&E collaborations between Central Asia and Europe with direct connection to GÉANT at a minimum bandwidth of 155 Mbps;
- seek synergies with user communities in neighbouring regions, i.e. Asia-Pacific (TEIN3) and the South Caucasus (BSI);
- act as a catalyst for the development of sustainable national research networking in the five former Soviet republics of **Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan**;
- decrease the digital divide, combat brain drain and promote regional development and cohesion;
- support and promote collaborative network applications in areas of high societal impact, such as telemedicine, seismology, distance education, energy and water resources management and environmental studies;
- Pave the way for sustainability of the network after CAREN.



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6.5.1. Current Status in the Region

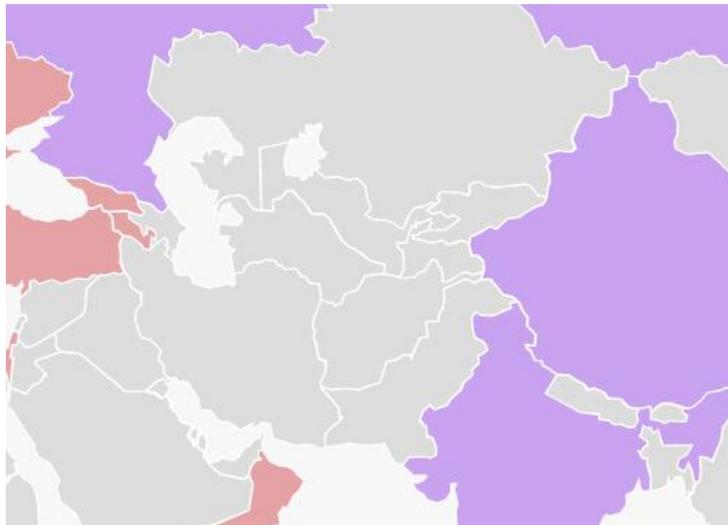


Figure 11: Federation status in July 2015.



Figure 12: eduroam status in July 2015.

- Federation in Kyrgyzstan;
- eduroam already in two countries:
 - Kazakhstan (KazRENA – roaming operator #61);
 - Kyrgyzstan (roaming operator #54).



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The Europe Aid Co-operation Office (AIDCO) of the European Commission is contributing 80% (€5m) towards the costs of the project with the remaining funds being provided by the partners based on a cost-sharing model.

The CAREN project aims to establish a high-capacity regional research and education network in Central Asia to provide the region with a gateway to global research collaboration by the end of 2009. It sets out to replace the satellite-based connectivity established by the Silk project with a broadband internet-based network using terrestrial fibre.

Offering a direct link to GÉANT, CAREN will allow researchers, educators and students in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan not only to collaborate among each other but also to engage in exciting joint projects with their peers in Europe and in other parts of the world.

6.5.2. Roadmap in CAREN

- During the kickoff meeting, the delegate of CAREN has committed to translate the training material to Russian, so, MAGIC Project will have training material in Portuguese, Spanish, English, French and Russian;
- During the project, it is expected to raise the federation in Kazakhstan, as there is already eduroam implemented there.
- It is planning an eduroam and NRENnum training in Tajikistan in a week of Nov 21;
- There will be a two-day event in next spring (25 – 26 April 2017). Venue is Kyrgyz Turkish Manas University in Bishkek (<http://manas.edu.kg/index.php/en>). It is explore this event to promote a Workshop of AAI and eduroam.

The following activities are planned:

- June 2016: agreement on collaboration between CAREN and MAGIC (RNP);
- July 2016: eduroam and AAI Pilot at Kyrgyz Turkish Manas University and Kyrgyz State Technical University (two universities);
- Sep 2016: eduroam/AAI preparation (access to Identity Management) and implementation;
- October 2016: Demo session at CAREN Regional Networking Conference, Bishkek, Kyrgyz Republic;



October 2016: Training conducted by Latin American partners, Bishkek, Kyrgyz Republic;

November 2016: Follow-up support and final progress report.

December 2016: Dissemination of training materials to university technical staff.

6.6. UBUNTUNET: THE EAST AND SOUTH AFRICAN REGION



UbuntuNet Alliance [R7] is a regional association of National Research and Education Networks (NRENs) in Africa. It was established in the latter half of 2005 by five established and emerging NRENs in Eastern and Southern Africa.

National Research and Education Networks; Transnational Communities of Practice; and Transnational Companies or Organisations providing services relevant to the Alliance and its members are welcome to apply. Click here to Apply for Membership. The following are recognised as NREN Members:

- DRC: Eb@le;
- Burundi: BERNET;
- Ethiopia: EthERNET;
- Kenya: KENET;
- Madagascar: iRENALA;
- Malawi: MAREN;
- Mozambique: MoRENet;
- Namibia: Xnet;
- Rwanda: RwEdNet;
- Somalia: SomaliREN;
- South Africa: TENET;
- Sudan: SudREN;
- Tanzania: TERNET;
- Uganda: RENU;
- Zambia: ZAMREN.



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6.6.1. Current Status in the Region

Currently two Federations are active in the region: SouthAfrica and Zambia, the same have eduroam active in their countries.

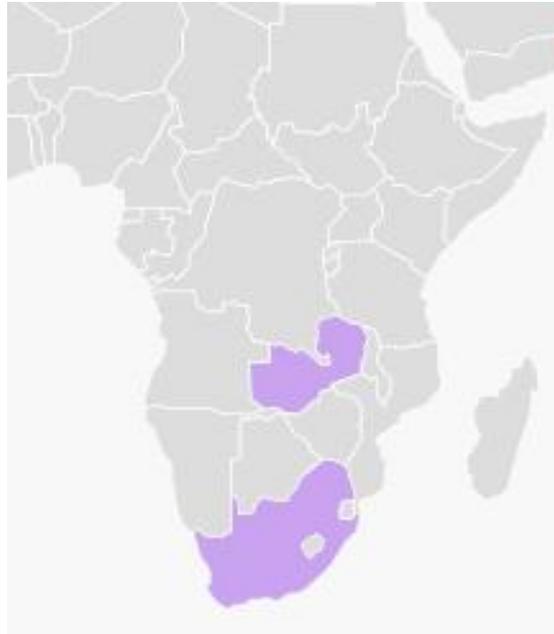


Figure 13: Federation status in July 2015.



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Figure 14: eduroam status in July 2015.

6.6.2. Roadmap in UbuntuNet

- Expect to target 3 or 4 countries. Zambia, Kenya, SA have eduroam. SA has federation but not in eduGAIN. Uganda, Tanzania, Rwanda and Botswana for both eduroam and Federations;
- Eastern Partnership countries should be remembered. Should look to see if there is any way in which MAGIC can assist;
- It is planning a Workshop on joining eduroam and Identity Federation, during the UbuntuNet-Connect 2015, 19-20 November 2015, Maputo, Mozambique (www.ubuntunet.net/uc2015_cfp). As the event will be place on Thursdays and Friday, the project will take advantage to run in the three previous days (16-18 November 2015);
- RNP will give support and online training to capacitate MoRENet staff in AAI and eduroam. The deliverable of this training and support will be a MoRENet Federation integrated with eduGAIN and an eduroam roaming operator working;
- UbuntuNet staff have setup a regional federation called unIDa. This one is open for any institution from our member countries, which do not have their own federation;

- Besides that, UbuntuNet plans to hold another training with NREN engineers at the UbuntuNet Connect in Entebbe in November. The participants will work on setting up an application for their organization.

6.7. REDCLARA: THE LATIN AMERICAN REGION



RedCLARA [R8] -Cooperación Latino Americana de Redes Avanzadas (Latin American Cooperation of Advanced Networks) - is a non-profit International Law Organisation, whose legal existence is dated on 23 December 2003, when it was acknowledged as such by the legislation of Uruguay.

RedCLARA develops and operates the only Latin-American advanced Internet network. Established for regional interconnection and linked to GÉANT2 (pan European advanced network) in 2004 via the ALICE Project (which –until March 2008- was co-funded by the European Commission through its @LIS Programme), RedCLARA provides regional interconnection and connection to the world through its international links to GÉANT2 and Internet2 (USA) and, through them, to the advanced networks of the Caribbean (C@ribnet), Africa (UbuntuNet Alliance), Asia (APAN, TEIN), among others. Thanks to the ALICE2 Project, between December 2008 and March 2012, RedCLARA could significantly improve the capacity of its network and expand its benefits for its members and regional research communities.

RedCLARA is constituted by 13 Latin American countries and its Assembly –where each country has representative- meets every six months to define courses of action and the policies to be implemented.

The organisms of the RedCLARA institutional government are the Board (higher organisms constituted by: President, Vice president, Secretary, Treasurer and one Director), a Fiscal Commission (constituted by three Assembly members who are not Board members) and a Technical Commission (with seven members, corresponding to engineers from the networks connected to RedCLARA, oversees the network's development and its technical and security implementations). The Executive Office is the organisms in charge of the Executive Direction of RedCLARA, a post under the trust of the Board and the Assembly.



The initial idea for the formation of RedCLARA arose in June of 2002 in the Toledo meeting (Spain), organized within the framework of the CAESAR Project -financed by the DG IST program of the European Commission-, the study that took to the generation of the ALICE Project (América Latina Interconectada Con Europa - Latin America Interconnected With Europe).

In that occasion the representatives of the main Latin American academic networks were confronted with the opportunity to get one historical revenge. That is to say: to constitute, finally, the Latin American network that so many times had been tried to bring into being.

6.7.1. Current Status in the Region

After the ELCIRA Project, the following is the status of Latin American countries

Country	NREN	eduroam status	AAI status
Argentina	InnovaRed	Operational	Joining eduGAIN
Brazil	RNP	Operational	eduGAIN partner
Bolivia	N/A	Not planned	Not planned
Chile	REUNA	Operational	eduGAIN partner
Colombia	RENATA	Operational	eduGAIN partner
Costa Rica	RedCONARE	Operational	Not planned
Cuba	RedUNIV	Not planned	Not planned
Ecuador	CEDIA	Operational	eduGAIN partner
El Salvador	RAICES	Not planned	Not planned
Guatemala	RAGIE	Not planned	Not planned
Honduras	N/A	Not planned	Not planned
Mexico	CUDI	Operational	Pilot
Nicaragua	N/A	Not planned	Not planned
Panama	REDCYT	Not planned	Not planned
Paraguay	ARANDU	Not planned	Not planned
Peru	RAAP	Operational	Pilot
Uruguay	RAU	Pilot	Pilot
Venezuela	REACCIUN	Not planned	Not planned



6.7.2. Roadmap in RedCLARA (Latin America)

- Uruguay, Venezuela are countries to have their implementation (eduroam and AAI) in a fast track implementation, as they are very advanced in knowledge in this subject;
- Cuba is reactivating their NREN, so it may be a possible country to join MAGIC project;

Mexico

Since the beginning of the project until the first quarter of 2016, CUDI [R9] has carried out the following activities:

1. Initial analysis of the project

The project scope was determined including hosting requirements, connectivity, hardware and software as well as the technical resources needed to carry out the NREN activities under WP2.

CUDI member institutions were invited to become beneficiaries of MAGIC WP2 activities.

2. Development of the base platform

A platform to support the deployment of the Mexican Identity Federation by participating institutions was implemented.

The activities for this included:

- a) The purchase, installation and configuration of servers for the CUDI Identity Provider (IdP);
- b) The development of Federation policies relating to the IdPs and Service Providers (SP) that will be integrated into the Federation;
- c) The planning of the Identity Federation website

3. Training

CUDI technical staff attended a workshop run by MAGIC on AAI and eduroam which was held on 7, 8 and 9 October at UWI Mona Jamaica.

The preparation of training materials to be used in training the technical staff of the institutions participating in the project was also started.





In the second quarter of 2016, CUDI is implementing a SP to federate services, which has and wants to make available to the federation, likewise, it is implementing a Discovery Service (DS) for the Federation. In addition, it is developing the Identity Federation website.

Work is currently ongoing to define the metadata to be used by the Identify Federation. The corresponding final document is expected to be ready at the end of the second quarter.

The documents setting the policies of the Identify Federation, the IdP and the SP were sent to participating institutions and are awaiting their signature. Equally, each institution was asked to define a service they want to make available to the Identity Federation.

It is expected that by the end of June 2016, the first service will be implemented within the Identity Federation as a pilot AAI.

In addition to this, training of technical staff at Mexican institutions will start at the end of June 2016, to enable them to install and configure an IdP and an SP. This training will be continuous throughout the third quarter of 2016 through in-person workshops and online training.

Once the training of technical staff has been completed, work for the development of a pilot AAI at each institution will begin. It is estimated that this work will be completed by the end of the first quarter of 2017.

eduroam Activities

CUDI currently has eduroam service for local users and is working to integrate into eduroam the eight Mexican institutions supported by MAGIC. UNAM and UAM have both already made significant progress, and we expect them to have an operational eduroam service in the near future.

AAI and eduroam Activities

In May 2016 a workshop open to academic institutions on eduroam and Identity Federations will be held alongside the CUDI Spring Meeting 2016. The workshop will be further complemented with an online course





7. REFERENCES

- [R1 RNP Website <http://www.rnp.br/en>
]
- [R2 ASREN Website <http://asrenorg.net/>
]
- [R3 WACREN Website <http://www.wacren.net/>
]
- [R4 CKLN Website <http://www.ckln.org>
]
- [R5 TEIN*CC Website <http://www.teincc.org>
]
- [R6 CAREN Website <http://icaren.org/>
]
- [R7 UbuntuNet Website <http://www.ubuntunet.net>
]
- [R8 RedCLARA Website <http://www.redclara.net>
]
- [R9 CUDI website <http://www.cudi.mx/>
]





8. CONCLUSION

With this document, we can provide that all objectives committed in the project will be achieved if project members meet all planning.



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European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D2.2 AAI and eduroam boot camp for experts training

Periodical Progress Report

MAGIC Deliverable: D2.2 - AAI and eduroam boot camp for experts training

Document Full Name	AAI and eduroam boot camp for experts training
Date	01-10-2015
Activity	Platform for mobility
Lead Partner	RNP
Document status	Final
Classification Attribute	Public / Private
Document link	

Abstract: This document describes the development and implementation of in-class training material and methodology to be used on Focal Point expert technical staff training. The material was developed to be used preferably in class. The first workshop took place at ASREN office at Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan and lasted for three days (8 to 10 September 2015). The second one was carried out from October 7th to 9th 2015, in the Jamaica Tertiary Education Commission, under the auspices of the Jamaica Research and Education Network, JREN.



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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	RNP/WP2	01/10/2015	RNP
Revised by	Antônio Carlos Fernandes Nunes	RNP Project Coordinator	23/10/2015	RNP
Revised by	Colleen Wint Smith	CKLN	30/10/2015	CKLN
Revised by				
Aproved by	Florencio Utreras	CLARA/CEO	30/10/2015	CLARA



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1. EXECUTIVE SUMMARY

This document describes the development and implementation of in-class training material and methodology used on Focal Point expert technical staff training. The first workshop took place at ASREN office at Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan and lasted for three days (8 to 10 September 2015). The second one was carried out from 7 to 9 October 2015, in the Jamaica Tertiary Education Commission, under the auspices of the Jamaica Research and Education Network, JREN.

2. INTRODUCTION

2.1. PURPOSE OF THE DOCUMENT

The main goal of WP2 is develop and provide training sessions in order to capacitate regional experts in AAI and eduroam. This document describes the development and implementation of in-class training material and methodology to be used on Focal Point expert technical staff training. The material developed was planned to be used preferably in class.

Such workshops will also be held in other regions, and the Arab States as well as the Caribbean were the first two.

2.2. TRAINING SESSIONS

2.2.1. FIRST WORKSHOP ON JOINING EDUROAM AND IDENTITY FEDERATION

The workshop on **Joining eduroam and Identity Federation** was realized at Arab States Research and Education Network (ASREN) [R2] office at Talal Abu-Ghazaleh University (TAGI-UNI) on 8 to 10 September 2015 in conjunction with the 1st International Conference on Open Source Software Computing (OSSCOM 2015). ASREN is a non-profit international organization, registered in Dusseldorf, Germany, on 3rd of June 2011, under the umbrella of the League of Arab States. ASREN is the association of the Arab region National Research and Education Networks (NRENs), as well as their strategic partners, that aims to implement, manage and extend sustainable Pan-Arab e-Infrastructures dedicated for the research and education communities and to boost scientific research and cooperation in member countries through the provision of world-class e-Infrastructures and e-services.



Media

News

TAG-Org News

Photo Gallery

Video Gallery

Speeches

Workshop on Joining eduroam and Identity Federation

Venue and Dates: the workshop took place at ASREN office at Talal Abu-Ghazaleh University (TAGI-UNI) - (Location Map), and lasted for three days (8-10 September, 2015).

Introduction

The Arab States Research and Education Network in cooperation with German Jordanian University, MAGIC Project and EUMEDCONNECT3 Project conducted a workshop dedicated for staff of National Research and Education Networks (NRENs) and Universities on:

- **eduroam:** is the secure, world-wide roaming access service that allows any user from an eduroam participating site to get network access at any institution connected to eduroam.
- **Federated Access:** effective and secure management of authentication and identity information to build a trusted environment where users can be identified electronically using a single identity to login and access variety of available resources and applications worldwide.
- **eduGAIN:** is a service that interconnects identity federations around the world, simplifying access to content, services and resources for the global research and education community.

Program

First day: eduroam

1.eduroam description

- From federation-level RADIUS server operator point of view
- From institution point of view

Figure 1: Workshop communication in ASREN website.

The ASREN workshop was organised in cooperation with MAGIC Project and EUMEDCONNECT3 Project, and it was designed for staff of National Research and Education Networks (NRENs) and Universities.

The topics discussed were:

- **eduroam:** the secure, world-wide roaming access service developed for the international research and education community.



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- **Federated Access:** effective and secure management of authentication and identity information to build a trust relationship between Identity Providers (IdP) and Service Providers (SP). It devolves the responsibility for authentication to a user's home institution, and establishes authorisation through the secure exchange of information (known as attributes) between the two parties.
- **eduGAIN:** a service developed within the GÉANT Project that interconnects identity federations around the world, simplifying access to content, services and resources for the global research and education community. eduGAIN enables the trustworthy exchange of information related to identity, authentication and authorisation (AAI) by coordinating elements of the federations technical infrastructure and providing a policy framework that controls this information exchange.

There were 11 participants from 6 countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia, as detailed in the table below.

Title	Full Name	Job Title	Institution	Country
Dr.	Ahmad Alsadeh	Faculty Member	Birzeit University	Palestine
Mr.	AlaaAldin AlRadhi	IPV6 Engineer	IPV6	Jordan
Mr.	Mohamed Aliouat	Computer Engineer	CERIST	Algeria
Mrs.	Aouaouche El-Maouhab	ARN Manager	ARN	Algeria
Mrs.	Fatima Bouslah	ingeneer teacher	Ecole des ingenieurs de l'equipement rura	Tunisia
Mr.	Ghannam Aljabari	Director of Computer Center	Palestine Polytechnic University (PPU)	Palestine
Mr.	Karim Oustouh	Senior Network Engineer	CNRST	Morocco
Mr.	Mohammad Abbass	Networking and Data Communication Directo	American University of Beirut (AUB)	Lebanon
Ms.	Ouafa Bentaleb	IT Engineer	CERIST	Algeria
Eng.	Raed Hindaileh	IT Infrastructure Section Head	Birzeit University	Palestine
Mr.	Ashraf S. A. Mashaleh	Senior Computer Networks Engineer,	Balqa' Applied University	Jordan

Figure 2: List of participants.



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Figure 3: Participants in the region.

Michal Procházka and Jan Oppolzer, both from CESNET (Czech Republic's NREN), produced the training material used in the workshop.



Figure 4: Training material.



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The workshop covered the following topics:

- ✓ Identity Federations;
- ✓ Identity Federation Problems;
- ✓ eduGAIN;
- ✓ eduroam;
- ✓ eduroam policy.



Figure 5: Workshop session.



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Figure 6: Workshop participants.

The suggested actions following the training are as follows:

- Morocco:
 1. to continue enhancing the eduroam and IdP services;
 2. to work on implementing ASREN Community Portal.
- Jordan: to start implementing eduroam in Balqa Applied University which includes 20 campus location in all Jordan;
- Algeria: to start implementing eduroam and continue developing their IdP services. Will also work on NRENum.net;
- Palestine: to start implementing eduroam in 2 universities;
- Lebanon: started implementing eduroam in AUB and will work on IdP later;
- Egypt: though Egypt people didn't attend, they will use the training material to start implementing eduroam first;
- Any NREN completes implementing eduroam and IdP before the end of November 2015 will be recognized and appreciated during e-AGE 2015 Conference in Casablanca 7-8 December 2015.

2.2.2. SECOND WORKSHOP ON JOINING EDUROAM AND IDENTITY FEDERATION

The Caribbean Knowledge and Learning Network (CKLN) [R3] represents the Caribbean region National Research and Education Networks (NRENs) in the MAGIC project along with a number of other global partners. As such, CKLN coordinated the 3-day training of trainers workshop, on eduroam and Federated Identity, from 7 to 9 October 2015. Other elements of the MAGIC project include working with science communities on themes of common interest, and using the middleware being learned and developed in the developing regions.



Figure 7: Workshop communication in CKLN website.

The Jamaica Research and Education Network, JREN, along with the UWI, hosted this important workshop and saw participation from Jamaican tertiary institutions, as well as representatives from institutions and NRENs in Grenada, Mexico and the Dominican Republic.





Figure 8: Participants in the region.

Name	Organisation	Country
1. Patrick Anglin	UWI	Jamaica
2. Juan Bailey	CKLN	Grenada
3. Reiner Campillo	CKLN	Dominican Republic
4. Garrick Blake	UWI	Jamaica
5. Mrs. Maureen Kerr-Campbell	Systems Librarians, UWI	Jamaica
6. Mr. Godfrey Walker	Systems Librarians, UWI	Jamaica
7. Ms. Elmarine Jimenez	UTech	Jamaica
8. Fernando Aranda	CUDI	Mexico
9. Luis Manuel Castro	CUDI	Mexico
10. Ms. Natanya Gillard - Ricketts	Montego Bay Community College	Jamaica
11. Ezmond Farquharson	Montego Bay Community College	Jamaica
12. Noe Argelis Luzon Rodriguez	PUCMM	Dominican Republic
13. Stephen Sanchez	PUCMM	Dominican Republic
14. Oscar Alejandro Lazala Vasquez	PUCMM	Dominican Republic
15. Keisha Edwards-Hamilton	Moneague College	Jamaica
16. Robert Lancashire	JREN	Jamaica

Figure 9: List of participants.

The three main goals of the workshop were to contribute to strengthening of NRENs in eduroam service deployment for the Roaming Operator and Campuses (UWI Mona is currently working on deploying eduroam), Federation Policy Development, and SAML federation deployment (for campus, federation and inter-federation). Participants are expected to develop Federation Identity Policies in



their countries as well as develop eduroam for their institutions, while training others as part of the MAGIC pilot implementation.



Figure 10: Maxine Henry-Wilson, Acting Head of JREN participates in the Workshop session.

Actual pilot of an eduroam deployment was done during the workshop. This development paved the way for JREN's proposed deployment of eduroam through the UWI Mona Campus by the first quarter of next year.

The workshop was facilitated Mr. Brook Schofield, Project Development Officer from GÉANT, the pan-European research and education network that interconnects Europe's National Research and Education Networks (NRENs). Most of Mr. Schofield's recent work is on dissemination of eduroam, which works hand-in-hand with federated identities. Brook's expertise and obvious wealth of experience and passion for his work coupled with his very easy-going style made for a very productive and engaging three days.



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Figure 11: Kenneth Sylvester (Chief Executive Officer of CKLN) and Brook Schofield (Project Development Officer for GÉANT).

Brook also presented ATLAS Probes [R4] to the representatives present for deployment in their networks, allowing the region to commence participation in the RIPE NCC project. RIPE Atlas employs a global network of probes that measure Internet connectivity and reachability, providing an unprecedented understanding of the state of the Internet in real time. RIPE NCC is building the largest Internet measurement network ever made. This was an additional bonus to the workshop with further deployment being considered.

The workshop was held at the Jamaica Tertiary Education Commission conference room located on the Mona Campus of the UWI and is the address used for the Jamaica National Research and Education Network, JREN.



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The suggested actions following the training are as follows:

- Jamaica, Dominican Republic and Mexico each to set up a Federation;
- UWI Mona setting up Eduroam (pilot, using UWI servers). Use these for a JREN pilot, as well as regional deployment;
- Participants to encourage and advocate for eduroam to IT Directors at universities;
- CKLN – seek additional PR Material in French and Spanish to support participants in their advocacy;
- Develop technical paper on how to establish an identity provider on your campus, deploying virtual machines – CKLN will undertake this with assistance from Brook and other community members;
- CKLN to work with interested parties in Barbados and the Bahamas (contacts have been forwarded to Brook for follow-up);
- JREN will seek to write the Policy document based off the international template (Prof. Robert Lancashire had said he would give it a go for JREN);
- Encourage the other NRENs to also prepare a policy document.

3. REFERENCES

[R1]	MAGIC Website	http://www.magic-project.eu
[R2]	ASREN website	http://asrenorg.net/
[R3]	CKLN website	http://www.ckln.org
[R4]	RIPE Website	https://atlas.ripe.net/probes/

4. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, Leandro Guimarães, WP2 - RNP, leandro.guimaraes@rnp.br, and copied to the Management of the MAGIC project.

5. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean



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6. CONCLUSION

Originally was planning only one expert training session in the MAGIC project. This is described in "T2.2 - Creation of an in class training to train regional experts in AAI and eduroam in order to replicate the action in their NRENs and with their customers", and detailed as: "an in class training (boot camp) will be developed by this Task to capacitate NREN technical experts in order to replicate the action in their NRENs and with their customers". However, the project team have considered more effectiveness if each region planned and organize regional workshops, doing this, MAGIC project have saved some travel budgeted, to be use in another activities under the project. There is another session planned to be held in Africa next year, besides that, the project team is also negotiating with others regions to have expert sessions as well.



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Periodical Progress Report

MAGIC Deliverable: D2.3 - On line Training Material on AAI development for Staff training (revised version)

Document Full Name	D2.3 - On line Training Material on AAI development for Staff training (revised version)
Date	30-09-2016
Activity	Platforms for mobility
Lead Partner	RNP
Document status	Final revised version
Classification Attribute	Public
Document link	

Abstract: This document describes and shows how the on line training material on AAI was developed and organized. This training was developed to be used on technical staff training of all NRENs members of MAGIC project. The material was developed to be used online only; there will be no printed material, although if the participant desire to use it in a in class course, it is possible as well.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	WP2 Coordinator	29/09/2016	RNP
Revised by	Antônio Carlos Fernandes Nunes	RNP Project Coordinator	30/09/2016	RNP
Revised by	Florencio Utreras	RedCLARA(CEO	03/10/2016	RNP
Revised by				
Aproved by				





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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

The purpose of this document is to describe and show how the on line training material on AAI was developed and organized. This second version was necessary to include some changes suggested by evaluators in the first year review meeting. Using the same model applied in the ELCIA project, this training was developed to be used on technical staff training of all NRENs members of MAGIC project. Although the material was developed to be used online, it can be used to support a in class training.

2. DOCUMENT AMENDMENT PROCEDURE

All changes should be send to the author, with a copy to WP2 mailing list. The revisions shall be send to WP2 and MAGIC ALL mailing list, in order to allow to all members review the entire document, mainly their region chapter.

3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean

4. EXECUTIVE SUMMARY

This document reviews how the on line training material on AAI was developed and organized. This training was developed to be used on technical staff training of all NRENs members of MAGIC project. the material was developed to be used online only; there will be no printed material, although if the participant desire to use it in a in class course, it is possible as well.



6. TRAINING STRUCTURE

The training was published in **virtual training platform** at:

<http://cursos.redclara.net>

Bienvenidos y bienvenidas a la plataforma de aprendizaje de RedCLARA. Esta plataforma es un recurso destinado al desarrollo de capacidades y competencias de los distintos actores que participan de nuestra organización. Es un espacio que permitirá la conexión de los participantes de las distintas áreas que nos conforman.

El propósito de esta herramienta es propiciar un proceso continuo de reflexión, ofrecer dispositivos y recursos de aprendizaje para la actualización de los profesionales y, en definitiva, aportar insumos que permitan instalar procesos de fortalecimiento a la Organización. Bajo esta plataforma se impartirán diversos cursos, diseñados según las necesidades del amplio abanico de actores que tienen funciones y responsabilidades en nuestra gran red.

Hoy en día, la gestión del conocimiento es una función estratégica para cualquier organización, ya que se requiere contar periódicamente con elementos de apoyo que permitan generar información de calidad, sistematizar experiencias y aprendizajes, consolidar conocimientos y difundir buenas prácticas. Pero, es importante señalar que la gestión de aprendizajes depende, principalmente, de la activa participación de sus usuarios. Una comunidad sin usuarios que se dispongan a compartir lo que saben, a analizar sus modos y prácticas y a incorporar nuevos conocimientos, no cumple con su propósito fundacional y se extingue. Por ello, entendemos la invitación a utilizar responsablemente estos recursos y generar, efectivamente, una comunidad que crece y aprende.

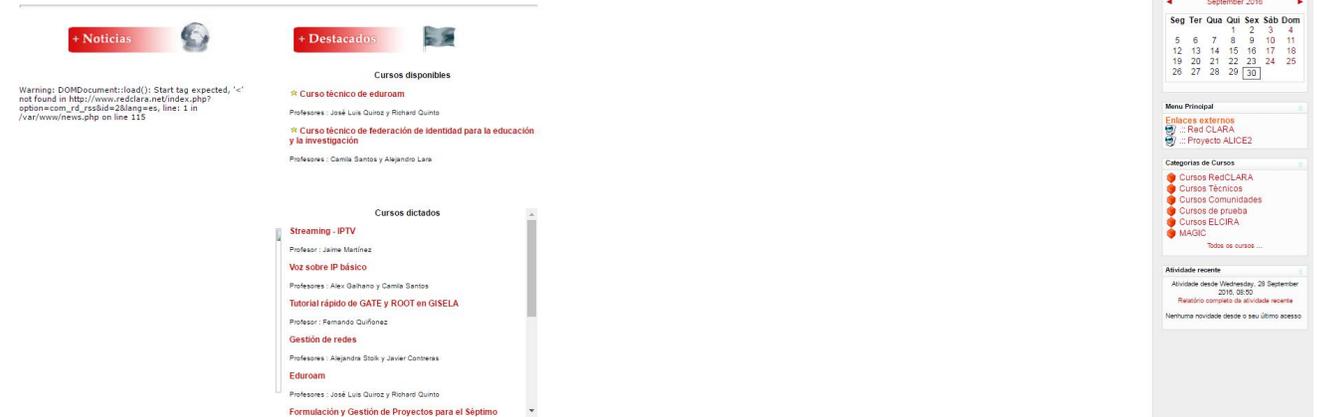


Figure 1: Main page of RedeCLARA's Moodle.

When user access the main page of RedCLARA's Moodle, it is possible to see all MAGIC courses available:



Figure 2: All MAGIC courses available (sept 2016).

Alternatively, if user knows the desired course address, he/she can access directly at:

<http://cursos.redclara.net/course/view.php?id=51>



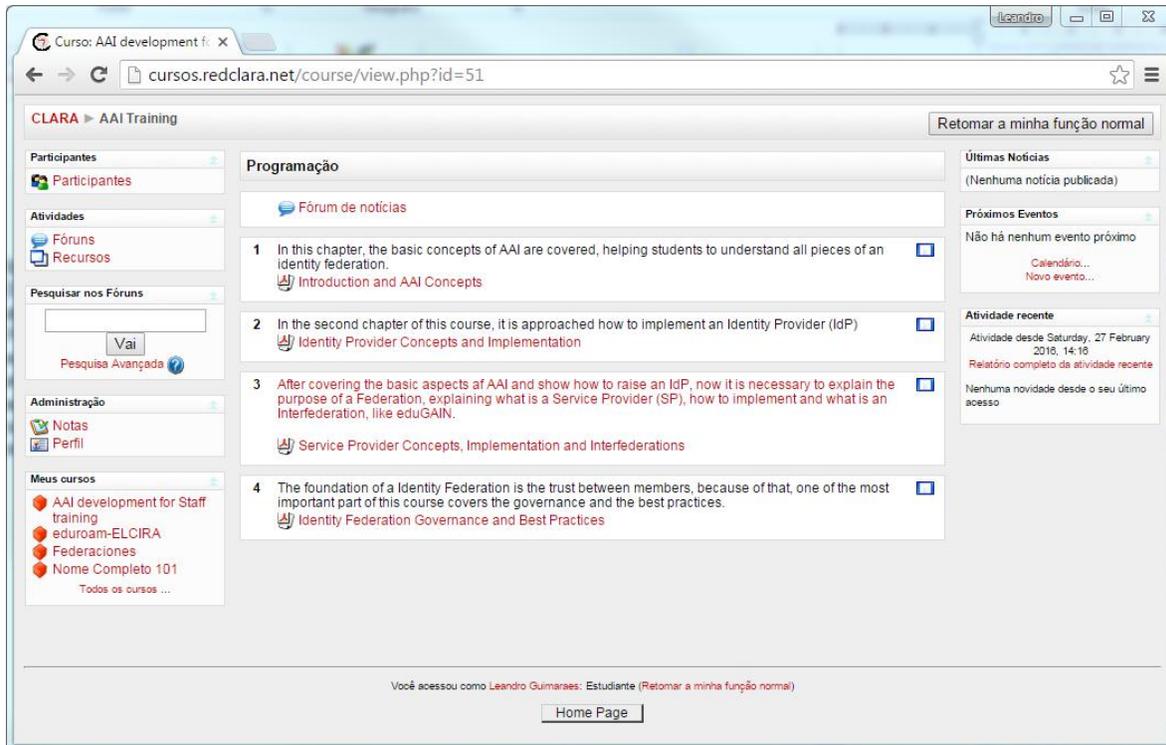


Figure 3: AAI course structure.



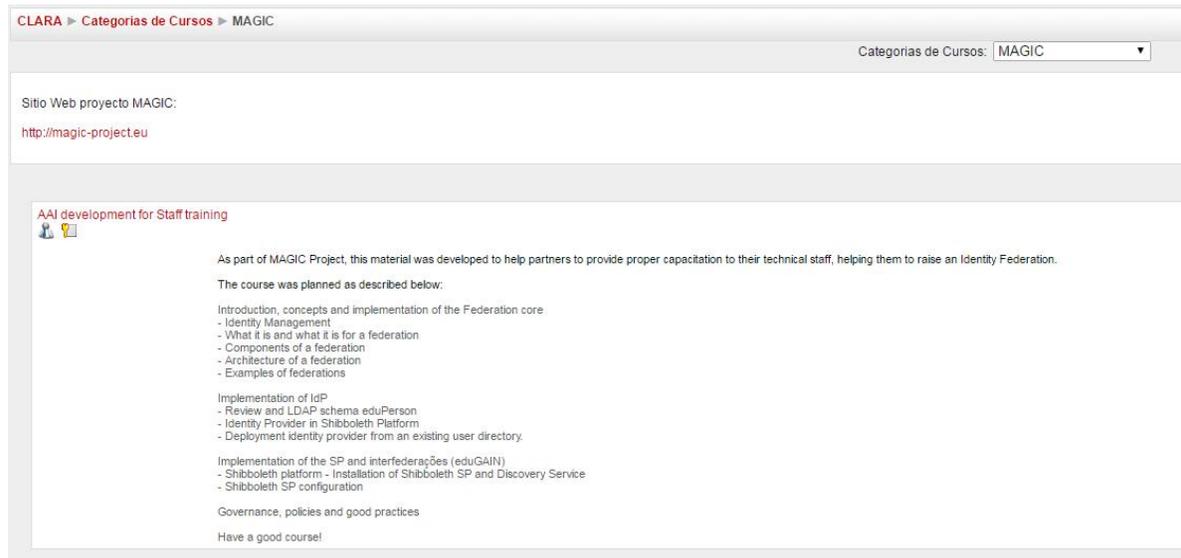


Figure 4: AAI course structure.

7. TRAINING TOPICS

Module 1: Introduction, concepts and implementation of the Federation core:

In this chapter, the basic concepts of AAI are covered, helping students to understand all pieces of an identity federation:

- Identity Management;
- What it is and what it is for a federation;
- Components of a federation;
- Architecture of a federation;
- Examples of federations.

Module 2: Implementation of IdP:

In the second chapter of this course, it is approached how to implement an Identity Provider (IdP):

- Review and LDAP schema eduPerson;
- Identity Provider in Shibboleth Platform;
- Deployment identity provider from an existing user directory.





Module 3: Implementation of the SP and interfederações (eduGAIN):

After covering the basic aspects of AAI and show how to raise an IdP, now it is necessary to explain the purpose of a Federation, explaining what is a Service Provider (SP), how to implement and what is an Interfederation, like eduGAIN:

- Shibboleth platform - Installation of Shibboleth SP and Discovery Service;
- Shibboleth SP configuration.

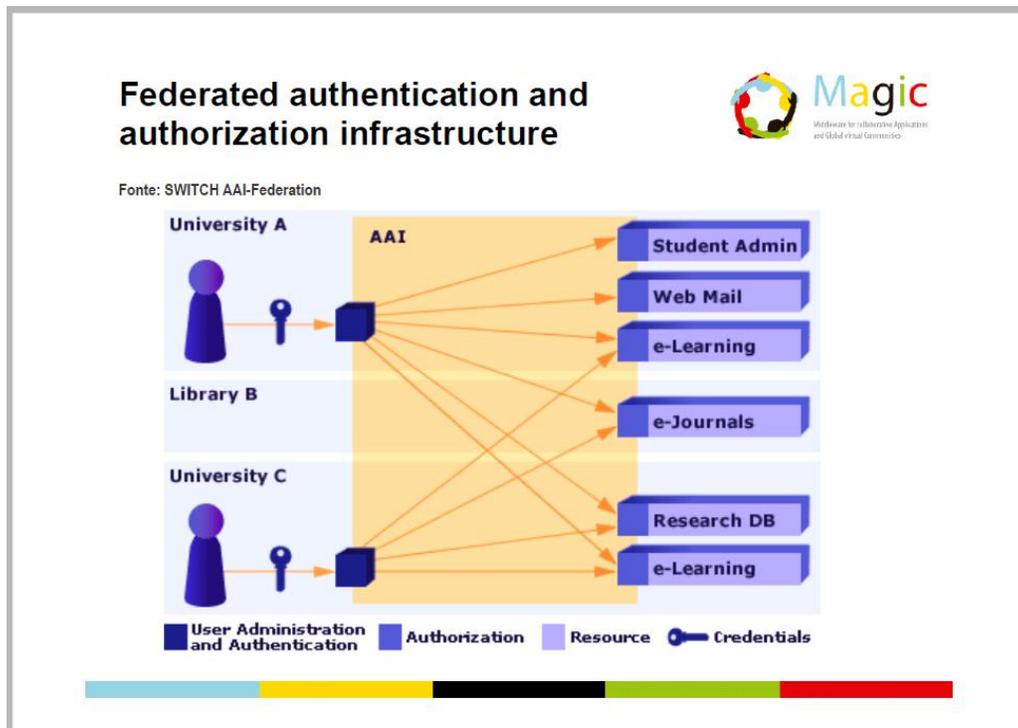
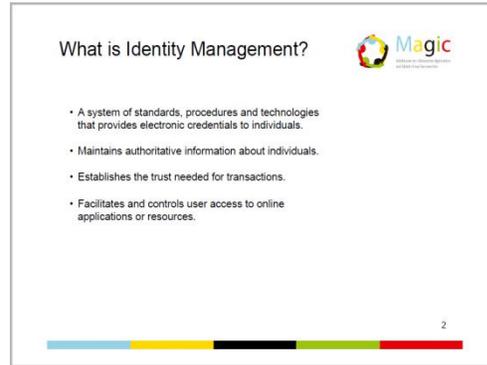
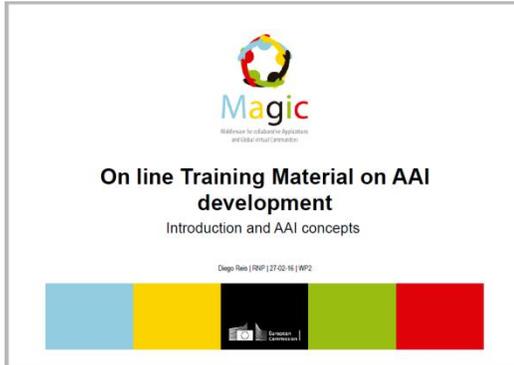
Module 4: Governance, policies and good practices

The foundation of a Identity Federation is the trust between members, because of that, one of the most important part of this course covers the governance and the best practices.



8. SCREENSHOTS

MODULE 1:



MODULE 2:



Magic
Middleware for Collaborative Applications
and Global Virtual Communities

**On line Training Material on AAI
development**

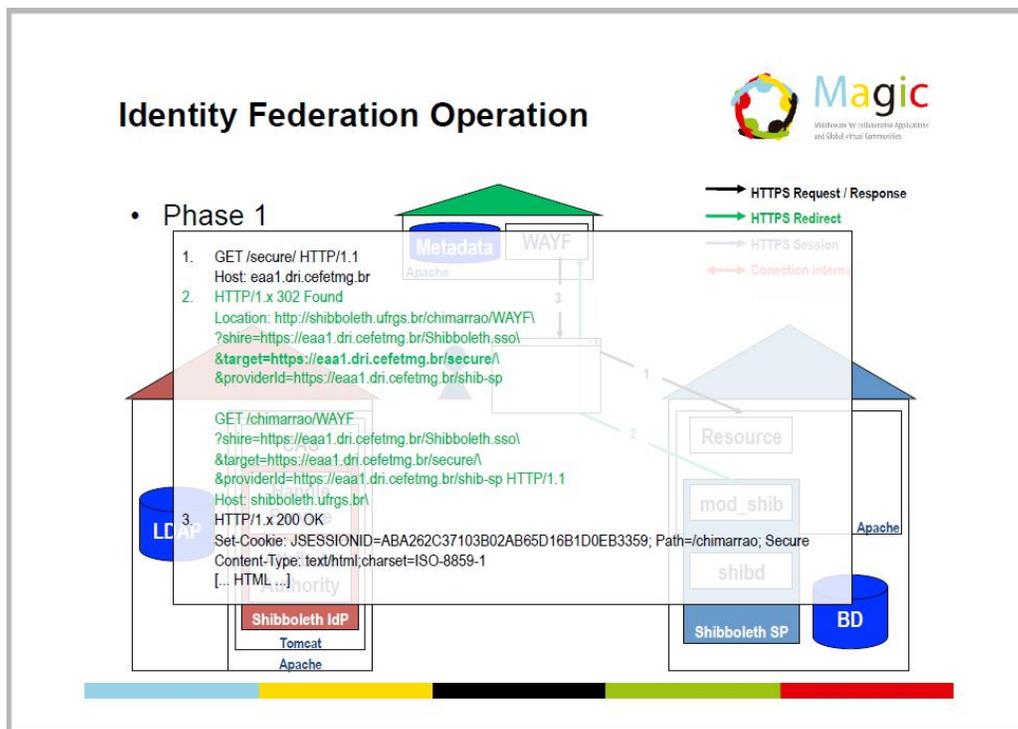
Identity Provider Concepts and
Implementation

Luciano Fernandes Rocha / Francisco Leonardo Melo | ISEP | 27-02-16 | 10/2




Shibboleth

- What is Shibboleth?
 - Middleware project from Internet2
 - SAML (Security Assertion Markup Language)
 - Standard defined by OASIS (Organization for the Advancement of Structured Information Standards)
 - Federated access
 - Authentication
 - Authorization
 - SSO (Single Sign-On)

MODULE 3:



Magic
 Middleware for Collaborative Applications
 and Global virtual Communities

**On line Training Material on AAI
 development**

Service Provider Concepts, Implementation
 and Interfederations

Francisco Leonardo Molig (FPF) | 27-02-16 | WP2




Service Providers (SP)

A Service Provider enables web applications written with any programming language or framework integrating natively with a web server.

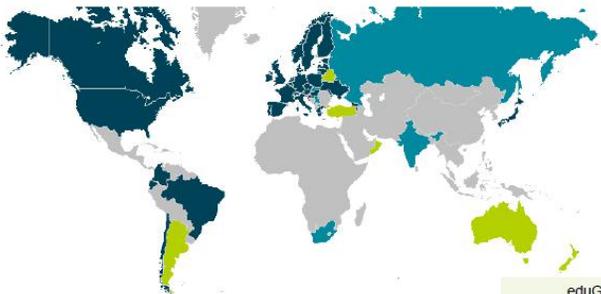
In a federation, it relies on a trusted Identity Provider (IdP) for authentication and authorization.





eduGAIN status*

- <https://technical.edugain.org/status>



Legend: ■ eduGAIN ■ Voting only ■ Candidate

eduGAIN numbers	
Federations:	37
All entities:	3.099
IdPs:	1.993
SPs:	1.107
Standalone AAs:	3

* Feb, 16th, 2016




MODULE 4:



Magic
Middleware for collaborative Applications
and Global virtual Communities

**On line Training Material on AAI
development**

Identity Federation Governance and Best
Practices

Ricardo Malero | RNP | 27-02-16 | WP2



**Identity Federation Governance
and Best Practices**



- Given its complexity, breadth, implications and importance, the phrase "don't attempt this at home" might well apply to federation identity management deployment.
- Although best practice federation identity management is a desirable goal, it is a status that can realistically be achieved only in stages.



**Identity Federation Services
Architecture**



- Federated services architecture generally conforms to multiple desired characteristics, including:
 - Service oriented
 - Standards based
 - Flexible and interoperable
 - Loosely coupled
 - Secure
 - Appropriately redundant
 - Scalable
 - Efficient



9. MOODLE USABILITY

All courses published in the Moodle can be monitored using the system functionalities, like:



9.1. REPORTS

Follows below some examples of information that is possible to obtain in the system:

AAI development for Staff training: All participants, Friday, 30 September 2016 (America/Sao_Paulo)

AAI development for Staff training | All participants | Today, 30 September 2016 | All activities | All actions | Display on page | Get these logs

Displaying 30 records

Time	IP Address	Full name	Action	Information
Fri 30 September 2016, 10:40 AM	200.143.193.131	Leandro Guimarães	course report log	AAI development for Staff training
Fri 30 September 2016, 10:40 AM	200.143.193.131	Leandro Guimarães	resource view	Introduction and AAI Concepts
Fri 30 September 2016, 10:40 AM	200.143.193.131	Leandro Guimarães	course view	AAI development for Staff training
Fri 30 September 2016, 10:40 AM	200.143.193.131	Leandro Guimarães	resource update	Introduction and AAI Concepts
Fri 30 September 2016, 10:40 AM	200.143.193.131	Leandro Guimarães	course update mod	resource 509
Fri 30 September 2016, 10:39 AM	200.143.193.131	Leandro Guimarães	resource view	Introduction and AAI Concepts
Fri 30 September 2016, 10:39 AM	200.143.193.131	Leandro Guimarães	course view	AAI development for Staff training
Fri 30 September 2016, 10:39 AM	200.143.193.131	Leandro Guimarães	course editsection	1
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	course view	AAI development for Staff training
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	course report log	AAI development for Staff training
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	resource view	Service Provider Concepts, Implementation and Interfederations
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	course report log	AAI development for Staff training
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	resource view	Service Provider Concepts, Implementation and Interfederations
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	course view	AAI development for Staff training
Fri 30 September 2016, 10:38 AM	200.143.193.131	Leandro Guimarães	course report log	AAI development for Staff training

Figure 5: Usage log.

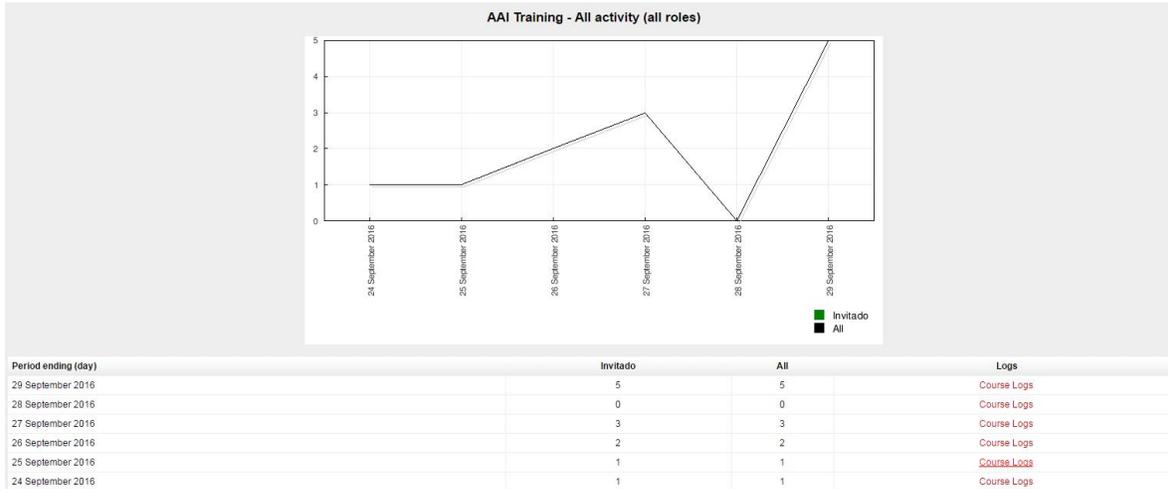


Figure 6: Usage statistics.

References

- [R1] MAGIC Website <http://www.magic-project.eu>
- Module Part1-AAI- <https://wiki.geant.org/pages/viewpage.action?pageId=50399132>
1 Fundamentals
- Module LDAP protocol <https://tools.ietf.org/html/rfc4511#page-3>
1
- Module Service Providers <https://wiki.refeds.org/dosearchsite.action?queryString=service+provider>
3
- Module Service Providers https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security#overview
3
- Module Service Providers <https://wiki.shibboleth.net/confluence>
3
- Module Service Providers <https://shibboleth.net/products/service-provider.html>
3
- Module Interfederatoin www.edugain.org
3
- Module Identity https://www.suse.com/docrep/documents/fdoi5xvzef/4622078_en.pdf
4 Management
Planning: Best
Practices, Insights



and
Recommendations -
Novell technical
white paper.

Module REFEDS Federation <https://wiki.refeds.org/display/FBP/Federation-Best-Practice+Home>
4 Best Practice Wiki

Module InCommon https://spaces.internet2.edu/download/attachments/16548332/Federated_IdM_Checklist.pdf
4 Federated Identity Management Checklist

10. CONCLUSION

After providing this material, initially in English, all Magic members can capacitate their technical staff in order to raise federations in their regions.

The second phase that started now is the translation activities, to have this material translated to Russian, Spanish, French and Portuguese. Doing this it is expected to reach the WP2 milestones in federation, having at the end of the project, pilot federations deployed in at least 4 countries.



Periodical Progress Report

MAGIC Deliverable: D2.4 - AAI Preparation (Assess the Identity Management of participating institutions)

Document Full Name	D2.4 - AAI Preparation (Assess the Identity Management of participating institutions)
Date	12-05-2016
Activity	Platforms for mobility
Lead Partner	RNP
Document status	Final
Classification Attribute	Public / Private
Document link	

Abstract: This Document contain all the necessary information required for AAI Implementation at the two NRENs per region participating in the project. This document contain implementation strategy to be used by NREN Focal Points



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	RNP – WP2	13/05/2016	RNP
Revised by	Thomas Fryer	GEANT	26/05/2016	RNP
Revised by	Tiwonge M. Banda	UbuntuNet	26/05/2016	UbuntuNet
Revised by	Antônio Carlos Fernandes Nunes	RNP Project Coordinator	27/05/2016	RNP
Revised by	Omo Oaiya	WACREN	01/06/2016	WACREN
Revised by				
Revised by				
Approved by	Florencio I. Utreras	CLARA	01/06/2016	CLARA



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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

The purpose of this document is to explain and detail all actions required for AAI implementation by at least two NRENs per region participating in the project, excluding Europe and Latin America. This document contains the implementation strategy to be used by NREN Focal Points.

2. DOCUMENT AMENDMENT PROCEDURE

All changes should be send to the author, with a copy to WP2 mailing list. The revisions shall be send to WP2 and MAGIC ALL mailing list, in order to allow to all members review the entire document, mainly their region chapter.

3. GLOSSARY

MAGIC	Middleware for collaborative Applications and Global vlrtual Communities
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
IdP	Identity Provider
SP	Service Provider
NREN	National research and education network
AAI	Authentication and Authorization Infrastructure

4. EXECUTIVE SUMMARY

This document shows how, where and when actions aiming AAI and eduroam implantation will occur in all MAGIC project regions.

This document was produced by WP leader and Project Coordinator form RNP, and all focal points and some partners, showing a very good level of integration between all regions.



5. FOCAL POINTS AND PARTNERS REPORT

5.1. MEXICO



5.1.1. AAI Activities

Since the beginning of the project until the first quarter of 2016, CUDI has carried out the following activities:

1. Initial analysis of the project

The project scope was determined including hosting requirements, connectivity, hardware and software as well as the technical resources needed to carry out the NREN activities under WP2.

CUDI member institutions were invited to become beneficiaries of MAGIC WP2 activities.

2. Development of the base platform

A platform to support the deployment of the Mexican Identity Federation by participating institutions was implemented.

The activities for this included:

- a) The purchase, installation and configuration of servers for the CUDI Identity Provider (IdP);
- b) The development of Federation policies relating to the IdPs and Service Providers (SP) that will be integrated into the Federation;
- c) The planning of the Identity Federation website

3. Training

CUDI technical staff attended a workshop run by MAGIC on AAI and eduroam which was held on 7, 8 and 9 October at UWI Mona Jamaica.





The preparation of training materials to be used in training the technical staff of the institutions participating in the project was also started.

In the second quarter of 2016, CUDI is implementing a SP to federate services, which has and wants to make available to the federation, likewise, it is implementing a Discovery Service (DS) for the Federation. In addition, it is developing the Identity Federation website.

Work is currently ongoing to define the metadata to be used by the Identify Federation. The corresponding final document is expected to be ready at the end of the second quarter.

The documents setting the policies of the Identify Federation, the IdP and the SP were sent to participating institutions and are awaiting their signature. Equally, each institution was asked to define a service they want to make available to the Identity Federation.

It is expected that by the end of June 2016, the first service will be implemented within the Identity Federation as a pilot AAI.

In addition to this, training of technical staff at Mexican institutions will start at the end of June 2016, to enable them to install and configure an IdP and an SP. This training will be continuous throughout the third quarter of 2016 through in-person workshops and online training.

Once the training of technical staff has been completed, work for the development of a pilot AAI at each institution will begin. It is estimated that this work will be completed by the end of the first quarter of 2017.

5.1.2. eduroam Activities:

CUDI currently has eduroam service for local users and is working to integrate into eduroam the eight Mexican institutions supported by MAGIC. Universidad Nacional Autónoma de Mexico (UNAM) and Universidad Autónoma Metropolitana (UAM) have both already made significant progress, and we expect them to have an operational eduroam service in the near future.





5.1.3. AAI and eduroam Activities

In May 2016 a workshop open to academic institutions on eduroam and Identity Federations will be held alongside the CUDI Spring Meeting 2016. The workshop will be further complemented with an online course.

5.2. ARAB REGION



5.2.1. Countries committed in the project

ASREN presented MAGIC to its member NRENs at regional meetings, by videoconference calls and by providing project material to them. ASREN also reviewed the status of readiness and willingness of NRENs in the Arab region to join MAGIC and to implement the services expected to be made available via the project.

NRENs and Universities in Morocco, Algeria, UAE, Qatar, Jordan, Lebanon, Tunisia, Oman, Egypt and Palestine showed interest.

5.2.2. AAI Activities

I. Initial analysis of the project

ASREN implemented an AAI project under the CHAIN-REDS¹ project and this is currently operational. As regards other countries, Oman started work before the start of MAGIC.

It was very important for NRENs to become informed about AAI and how to implement the service. The first step was therefore to conduct awareness and training sessions for the NRENs.

¹ <https://www.chain-project.eu/>



II. Development of the base platform

At the end of Year 1 of MAGIC, the status of AAI in the ASREN region is as follows:

- AAI is now successfully implemented at:
 - ASREN, Jordan (launched mid-2015);
 - TRC, Oman (ready before MAGIC start);
 - MARWAN, Morocco (launched during MAGIC project);
 - ARN, Algeria (launched and implemented during MAGIC).
- AAI is in pilot status in:
 - AUB, Lebanon,
 - JUNet, Jordan.
- Planning to implement AAI: Palestine and Egypt.

III. Training

ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organised in cooperation with the MAGIC and EUMEDCONNECT3² projects, and was designed for staff of National Research and Education Networks (NRENs) and Universities.

The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN. There were eleven (11) participants from six (6) countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia.

ASREN is planning for another workshop during its annual conference e-AGE2016 in Beirut in December 2016.

² www.eumedconnect3.net

5.2.3. eduroam Activities:

I. Initial analysis of the project

Before MAGIC, eduroam was implemented in the United Arab Emirates, at one university in Qatar and at pilot level at ASREN. It was necessary to disseminate and promote eduroam to the respective NRENs in the region. Therefore, eduroam was on the agenda of all regional meetings of ASREN members and it was discussed in most of the monthly conference calls.

II. Development of the base platform

At the end of Year 1 of MAGIC, the status of eduroam in the ASREN region is as follows:

- eduroam is successfully implemented in Saudi Arabia, United Arab Emirates, Lebanon, Algeria, Morocco and ASREN. It should be noted that it was in operation in Saudi Arabia and the United Arab Emirates, as well as in Morocco, before the start of MAGIC;
- eduroam is successfully at pilot level in Jordan, Tunisia and Oman;
- Egypt and Palestine are starting.

III. Training

ASREN conducted the first workshop “First workshop on Joining eduroam and Identity Federation” in Amman, 8-10 September 2015 at ASREN headquarters. The workshop was organised in cooperation with the MAGIC and EUMEDCONNECT3 projects, and was designed for staff of National Research and Education Networks (NRENs) and Universities.

The workshop mainly discussed the technical and policy issues related to implementing eduroam, AAI and joining eduGAIN. There were eleven (11) participants from six (6) countries: Algeria, Jordan, Lebanon, Morocco, Palestine and Tunisia.

ASREN is planning for another workshop during its annual conference e-AGE2016 in Beirut in December 2016.

5.2.4. Schedule of implementation

ASREN, with the support of experienced project partners, continues to promote the eduroam and AAI to its member NRENs and will provide the necessary help and technical support. More NRENs are expected to join both eduroam and eduGAIN in the second year of the project.

5.2.5. Major Obstacles and Concerns

- I. Allocating resources: most NRENs lack the resources to work on additional activities such as eduroam or IdPs as most of the team works on network implementation, management and security monitoring as they count this as the main function of NRENs;
- II. Capacity building: NRENs do not have the technical capacity and at the same time do not have funds to send their staff for training. Therefore, most of the staff are working on remote training or online reading material and following up with colleagues at GÉANT and other NRENs to get technical support and assistance.

5.3. AFRICA REGION (EASTERN & SOUTHERN AFRICA)



Eastern and Southern Africa is at infrastructure level coordinated by UbuntuNet Alliance. The region includes some 26 countries, 15 of which are members of the Alliance, while discussions for NREN development are at various stages in Botswana, Comoros, Lesotho, Madagascar, Mauritius and Zimbabwe. Further details at www.ubuntunet.net.

5.3.1. Countries committed in the project

Much of Eastern and Southern Africa is a greenfield in as far as AAI is concerned. The subject of AAI in the region begun getting some tangible traction a few years ago with the EU FP7 ei4Africa project. The idea then was to raise awareness of the concept using demonstrators. Three NRENs (KENET – Kenya; TERNET – Tanzania; and SANREN – South Africa) participated in setting up Catch-All Identity Providers that soon became part of the Grid Identity Pool (GrIdP) Test Federation run by GARR, the Italian NREN.





Zambia's ZAMREN later joined and set up its Catch-All IdP. The next step was to move towards establishing national federation, but this was only started later by South Africa as they initiated SAFIRE.

UbuntuNet Alliance has re-organised its deployment strategy, which started with a training session, held in Dar es Salaam on 26-28 April 2016 ahead of its Annual General Meeting. The training is reported in detail in section 2.3.2 III below. After the hands on training NRENs have been tasked with rolling out the service. As at the time of writing this report, starting with the initial NRENs that participated in e4Africa, MAREN (Malawi) and RENU (Uganda) have made progress in rolling out the service. They are also working on the paper work for officially joining eduGAIN.

5.3.2. Activities in AAI

I. Initial analysis of the project

At this time in Eastern and Southern Africa, in addition to MAGIC, 2 other initiatives are promoting the development of AAI, these are: AfricaConnect project and the H2020 Sci-GaIA project. These three projects are complimenting each other, in that Sci-GaIA is promoting services that require federated access, such as Science Gateways; MAGIC project provides the training materials, whereas AfricaConnect had the budget to support the participation of trainees. UbuntuNet Alliance now has a dedicated office at its secretariat to oversee the deployment of AAI.

II. Development of the base platform

UbuntuNet Alliance is working towards a deal with a cloud provider, Wingu and already has access to its platform, where the infrastructure has been deployed in Johannesburg, South Africa. The same platform is being made available to those NRENs that do not have infrastructure.

III. Training

A Federated Applications (FedApps) Training session was held on 26-28 April 2016 in Dar es Salaam as part of UbuntuNet Alliance's strategy for deployment of AAI in the region. The training - supported by the MAGIC project - was facilitated by UbuntuNet Alliance and SANReN, South Africa. The training was attended by 22 engineers from 14 NRENs.



The plan is that after the hands-on training session the engineers will work as a community in deploying the services. The NRENs will deploy national federations, while supporting universities and research centers in deployment of Identity Providers. The trainees were also exposed to the paper work required to incubate a federation and to join eduGAIN. While eduGAIN is not a top priority at the beginning, the federations will be constructed in a way that enables them to be eduGAIN compliant.

5.3.3. Activities in eduroam:

I. Initial analysis of the project

The Research and Education Network for Uganda (RENU) in January 2016 became the 4th NREN in Eastern and Southern Africa to deploy and join eduroam after SANREN (South Africa), KENET (Kenya) and ZAMREN (Zambia). UbuntuNet Alliance continues to promote deployment of the service in the region. During the Federated Applications training in Dar es Salaam in April 2016, eduroam was not covered extensively, but it was teaser enough to spark the interest in additional training. With the eduroam experts from SANREN, UbuntuNet Alliance is currently looking into the possibility to provide this training in the coming months.

II. Development of the base platform

As noted earlier eduroam exists in South Africa, Kenya, Uganda and Zambia. As at the time of writing this report, engineers from MAREN (Malawi) with the support from UbuntuNet Alliance just completed setting up the Federation Level Roaming Operator and a first eduroam Identity Provider for the College of Medicine in Blantyre. The next step is to assist other institutes in getting their own wireless roaming service up and running. This way the Malawian federation will hopefully soon reach the state where it can join the growing global eduroam community

III. Training

No training on eduroam has been conducted so far. This is still at planning stage to be done in the coming few months.



5.3.4. Schedule of implementation

After Malawi is completed, Mozambique and Zimbabwe are next.

5.4. AFRICA REGION (WEST & CENTRAL AFRICA)



The West and Central Research and Education Network (WACREN) is the regional network. It has 10 established NRENs amongst the 22 countries in the region as members. There are on-going initiatives in another 4 countries to establish NRENs but the remaining are yet to start the dialogue towards establishing NRENs. The European Commission AfricaConnect2 project to deploy the WACREN network also has development of these NRENs as part of its objectives.

5.4.1. Countries committed in the project

In the absence of network infrastructure to interconnect its members, WACREN has been working to foster collaboration in the community by increasing awareness and developing activity to bootstrap the uptake of federated identity and deployment of AAI infrastructure.

Experience gained in deploying a production demonstration Identity Provider in Nigeria in ei4Africa, a previous FP7 project provided a good base to work with the MAGIC project and the training materials provided. The number of participating countries was boosted by WACREN involvement in the UNSECO and UEMOA supported PADTICE, a project to enhance the daily life of African students in 8 selected countries in the region that included deployment of AAI infrastructure.

The countries currently involved in various stages of AAI infrastructure development in addition to Nigeria include – Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. Each of these countries now have reference Identity and Service Provider deployments and are engaged in developing the policy and practice statements required to establish Identity Federations and make them viable.





5.4.2. Activities in AAI

IV. Initial analysis of the project

After ei4Africa, WACREN had embarked on the development of a Federation-as-a-Service (FaaS) infrastructure for federated authentication and authorization to promote the use and adoption of Identity Federations and shared e-Research services.

The pilot known as WACREN EduID is a fully functional production demonstration of web-based management of Identity Federations. It was deployed to complement training efforts with a registry, discovery service and easy to use tools that provide a comfortable entry point for the NRENs, enabling them to roll out Identity Federations in their countries based on current best practices.

Training is therefore targeted and offered in 2 streams

1. Policy and Practice
2. Technology Support

V. Development of the base platform

WACREN EduID builds on similar activity in GÉANT and is based on JAGGER, an open source federation resource registry developed by HEAnet the Irish NREN and customized for WACREN. The goal in subsequent phases of its development is joint management with WACREN NREN members.

The pilot federation currently has 11 Identity Providers (IdP) and 6 Service Providers (SP) from campuses in the region including an Open Identity Provider service by WACREN for members of the community yet to deploy their own identity infrastructure but need immediate access to globally federated services.

As the NRENs now have a platform with which to manage their federations and uses-cases provided by complementary EU projects such as Sci-GaiA, effort is now focused on employing MAGIC training for the deployment of Identity and Service Providers as well as business models, governance and management.



VI. Training

Training was provided to WACREN engineers in November 2015 using content produced in the MAGIC project to enable the participants from the 8 countries involved in the PADTICE project to deploy their campus Identity Providers and a temporary catchall for the NREN. A total of 24 engineers and network administrators were trained.

A further training session targeted at decision and policy makers was co-located with the WACREN Annual Conference in March 2016. While the first was technical, the latter enlightened participants on the motivation, business case and management issues for the development of identity federations and services. Supported by a facilitator from the MAGIC project and other experienced practitioners, the participants explored governance, policies and technology requirements for identity federations, and defined a roadmap for kick-starting implementation in their respective NRENs and institutions. This workshop was attended by 62 participants from African NRENs

5.4.3. Activities in eduroam:

IV. Initial analysis of the project

The Senegalese Research and Education Network (snRER) was the first full-blown eduroam pilot in the WACREN region. The pilot initiated in January 2016 is currently confined to the Université Cheikh Anta Diop de Dakar (UCAD), which is leading the training of engineers from other campuses in snRER. The deployment will transit to a full deployment when this is completed and other campuses join the federation. The eduroam pilot was also successfully extended to the WACREN Annual Conference, which was held in Dakar in March 2016 for the benefit of the international audience who participated.

The Ghanaian NREN, GARNET followed on quickly after its experience in the WACREN conference with its own pilot led by the University of Ghana. They are currently planning training activity for other members of the NREN. Aside from these two, there is little activity in other parts of WACREN. NgREN (Nigeria), which had deployed a Federation Level Router in 2013, has been energised by the activities in its peer NRENs and has recently convened a project team to follow suit.





V. Development of the base platform

WACREN is currently providing web-based support to these NRENs actively engaged in trialling out eduroam in their NRENs.. As campus identity systems are the basic building blocks of both Identity and eduroam federations, efforts are being made to exploit the common areas. Initial feedback suggests that this and remote assistance with setup may be sufficient for lead NREN technologists to leverage along with training content from the MAGIC project and eduroam wiki for localised training

VI. Training

There have been a number of videoconferences and webinars but WACREN is yet to offer any face-to-face training

5.4.4. Schedule of implementation

After the deployments in Senegal, Ghana and Nigeria are completed and fully operational, advantage will be taken of the WACREN regional training scheduled to take place in Burkina Faso in July/August to add FasoREN to the list. It is also expected that NRENs with extensive wireless infrastructure such as RITER (Côte d'Ivoire) will quickly follow suit.

5.5. ASIA REGION (CENTRAL ASIA)



5.5.1. Countries committed in the project

With start of the third phase of the EC-co-funded CAREN project, it is planned to develop services and applications to help achieve the sustainability of NRENs in the Central Asia region. The establishment and setup of eduroam and Identity Federation services will allow CAREN NRENs to participate and collaborate with other world regional networks in the area of Authorisation and Authentication and academic collaboration.



NRENs and Universities in Kyrgyzstan (Kyrgyz Research and Education Network Association (KRENA)) and Tajikistan (Tajik Research and Education Network Association (TARENA)) are interested.

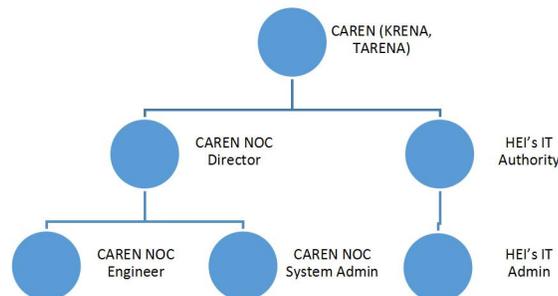
5.5.2. Activities in AAI and eduroam

I. Initial analysis of the project

Currently only the CAREN NOC offers eduroam for local users and there is no AAI presence in Central Asia region. It was very important for NRENs to be informed about eduroam and AAI and how to implement the services. The first step was therefore to conduct awareness and training sessions for the NRENs, and support the development of eduroam and AAI infrastructure in a pilot universities.

II. Development of the base platform

At this stage, a roadmap has been developed for the introduction and development of a platform that supports the deployment of the Identify Federations by KRENA and TARENA institutions, which are supported by MAGIC. The CAREN NOC with the support of MAGIC partners provides technical support and training for the Higher Education Institutions (HEI) behind the NRENs.



The following activities are planned:

June 2016: agreement on collaboration between CAREN and MAGIC (RNP).

July 2016: eduroam and AAI Pilot at Kyrgyz Turkish Manas University and Kyrgyz State Technical University (two universities)





- Sep 2016: eduroam/AAI preparation (access to Identity Management) and implementation
- October 2016: Demo session at CAREN Regional Networking Conference, Bishkek, Kyrgyz Republic
- October 2016: Training conducted by Latin American partners, Bishkek, Kyrgyz Republic
- November 2016: Follow-up support and final progress report
- December 2016: Dissemination of training materials to university technical staff

III. Training

For both areas, training on Identity Federations and eduroam will be held in a workshop for academic institutions, which will take place during the 2nd CAREN Conference 2016. This training workshop will be further complemented with an online course.

5.5.3. Schedule of implementation

CAREN, with the support of experienced MAGIC partners has started to promote eduroam and AAI to its member NRENs and will provide the necessary help and technical support. More NRENs are expected to join both eduroam and eduGAIN in the second year of the project.

5.6. CARIBBEAN

Jamaica

Institution: The University of the West Indies (UWI) - Mona Campus.

Activities:

- Training – delivered on the workshop of October/2015;
- eduroam preparation – currently in progress;
- eduroam pilot tests – July/2016;
- eduroam implementation – September/2016;
- AAI preparation – July/2016.

Barbados





No institution committed yet;
Promoting session planned for June/2016.

Dominican Republic

No institution committed yet;
Promoting session planned for June/2016.

5.7. FURTHER INFORMATION

It was not possible to inform activities in some regions because the WP coordination did not receive all information needed on time by focal points. As soon as the WP coordination receive new information, a new version of deliverable 2.4 will be submitted.

6. CONCLUSION

After having the training material ready, translated, and available for all MAGIC members and partners the project will provide a very strong pillar to support federations and euroam implementation. After providing this material, initially in English, all Magic members can capacitate their technical staff in order to raise federations in their regions.

Doing this it is expected to reach the WP2 milestones in federation, having at the end of the project, pilot federations deployed in at least 4 countries, although in some regions are informing that they are having been difficult to focus in this work package due a lack of work force internally in their regions.



Periodical Progress Report

MAGIC Deliverable: D2.6-eduroam pilot

Document Full Name	D2.6 eduroam pilot
Date	28-10-2016
Activity	Platforms for mobility
Lead Partner	RNP
Document status	Final
Classification Attribute	Public
Document link	

Abstract: After the online training, it is expected that NRENs Focal points provide technical follow-ups in order to create an eduroam infrastructure, in pilot basis, using the same AAI user database. This document describes this task among all institutions.



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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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This project is co-funded by the Horizon 2020
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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	WP2 Coordinator	05/12/2016	RNP
Revised by	Antônio Carlos Fernandes Nunes	RNP Project Coordinator	06/12/2016	RNP
Revised by				
Revised by				
Aproved by	Florencio Utreras	CLARA/CEO	12/12/2016	RedCLARA



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1. INTRODUCTION

Operating a federation involves managing and supervising eduroam Identity Providers, eduroam Service Providers, as well as keeping authentication logs, fulfilling uptime requirements, etc. A prospect National Roaming Operator (NRO) also needs to commit to the eduroam policy.

The Roaming Operator (RO) may outsource the operation of its technical infrastructure (particularly, the Federation Level RADIUS servers) to a third party, but will remain responsible for eduroam within its service area. Eduroam is always easier to “sell” to organizations because it propose mobility to the institutions users, what is quite challenging comparing with another commercial solution. Although all difficulties, WP2 members are moving forward with eduroam implementation all over the world, averagely.

In the other hand, unfortunately, MAGIC project manager, Florencio Utreras, has reported that he has received a letter from CKLN’s Director, Ken Sylvester informing that CKLN closed down at the end of September 2016. The European Commission has been informed of the situation and consultations are underway to decide on the avenues to take as what regards the contract with the EC and the work that CKLN had committed. Because of this, Caribbean region is not reported in this deliverable.

1.1. PURPOSE OF THE DOCUMENT

This document has the purpose of describe all initiatives of implementation eduroam as a pilot. Generally the pilot phase is needed to test the project deliverables "in the field" so that when the eduroam artefacts are released to production, many or all issues have been found and added to the issues log so that they may be rectified by the project’s technical working group. Regarding eduroam pilot phase, technical team start of eduroam implementation, when all policies are written down and all infrastructure to support a limited number of participant, is installed and configured. There is also the added bonus that, when the artefacts are released to production, the pilot phase participants will have already had experience in using eduroam and implementing the data flows.



2. STATUS OF PILOTS

2.1. ARAB COUNTRIES REGION



ASREN, the Arab States Research and education Network is the Arab regional organization that works on developing the Pan Arab e-Infrastructures to contribute and to support the developments of research and education activities in the Arab region and to provide mean of collaboration with researchers and academics around the world.

Under the MAGIC Project, ASREN conducted many activities towards developing AAI, eduroam, NRENum.net and Colaboratorio in the region. ASREN conducted training workshops, face-to-face meetings and virtual conference call meetings to spread the awareness to its members on how to deploy such services.

Since MAGIC started, there have been some pilots in the region on implementing eduroam. Some of these pilots have been successfully operational; others are progressing while some others are still the same. Here is a summary of the pilots:

2.1.1. Successful implementation:

- Algerian;
- Morocco;
- Lebanon.

All are extending the service to more universities.

2.1.2. Progressing implementation:

- Jordan: implemented eduroam at one university with five campuses;
- Egypt: had some technical difficulties awaiting for the training workshop.

2.1.3. Other pilots to start:

- Tunisia: awaiting for the training workshop;
- Oman: awaiting for the training workshop.

2.1.4. Another Workshop on AAI and eduroam

Based on the request of ASREN's NRENs, was decided to conduct another technical workshop on IdP and eduroam to take place 3-4 December 2016 at the American University at Beirut, Lebanon in cooperation and support of MAGIC Project, AfircaConenct2 and EUMEDCONNECT3 Projects in addition to CESNET. NRENs of Jordan, Palestine, Algeria, Morocco, Tunisia, Egypt, Oman and Lebanon are attending





Participating NRENs in this workshop have officially committed to work on deploying AAI and eduroam after getting this training. At the end of the workshop, we will have a roundtable and planning discussion with all participants.

2.2. ASIA REGION (CENTRAL ASIA)



2.2.1. Countries committed in the project

The CAREN project was resumed in July 2016:

http://caren.geant.org/Media_Centre/News/Pages/research-and-education-connectivity-project-in-Central-Asia-rebooted.aspx

The 3rd phase of CAREN project is planned to develop services and applications in order to reach sustainability of NRENs. Establishment and setup of eduroam and Identity Federation services will allow CAREN NRENs to participate and collaborate with other world regional networks in the area of Authorization and Authentication and academic collaboration.

NRENs and Universities in Kyrgyzstan (Kyrgyz Research and Education Network Association (KRENA)) and Tajikistan (Tajik Research and Education Network Association (TARENA)) were interested.

2.2.2. Activities in AAI and eduroam

I. Initial analysis of the project

Currently only CAREN NOC offers, eduroam service for local users and there is no AAI presence in Central Asia region. It was very important for the NRENs to get education on eduroam and AAI and how to implement this service. Therefore, the first step to conduct awareness and training sessions for the NRENs, support the development of eduroam and AAI infrastructure in a pilot universities.

II. Development of the base platform

At this stage, introduction and development of a platform that supports the deployment of the Federation of Identities in KRENA and TARENA institutions participating in the project is planned. CAREN NOC with the support of MAGIC partners provides a technical support and training to NREN's Higher Education Institutions (HEI).



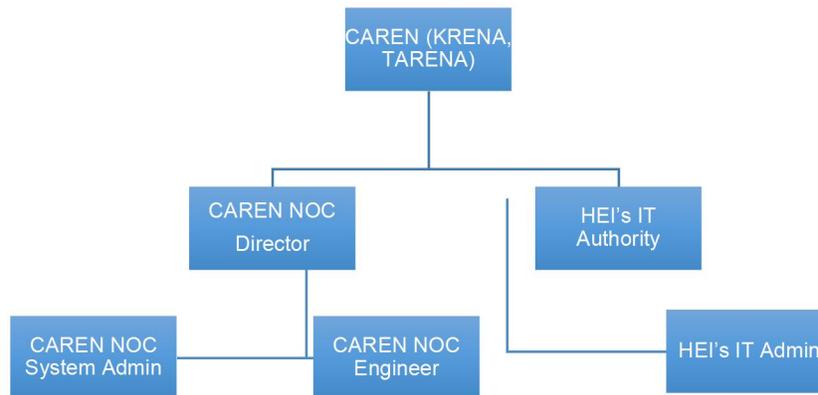


Figure 1: CAREN organizational structure.

There are following activities performed and planned:

- June 2016: there is an agreement on the collaboration between CAREN and MAGIC.;
- 27-28 October 2016: the 1st TEIN-CAREN joint workshop was held in Bishkek, Kyrgyzstan. On October 28 there was the 3rd session completely devoted to eduroam topic. Prof. Deokjai Choi from Chonnam National University presented “Intro to Eduroam” and Almaz Bakenov from NITC made a presentation “Roaming for Education and Research”;
- 16-20 January 2017: Training conducted by Magic partners, Bishkek, Kyrgyz Republic, and Dushanbe, Tajikistan;
- February 2017: eduroam and AAI Pilot at Kyrgyz Turkish Manas University and Kyrgyz State Technical University (2 universities);
- February-March 2017: eduroam/AAI preparation (access to the Identity Management) and implementation;
- February-March 2017: Dissemination of training materials to technical staff of universities;
- End of March 2017: Demo session at CAREN Regional Networking Conference, Bishkek, Kyrgyz Republic;
- April 2017: Follow up support and final progress report.

III. Training

For both areas, Identity Federation and eduroam will be held a classroom workshop to academic institutions, which will take place during the 2nd CAREN Conference 2017. This training workshop will be further complemented with an online course.

2.2.3. Schedule of implementation

CAREN, with the support of experienced project partners from MAGIC starts to promote the eduroam and AAI to its member NRENs and will provide necessary help and technical support. More NRENs are expected to join both eduroam and eduGAIN in the second year of the project.

2.3. AFRICA REGION (MOZAMBIQUE)



Since 2013, MoRENet has been working with the Brazilian NREN (RNP) within an international cooperation framework, which comprises training activities, exchanging good management and governance practices of networks, technical visits and, more recently, information exchange under technical and operational management.

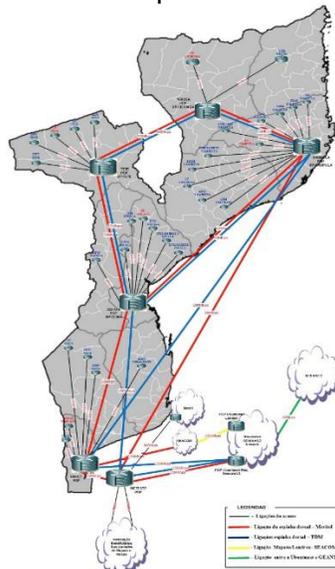


Figure 2: MoRENet architecture.



This last exchanging activity, which initiated in September 2016, RNP collaborated with MoRENet in order to assist it in implementing an authentication and authorization federation and one eduroam-roaming operator. This activity occurred due to the following factors:

- The previous existence of collaboration among both NREN's;
- The willingness of MoRENet to widen the offer of services to its institutions;
- The RNP experience with modeling, creation and offer of services and in projects of international cooperation devoted to the development of new federations and eduroam-roaming operator in different countries.

Because of this collaboration activity, a work plan comprising four phases was developed.

- **Preparation:** refers to the elaboration of an implementation plan of the Project, which indicates the staff in charge of the activities of both sides, the name of the institutions that will be part of the pilot and the scope of the network infrastructure of each institution. This phase also comprises the elaboration of structural documents required to implement the federation and the eduroam-roaming operator, which also includes the signature of adhesion term to eduroam international and the MAGIC project;
- **Federation Implementation:** corresponds to the implementation of the federation of authenticity and authorization in Mozambique, which comprises an one-week-online-training as well as an assisted support performed through web conference;
- **eduroam implementation:** as previously exemplified , this phase corresponds to the implementation of the eduroam-roaming operator in Mozambique, which includes an one-week-online-training as well as an assisted support performed through web conference;
- **Conclusion:** corresponds to the elaboration of an implementation report, which must refer to the implementation plan elaborated in the beginning of the Project, pointing out results, contingencies plan, lessons acquired, results accomplished and an eventual justification for extending the initial deadline.

The accomplishment of all these phases included a weekly-based follow-up during web meetings attended by the analyst staffs in charge of both the implementation of the MoRENet and the analysts responsible for information exchange regarding technical and operational management from RNP.





Figure 3: first meeting of project.

The first formal meeting regarding this cooperation activity took place in September 16, 2016, during which a series of elements were set up, such as: the scope of the activity, the initial chronogram of the project and respective phases and deliverables, as well as MoRENet and RNP staff, and the dates of two web seminars comprising the introduction to the federation concept and eduroam based on the offer provided by RNP and its clients. During this meeting the template for the Implementation Plan was also presented, whose content corresponds to one of the first deliverables of the first phase of the project that included the following aspects that will be defined by MoRENet:

- **Objectives:** a clear definition of general and specific objectives of the project;
- **Justification:** the main justifications to the accomplishment of the Project with respect to its conditions;
- **Preconditions:** the main preconditions for the accomplishment of the Project in terms of availability of human and technological resources.
- **Structure:** the indication of names of MoRENet client institutions that will be part of the pilot of the new federation and the eduroam-roaming operator and of the staff that will technically lead the project;
- **Documentation:** the list of documents to be provided in order to carry out the implantation within the expectations both the participants and the international institutions related to the new services herein addressed;
- **Schedule:** an initial schedule was divided in phases with the indication of the main tasks and deliverables and deadlines.

The first phase of the Project was concluded six weeks after the first formal meeting of the project. More specifically on October 28th, 2016, with the conclusion of the following tasks:

- Web seminars about federation and eduroam;





- Elaboration of the Project implementation;
- Infrastructure availability in the MoRENet client institution;
- Term of adhesion signed by MoRENet;
- Elaboration of structural documents.

The elaboration of structural documents has proved to be an essential activity that assists both the communication among the new service, MoRENet clients as well as the international eduroam and eduGAIN service, to which the federation and Mozambique roaming operator had the intention to integrate because of a RNP suggestion. Due to this directive, the following documents were elaborated:

- Agreement-signing-memo among MAGIC and MoRENet;
- Elaboration of the Use Policy of the eduroam-roaming operator;
- Web Page for the eduroam-roaming operator in Mozambique;
- Elaboration of the document with eduroam technical specification;
- Elaboration of adhesion term for eduroam client institutions;
- eduroam statement signature.

During this meeting 10/28/2016, one of the most significant activities of the second phase of the project, which corresponded to the implementation of the federation: one-week-online-training. Thus, the project point out the following scenario for the next two months:

- Implementation of eduroam-roaming operator and report of the Project implementation.

2.4. LATIN AMERICA REGION (MEXICO)



Currently, work continues with the institutions participating in the MAGIC project for the implementation of an eduroam pilot and finally on to production, as well as work with other institutions that are interested in implementing the service on their campus.

Work is also being done on an active dissemination of the benefits of eduroam throughout the academic community in Mexico with the purpose of getting more institutions to join the project.



2.4.2. Implementation of eduroam

In the third and fourth quarters of 2016, eduroam in Mexico has continued to advance, the National Autonomous University of Mexico (UNAM) and the Center for Mathematical Research (CIMAT) have incorporated into production, throughout its institutional network, the eduroam service.



Figure 4: eduroam at UNAM.

2.4.3. Training

A workshop was held in the City of Mérida, where the participating institutions were trained in the required infrastructure and in the implementation of eduroam.

A discussion forum was held with the participants, having as main theme "eduroam and its integration with different databases".

2.5. REFERENCES

[R1 MAGIC Website
]

<http://www.magic-project.eu>



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3. DOCUMENT AMENDMENT PROCEDURE

All changes should be sent to the author, with a copy to WP2 mailing list. The revisions shall be sent to WP2 and MAGIC ALL mailing list, in order to allow to all members review the entire document, mainly their region chapter.

4. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean

5. EXECUTIVE SUMMARY

This document reviews the eduroam implementation in all MAGIC project regions.

6. CONCLUSION

In this document, it is possible to analyse that project has been moving forward in Arab region with three new countries (Algerian, Morocco and Lebanon), Africa is moving forward with Mozambique and there is an important evolution in the Central Asia region, with training and bootcamps happening about identity management, in 2016 and 2017.



Periodical Progress Report

MAGIC Deliverable: 2.7 - AAI implementation

Document Full Name	D2.7 - AAI implementation
Date	04-05-2017
Activity	Platforms for mobility
Lead Partner	RNP
Document status	Final
Classification Attribute	Public
Document link	

Abstract: To have a successful AAI implementation, it is necessary that technical staff of the focal points provide governance and technical mentoring to NRENs or local institutions in order to speed up the local implementation. After AAI pilot phase, the NREN's focal points should have provided technical follow-ups in order to roll out into production state an AAI infrastructure, connecting at least to the NREN's user database. This document aims at reporting onr this effort.

Besides infrastructure, the NRENs have created all governance documentation and websites, in order to join eduGAIN in a pilot state



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	RNP – WP2	04/03/2016	RNP
Revised by	Gustavo Garcia	CLARA – WP2	12/05/2017	RNP
Revised by	Omo Oaiya	WACREN - WP2	15/05/2015	WACREN
Revised by	Almaz Bakenov	NITC – WP2	16/05/2015	NITC
Revised by	Yousef Torman	WP2 - ASREN	16/05/2017	ASREN
Revised by				
Revised by				
Approved by	Florencio Utreras	CLARA/Coordinator	24/05/2017	CLARA



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1. EXECUTIVE SUMMARY

This document reviews the regional actions that guided identity federation implementation within countries that have joined MAGIC Project.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, Leandro Guimarães, WP 2 - RNP, Leandro.guimaraes@mp.br, and copied to the Management of the MAGIC project.

3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean

4. INTRODUCTION

4.1. PURPOSE OF THE DOCUMENT

The purpose of this document is to explain and detail the work that has been done in all regions participants of MAGIC Project. In this deliverable it is detailed what was expected in providing technical and governance mentoring, by all focal points, to at least two NRENs per region participating in the project.

4.2. WHAT HAS BEEN DONE?

4.2.1. Face to face training experiences:

Mobility Federated Services and Nrenum.net

Date: July 8, 2015

Venue: Viña del Mar, Chile. Enjoy Conference Center

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.



Federated Access and eduroam workshop in the Caribbean

Date: October 7 to 9, 2015

Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica

Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).

Workshop on Joining eduroam and Identity Federation

Date: September 8 to 10, 2015

Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan

Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.

Federated Applications (FedApps) Training session

Date: April 26 to 28, 2016

Venue: Dar es Salaam - as part of UbuntuNet Alliance's strategy for deployment of AAI (Authorization and Authentication Infrastructures) in the region.

Attendees: 22 engineers from 14 NRENs.

4.2.2. On line training course:

On line Training Material on AAI Development for Staff

Available to everyone (<http://cursos.redclara.net/course/view.php?id=51>).

4.2.3. Creation and implementation of Federations

When MAGIC started there were 34 Federations in production and 22 in pilot in the world (June 2015), a year later (June 2016) the work carried out by MAGIC's WP2 has change these numbers into: 43 Federations in production and 18 in pilot (Zambia, Romania, Serbia, Macedonia, Bulgaria and so on). At the end of MAGIC project, eduGAIN had 48 federation in production with the eduGAIN Steering Group approval, to admit the South African Identity Federation (SAFIRE) as the first fully participating member from Africa.

The Arab region has been very active in the AAI implementation, since MAGIC started the situation within the Arab countries is the following: Successfully implemented: MARWAN (Morocco), ARN (Algeria); Pilot: AUB (Lebanon), JUNet (Jordan); Planning to implement in Palestine, Egypt





5. DEPLOYMENT WITHIN REGIONS

5.1. AFRICA

5.1.1. Mozambique

Concomitant implementation of an eduroam-roaming operator, the National research and education network of Mozambique (MoRENet) has been working with the mentoring of the RNP to implement an identity federation. More specifically, both initiatives are part of the same international cooperation project initiated in September 2016 and scheduled to be completed in April 2017.

As applied to the eduroam initiative, in September 2016 it was wrote a document, which describes the objectives of the collaboration project, justification, main assumptions, hardware and network structure, work team, documentation to be elaborated and the initial implementation schedule of the project.

Currently, the Mozambican federation core is set in pilot phase, leaving only the configuration of the first identity provider (IdP), that is already under implementation and final adjustment. Once this activity is completed, the intention is to expand the Mozambican federation, named CAF-Moz, to its client institutions.





Fig. 1: Federation of Mozambique on eduGAIN map

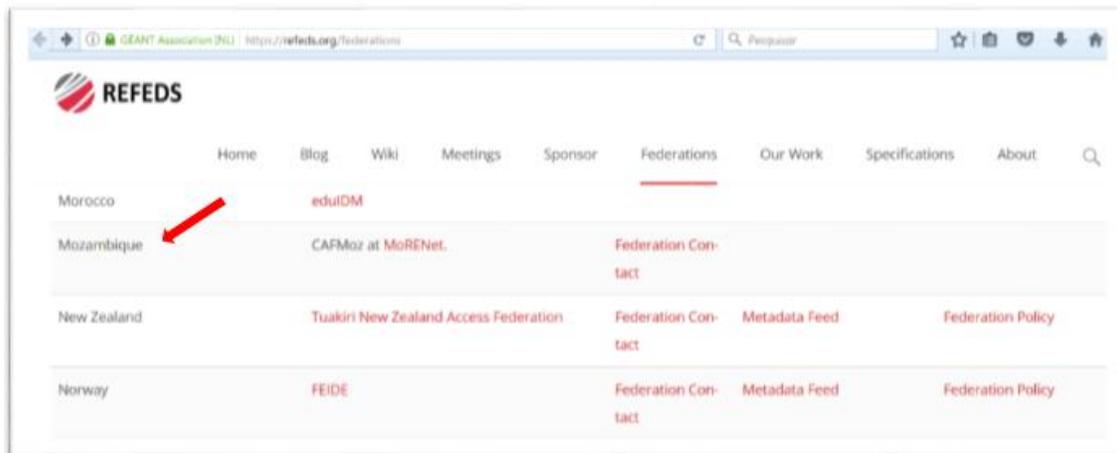


Fig. 2: Federation of Mozambique on REFEDS website

In roughly seven months of this international cooperation work between MoRENNet and RNP, these were the main activities carried out:



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Month	Performed Activities
September	Planning and schedule
September	Preparing and conducting online training
October	Definition of the name of the Mozambican federation (CAF-Moz)
October	Signing of the memorandum of understanding (MoU) of MAGIC Project
October	Writing Polycies
October	Writing the term of adhesion
October	Drafting of the technical specifications document
October	Writing the file "Metadata Registration Practice Statement"
November	Web page development of the Mozambican federation
November	Writing Polycies (version in English)
November	EduGAIN Policy Acceptance Signature
November	Inclusion of Caf-moz in REFEDS
November	Inclusion of Caf-moz in eduGAIN
November	Start up of federation core configuration
December	Review the federation core installation procedures
January	Installing the federation core
January	Elaboration of the federation XML file (Metadata feed)
January	Installing and Setting Test SP
March	Validation of the federation XML file in eduGAIN
March	Installation and Setting of the first IdP of the federation

As seen on this table, there was an initial stage of document planning and elaboration, which is necessary for the development of a federation. Then, the documents were available and the project was inserted in both REFEDS and eduGAIN. Since November, the implementation of the server has been at initial phase, leading to consequent reformulation of the procedures.

In general, it is important to emphasize that:

- September 2016 was a key milestone for the planning activity, thus it was included the preparation and the performance of an online training on the concepts related to an authentication and authorization federation;
- October 2016 was very important for the elaboration and the signature of documents related of formalization of the federation in Mozambique. Some of these documents are required by eduGAIN and REFEDS, while others were suggestions from RNP based on their service management experience in Brazil;
- November 2016, the documents prepared in the previous month were published on the website created specifically for Mozambican federation available at



- <http://cafmoz.morenet.ac.mz/index.php/en/>. In parallel, the installation and configuration of the core server of the new federation has been started;
- d) December 2016, the implementation of the federation in Mozambique had a pause because of the prioritization of the eduroam roaming server configuration. Meanwhile, however, RNP focused on reviewing its technical procedures in order to facilitate their use by the MoRENet team;
 - e) January 2017, the configuration of the core server of the new federation restarted. Now, however, the configuration was performed by apply a revised and simplified procedure. Besides that, in this some month, a test service provider (SP) was installed in order to facilitate the verification of the operation of future federation clients;
 - f) February 2017, the installation and setting of the first identity provider (IdP) began, however, it was interrupted due to vacations of the MoRENet team;
 - g) March 2017, the last adjustments in the configuration of the first identity provider of CAF-Moz were carried out.

After March 2017, the international cooperation project between RNP and MoRENet - created specifically to facilitate the implementation of the federation and eduroam in Mozambique - ends. The following month of April will be devoted to the drafting of the project closure report with the respective indication of what has or not been achieved in relation to the initial planning.

Regarding what was originally planned; the only aspect that was not achieved within the timeframe in question was the implementation of identity providers in all three selected client institutions, such as what happened to eduroam roaming, although the MoRENet struggled to reverse this scenario in the last weeks of the project.

In spite of that, RNP considers the experience as quite positive as, among other things, some of the procedures, used to implement a new federation, could be updated. This exercise of reviewing and updating the procedures also contributed to updating the knowledge of the current team as well as making RNP better prepared for future technological cooperation experiences analogous to this one. The assurance of the results presented here was largely due to weekly project management meetings that helped maintaining a relatively steady pace of time deliveries and progress on the activity in question.

However, we must add another fundamental element to achieve the results: the dedication of the analysts involved in the cooperation. This is a point that must be highlighted because the MoRENet team support proved to be higher to what was originally planned. Thus, in addition to the weekly meetings, several technical meetings were held to monitor the implementation of technical procedures, as well as to review these procedures both to update them and to make them simpler. Sometimes, some procedures were replaced by a virtual machine image generated so that the



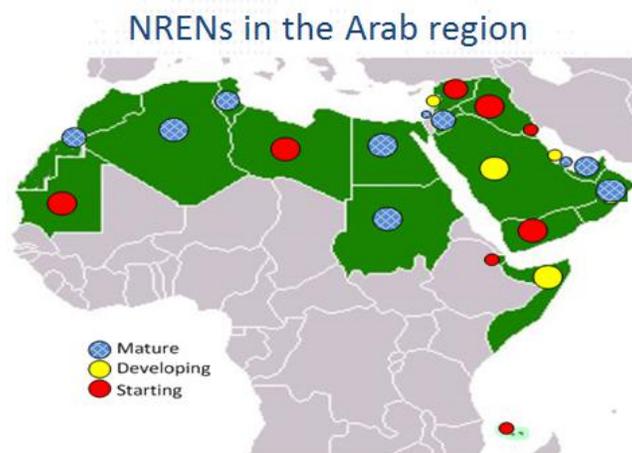
configuration, made in the RNP approval and testing environment could be replicated in the MoRENet infrastructure.

Additionally, considering these and other technical difficulties encountered in this activity, some improvements in the process as a whole are recommended. Some of these recommendations, by the way, are similar to those previously appointed in the roaming-eduroam implementation report:

- a) Development of a standard online training on federation, which guaranteed the same level of knowledge for the new federations in the world;
- b) Designing a standard online core server configuration and identity provider (IdP) training to help analysts in the new institution perform their technical procedures;
- c) Development of a program (or script or technical procedure) to report, such as a security audit, which eventually changed in a new server installed after the configuration, has been completed. This is a useful measure to quickly identify why the service has suddenly ceased to function, as it did in this project;
- d) Development of a program (or script or technical procedure) that informs the quality of the network connection between the institution that is installing the new federation and the institution that is technically supporting the installation. This is an important step in enabling a "remote assisted support" to the local server configuration.

5.2. ARAB REGION

The Arab region consists of 22 Countries, 12 in Asia (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen) and 10 in Africa (Algeria, Comoros, Djibouti, Egypt, Libya, Mauritania, Morocco, Somalia, Sudan and Tunisia).



In fact, not all Arab countries have National Research and Education Networks (NRENs) in place. The above map shows that 10 countries have mature NRENs, others are in the state developing NRENs and some minority are still in very early stages. The main reason for this is the conflicts and instability in the region especially in Libya, Syria, Yemen and Iraq and thus will not be possible to have any kind of eduroam nor idp activities there. However, ASREN is spending many efforts in these countries to promote the concept of NREN and to encourage universities to cooperate towards having some form of NRENs.

ASREN's Approach

ASREN decided to take the opportunity of the support of the MAGIC Projects and MAGIC partners to develop identity federation and eduroam in the region. The approach was based on the following:

- Promoting identity federation 'as an essential service' at all levels including decision makers, NRENs CEOs, NREN technical staff and users in the universities. Promotional material including brochures, documents and giveaways have been produced by ASREN and in cooperation with RedCLARA.
- Capacity building and technical support which was provided to the NREN teams through workshops, webinars, online material and technical support via phone or email or VC calls.
- ASREN also encouraged its NRENs by announcing awards and recognition of successful implementations during its annual conference every year. Each successful NREN in implementing IdP received ASREN Trophy from ASREN Chairman and was also announced in the media.

Main Activities:

ASREN, and in cooperation with its MAGIC partners conducted the following activities towards IdP implementation the region:

- I. Conferences: MAGIC Project, identity federation and eduroam mentioned in all ASREN conferences, meetings and workshops:
 - ASREN annual conference e-AGE 2015, Casablanca 7-8 December 2015. A special session and a booth on MAGIC federation and eduroam. Oman and Morocco received ASREN Trophy for success on IdP implementation.



- ASREN annual Conference e-AGE 2016, Beirut, 1-2 December 2016. a side roundtable was allocated for eduroam and idp discussion. Algeria was recognized for its success in federation startup.
- eduGAIN and eduroam used to be on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on these developments.it was also discussed during ASREN monthly VC meetings.

II. Technical and hands-on workshops:

- Workshop on Joining eduroam and Identity Federation: September 8 to 10, 2015, Amman, Jordan. The workshop was attended by 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan. The training was conducted by ASREN in cooperation with CESNet of the Czech Republic.
- Workshop on Identity Federation Infrastructure: December 3 to 4, 2016, American University at Beirut (AUB), Beirut, Lebanon. The workshop was attended by 22 participants representing Morocco, Algeria, Lebanon, Palestine, Oman, Egypt, Somalia, Malawi and Jordan. The workshop was coordinated with CESNet and GEANT.

III. Webinars and Conference Calls:

- Several Conference calls and webinars organized to exchange knowledge and to follow up with technical staff at NRENs with support of the technical people from GEANT and CESNet in addition to ASREN team.

IV. Follow up:

- IdP eduroam was on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on the progress of IdP eduroam activities. It was also followed up during ASREN monthly VC meeting with its partners.



Main Achievements:

V. Successful implementation in:

- Morocco through its NREN (MARWAN), <http://www.educert.ma/> (implemented before MAGIC start but close cooperation took place with MAGIC project)
- Oman by the TRC, <https://www.trc.gov.om/portal/sec/portal/default/default> (before MAGIC start but there is cooperation with them).
- Algeria through its NREN (CERIST), <https://www.aai.arn.dz/> implemented during the MAGIC project

VI. Pilots in advanced stages:

- Lebanon through the American University in Beirut
- ASREN IdP, to be announced very soon.

VII. Starting:

- Jordan
- Egypt

Way Ahead:

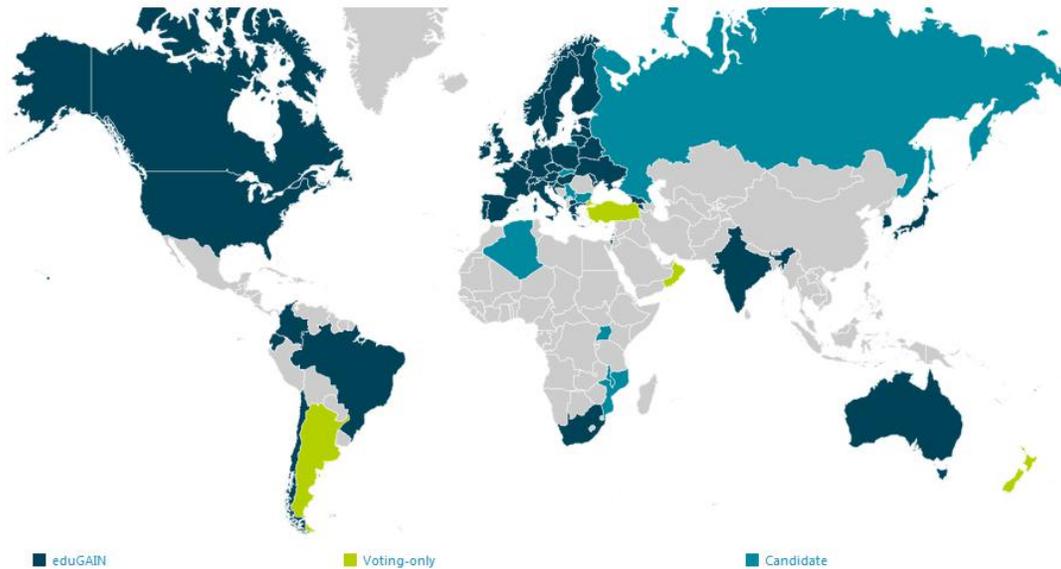
ASREN has built a pool of technical capacities across its region on identity federation issues including technical, administrative and legal requirements which will be utilized by ASREN to provide support to new countries, NRENs and universities who want to join.

ASREN will continue its efforts to promote identity federation at all levels and will encourage and attract more countries to implement IdP and to join eduGAIN.

ASREN will count on the support of GEANT and other partners to further support the developments and implementations of federation services in the region.

Below are marked the countries in eduGAIN worldwide at: <https://technical.edugain.org/status>





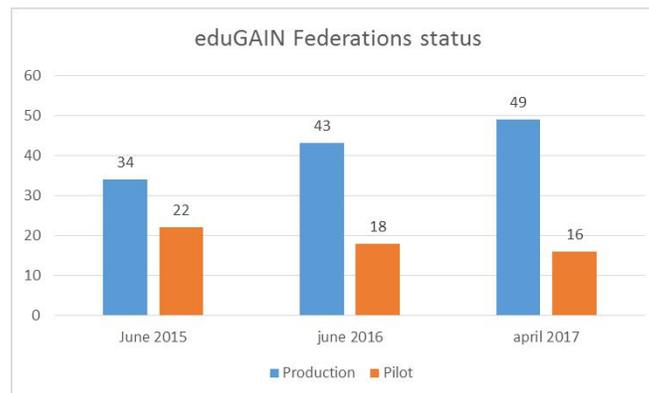
5.2.1. New eduGAIN candidates

As have experienced in ELCIRA Project, after MAGIC Project conclusion, all focal points and Regional and national research and educational networks will keep pushing their customer in order to implement and use all identity federation benefits. This represents that specific project helps to create an effort to improve, in a very short time, the maturity level in some areas, in this case, Identity Management. At the end of MAGIC Project there are 10 pilot federations: **Algeria** – ARNaai, **Bulgaria** – BIF, **Malawi** – MAREN, **Montenegro** – eduID, **Mozambique** – CAFMoz, **Russia** – φEDUrus, **Serbia** – iAMRES, **Singapore** - Singapore Access Federation – SGAF, **Slovakia** – safelD and **Uganda** - RIF

6. CONCLUSION

When MAGIC started there were 34 Federations in production and 22 in pilot in the world (June 2015), a year later (June 2016) the work carried out by MAGIC's WP2 has change these numbers into: 43 Federations in production and 18 in pilot (Zambia, Romania, Serbia, Macedonia, Bulgaria and so on). At the end of MAGIC project, eduGAIN had 49 federation in production with the eduGAIN Steering Group approval, to admit the South African Identity Federation (SAFIRE) as the first fully participating member from Africa.





This advance is result of many training sessions, speeches in conferences and in some regions even consulting. This shows that when a project is running with feasible goals it is possible to motivate partners to reach them. In the MAGIC project, although the goals were challengeable, the project team have motivated their partners in order to implement AAI, infrastructure and governance. This represents that specific project helps to create an effort to improve, in a very short time, the maturity level in some areas, in this case, Identity Management.



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Periodical Progress Report

MAGIC Deliverable: 2.8 -eduroam Implementation

Document Full Name	D 2.8 eduroam Implementation
Date	04-05-2017
Activity	Platforms for mobility
Lead Partner	RNP
Document status	Status here
Classification Attribute	Public / Private
Document link	

Abstract: After eduroam pilot phase, it is expected that NRENs Focal Points provided technical follow-ups in order to roll out into production state an eduroam infrastructure, using the same AAI user database (preferably). Besides infrastructure the NRENs have create all governance documentation and website, to be able to join the global eduroam. This deliverable describes this effort.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Leandro Guimarães	RNP – WP2	04/03/2016	RNP
Revised by	Gustavo Garcia	CLARA – WP2	12/05/2017	RNP
Revised by	Omo Oaiya	WACREN - WP2	15/05/2015	WACREN
Revised by	Almaz Bakenov	NITC – WP2	16/05/2015	NITC
Revised by	Yousef Torman	ASREN	16/05/2017	ASREN
Revised by				
Revised by				
Aproved by	Florencio Utreras	CLARA/Coordinator	24/05/2017	CLARA





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1. EXECUTIVE SUMMARY

This document reviews the regional actions that guided eduroam implementation within countries that have joined MAGIC Project.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, Leandro Guimarães, WP 2 - RNP, Leandro.guimaraes@rnp.br, and copied to the Management of the MAGIC project.

3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean

4. INTRODUCTION

4.1. PURPOSE OF THE DOCUMENT

The purpose of this document is explain and detail, after eduroam pilot, the actions that all NREN Focal Points have executed in order to roll out into production state an eduroam infrastructure, using the same AAI user database (preferably). Besides infrastructure needed to support eduroam service, to join eduroam network, it is mandatory to follow a list of procedures to provide proper trustworth to all partners all over the world. To show this the NRENs must create governance documentation and

4.2. What has been done in eduroam within magic?

4.2.1. Face to face training experiences:

Mobility Federated Services and Nrenum.net

Date: July 8, 2015

Venue: Viña del Mar, Chile. Enjoy Conference Center

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.

Federated Access and eduroam workshop in the Caribbean

Date: October 7 to 9, 2015

Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University



of the West Indies, Jamaica

Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).

Workshop on Joining eduroam and Identity Federation

Date: September 8 to 10, 2015

Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan

Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.

Federated Applications (FedApps) Training session

Date: April 26 to 28, 2016

Venue: Dar es Salaam - as part of UbuntuNet Alliance's strategy for deployment of AAI (Authorization and Authentication Infrastructures) in the region.

Attendees: 22 engineers from 14 NRENs.

Eduroam workshop in Kyrgyzstan

Date: February 27 - 28, 2017

Venue: National Information Technology Center, 265a Chui Avenue, Bishkek, Kyrgyz Republic

Attendees: 14 participants from 12 institutions of Kyrgyzstan.

Eduroam workshop in Tajikistan

Date: March 1 - 2, 2017

Venue: Tajik Technical University named after M.Osimi, 10 acad. Radjabov str., Dushanbe, Tajikistan

Attendees: 14 participants from 13 institutions of Tajikistan.

5. DEPLOYMENT WITHIN REGIONS

5.1. AFRICA

5.1.1. Mozambique

Since September 2016, Mozambican Academic Network (MoRENet) has been working with the support of Brazilian National Research and Education Network (RNP) in an international cooperation project to implement an eduroam-roaming operator in Mozambique.

Last January just five months after starting the project, eduroam's main server in Mozambique started operating at a pilot stage. Late March it was officially accepted by the international *eduroam*.



Where can I eduroam?

eduroam > Where can I eduroam?

Having started in Europe, eduroam has rapidly expanded throughout the research and education community and is now available in 89 territories worldwide and emerging pilot locations.



During this period, these were the performed activities:

Month	Performed Activities
September	Planning and schedule
October	Preparing and conducting online training
October	Policy writing
October	Web page development of the Mozambican federation
October	Drafting the technical specifications document
October	Writing the term of adhesion
November	Installation of the Operational System in the server
December	Configuration of the eduroam server
January	Elaboration of the XML eduroam file
January	Final configuration adjustments
March	eduroam statement signature
March	Acceptance of the eduroam internacional

As shown, most of the documentation activities were performed in October 2016. In November, the activities suffered a short interruption but resumed in December.

In general, it can be said that:

- September 2016 was remarkable for the project planning, including the preparation of the online training on eduroam;



- b) October 2016 was remarkable for the online training and by the elaboration and publication of documents of formalization of the eduroam in Mozambique;
- c) November and December 2016 were remarkable for the installation and configuration of eduroam roaming server in Mozambique. And since the MoRENet analyst responsible for the activity was in Brazil for training, the last activity was performed together in person with RNP expert in Brasilia;
- d) In January 2017, some final adjustments were made to the eduroam server configuration. This activity arose as a result of unforeseen problems in the configuration of the server but they were solved with the support of eduroam international;
- e) In February 2017, the server was remotely monitored until the next month when the request to include the new roaming in the international eduroam was officially accepted.

Throughout this project, RNP could contribute to the implementation of eduroam in Mozambique not only with technical knowledge, but also with a document structure that can be checked on eduroam web page in Mozambique (in Portuguese):

<http://eduroam.morenet.ac.mz/index.php/pt/>

The exercise of adapting these documents to a different country ended up requiring RNP team to update and consequently improve some documents, thus contributing to the improvement of its own management processes. After six months of this cooperation project, RNP team is proud of its contribution to the development of services in the MoRENet. In addition to that, the procedures and knowledge in technology of the RNP were improved.

In addition to that, if RNP had to repeat the current experience, it would require less time now that the online training is ready and the experience of performing a "zero-point" configuration has already been exercised. However, given the technical difficulties encountered over this period, some improvements are recommended:

- a) Development of a standard online training on eduroam, which guaranteed the same level of knowledge for the new federations in the world;
- b) Designing a standard online server configuration training to help analysts in the new institution perform their technical procedures;
- c) Development of a program (or script or technical procedure) to report, such as a security audit, which eventually changed in a new server installed after the configuration, has been completed. This is a useful measure to quickly identify why the service has suddenly ceased to function, as it did in this project;
- d) Development of a program (or script or technical procedure) that informs the quality of the network connection between the institution that is installing the new federation and the



institution that is technically supporting the installation. This is an important step in enabling a "remote assisted support" to the local server configuration.

5.2. THE CARIBBEAN

Several activities were carried out as part of MAGIC's WP2: Platforms for Mobility and WP3: Cloud Provisioning and Groupware Standards to support of the following objectives in the Caribbean:

- Strengthen the regional technical infrastructure for eduroam
- Increase the number of deployments of eduroam
- Increase collaboration between scientific and academic groups in the Caribbean and the rest of the world
- Build capacity in the support, maintenance and administration of Colaboratorio

The details of the technical activities performed and outcomes are outlined in the sections that follow.

5.2.1. WP2 Activities

Objective 1: Strengthen the regional technical infrastructure for eduroam in the Caribbean

Work Completed:

- Installation and configuration of a secondary National Proxy Radius Server (NPRS) for TTRENT (Trinidad & Tobago Research and Education Network) that can be used a secondary server for other National Roaming Operators (NROs) in the Caribbean.
- Peering and testing of the new NPRS with the eduroam Top Level Radius Server (eTLRS)
- Migration of institutions in Trinidad & Tobago to the new NPRS

Date Completed 2017-03-10

Outcome: The addition of a RADIUS proxy server outside of Trinidad & Tobago to ensure Security, Stability, and Resiliency of the eduroam service regionally.

Objective 2: Increase the number of deployments of eduroam in the Caribbean

Work Completed:

- Assessment of institutions regionally to determine which ones have the wireless infrastructure to support deployment of eduroam.
- Assisted institutions with the planning and deployment of eduroam (UWI, UTT, COSTAATT).





Date Completed 2017-04-28

Outcome: Deployment of eduroam in 5 additional countries (Anguilla, Barbados, Grenada, Montserrat and Jamaica) and one additional eduroam pilot in Barbados.

Technicians, academics and researchers in the Caribbean had the opportunity to benefit from “Caribbean MAGIC”, a 3-day series of technical training and scientific discourse from April 10-12 at the University of the West Indies (UWI), Cave Hill Campus in Barbados.

Collaborating with the UWI, MAGIC have hosted a 2-day training session on eduroam, facilitated by GÉANT, Europe's leading collaboration on e-infrastructure and services for research and education. This have target the technical and IT representatives from various universities and colleges in Barbados and the Eastern Caribbean. For further information on Eduroam, and its application in the Caribbean region.

On April 12, the Global Science Communities of MAGIC, in collaboration with the Centre for Resource Management and Environmental Studies (CERMES) at Cave Hill, have hosted an Enviro-Health seminar, enabling a sharing of recent research and initiatives of the researchers, academics and practitioners in the respective sciences of the environment and health.

Details regarding the training, the seminar registration, connection for those participating virtually visas is available at this page: <https://eventos.redclara.net/indico/event/794/>

5.3. THE ARAB REGION

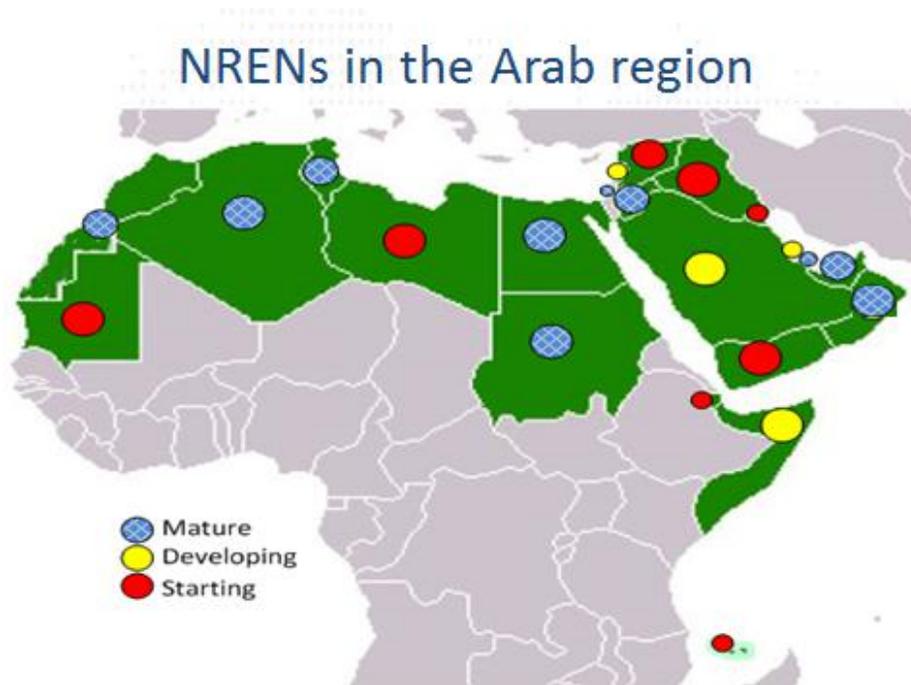
The Arab region consists of 22 Courtiers, 12 in Asia (Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen) and 10 in Africa (Algeria, Comoros, Djibouti, Egypt, Libya, Mauritania, Morocco, Somalia, Sudan and Tunisia).



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In fact, not all Arab countries have National Research and Education Networks (NRENs) in place. The above map shows that 10 countries have mature NRENs, others are in the state developing NRENs and some minority are still in very early stages. The main reason for this is the conflicts and instability in the region especially in Libya, Syria, Yemen and Iraq and thus will not be possible to have any kind of eduroam activities there. However, ASREN is spending many efforts in these countries to promote the concept of NREN and to encourage universities to cooperate towards having some form of NRENs.

5.3.1. ASREN's Approach

ASREN decided to take the opportunity of the support of the MAGIC Projects and MAGIC partners to develop eduroam in the region. Our approach was based on the following:

- Promoting eduroam at all levels including decision makers, NRENs CEOs, NREN technical staff and users in the universities. Promotional material including brochures, documents and giveaways have been produced by ASREN and in cooperation with RedCLARA.
- Capacity building and technical support which was provided to the NREN teams through workshops, webinars, online material and technical support via phone or email or VC calls.



- ASREN also encouraged its NRENs by announcing awards and recognition of successful implementations during its annual conference every year. Each successful NREN in implementing eduroam received ASREN Trophy from ASREN Chairman and was also announced in the media.

5.3.2. Main Activities:

ASREN, and in cooperation with its MAGIC partners conducted the following activities towards eduroaming the region:

- I. Conferences: MAGIC Project and eduroam mentioned in all ASREN conferences, meetings and workshops:
 - ASREN annual conference e-AGE 2015, Casablanca 7-8 December 2015. A special session and a booth on MAGIC and eduroam.. The conference was served by eduroam. Lebanon and Morocco received ASREN Trophy for success on eduroam.
 - ASREN annual Conference e-AGE 2016, Beirut, 1-2 December 2016. a side roundtable was allocated for eduroam discussion. The conference was served by eduroam too.
 - eduroam was on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on these developments.it was also discussed during ASREN monthly VC meetings.
- II. Technical and hands-on workshops:
 - Workshop on Joining eduroam and Identity Federation: September 8 to 10, 2015, Amman, Jordan. The workshop was attended by 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan. The training was conducted by ASREN in cooperation with CESNet of the Czech Republic.
 - Workshop on Identity Federation Infrastructure: December 3 to 4, 2016, American University at Beirut (AUB), Beirut, Lebanon. The workshop was attended by 22 participants representing Morocco, Algeria, Lebanon, Palestine, Oman, Egypt, Somalia, Malawi and Jordan. The workshop was coordinated with CESNet and GEANT.



IV. Webinars and Conference Calls:

- A technical support team was formed from some staff from Lebanon and Jordan to provide technical assistance and support to the staff of other NRENs.
- Several Conference calls and webinars organized to exchange knowledge and to follow up with technical staff at NRENs with support of the technical people from GEANT and CESNet in addition to ASREN team.

V. Follow up:

- eduroam was on the top of the agenda of ASREN regional meetings with EUMEDCONNECT3 and AfricaConenct2 meetings. The main reason is to promote and follow up with NRENs on eduroam. it was also followed up during ASREN monthly VC meeting with its partners.

5.3.3. Main Achievements:

VI. Full eduroam implementation in:

- Morocco through its NREN (MARWAN), <http://eduroam.ma/index.php/en/>
- Algeria through its NREN (CERIST), <https://www.eduroam.arn.dz/>
- Lebanon through the American University in Beirut <http://www.aub.edu.lb/it/Documents/eduroam-IT-Services-20150415.pdf#search=eduroam>
- UAE by its NREN (Ankabut) <http://www.ankabut.ae/en/Pages/default.aspx>
- KSA, by KAUST University, <https://eduroam.kaust.edu.sa/Pages/Index.aspx>
- Qatar by Qatar University, <http://www.qu.edu.qa/>

VII. Pilots in advanced stages:

- Jordan
- Egypt
- Tunisia
- Oman

VIII. Starting:

- Paestine
- Sudan
- Kuwait
- Somalia



– Mauritania

5.3.4. Way Ahead:

ASREN has built a pool of technical capacities across its region on eduroam issues including technical, administrative and legal requirements which will be utilized by ASREN to provide support to new countries, NRENs and universities who want to join.

ASREN will continue its efforts to promote eduroam at all levels and will encourage and attract more countries to have a place in the eduroam map.

ASREN had a unique story to start eduroam in a country with no NREN by a leading university such as the American University in Beirut which started the eduroam in its campus and now other universities are following. ASREN is now working with Kuwait University which will hopefully lead to more universities to join.

5.4. COUNTRIES EDUROAMING:

In June 2015, when MAGIC started, there were 74 countries eduroaming and 13.390 hotspots, a year later, in June 2016, MAGIC and worldwide eduroam efforts changed those numbers into 77 countries and 17.937 hotspots (Georgia, Ukraine and Uruguay, were added in the MAGIC scope). In April 2017, eduroam counted with 89 countries.

eduroam in Africa: Since MAGIC started the eduroam status in Africa is growing, today there are 6 production deployments - Kenya, Morocco, Uganda, South Africa, Zambia, Algeria - and 10 Pilot deployments - Zimbabwe, Somalia, Ghana, Malawi, Nigeria, Senegal, Egypt, Sudan, Tanzania, Tunisia.

5.4.1. New Production Territories:

1. Sri Lanka
2. The Phillipines
3. Pakistan
4. Uruguay
5. United Arab Emirates
6. Ecuador
7. Mexico
8. Costa Rica
9. Colombia
10. Argentina

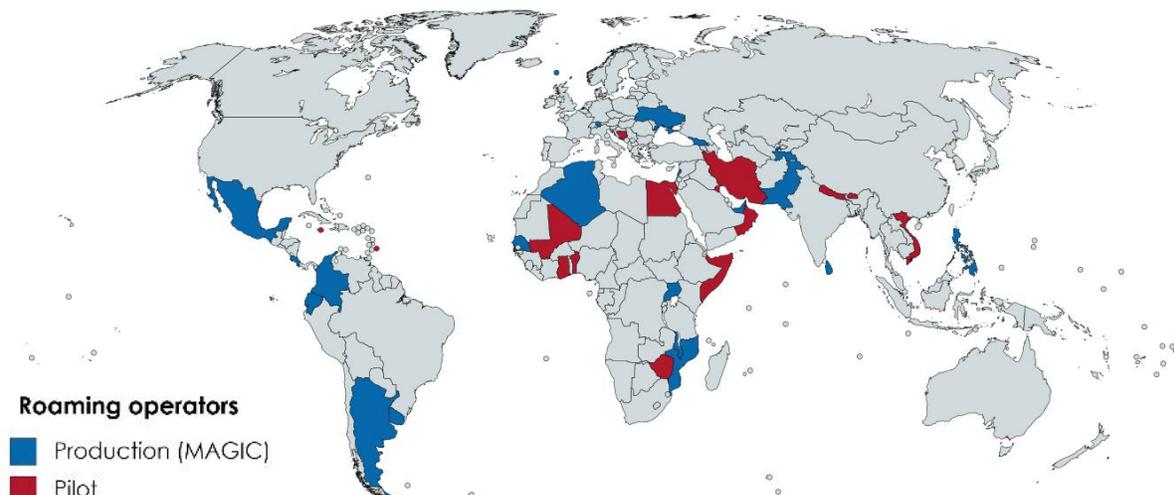


11. Uganda
12. Lebanon
13. Algeria
14. Georgia
15. Ukraine
16. Senegal
17. Malawi
18. Mozambique
19. Tajikistan
20. Greenland
21. Faroe Islands
22. Liechtenstein

5.4.2. New Pilots:

1. Bosnia & Herzegovina
2. Vietnam
3. Bhutan
4. Nepal
5. Iran
6. Oman
7. Egypt
8. Kuwait
9. Jamaica
10. Barbados
11. Mali
12. Ghana
13. Somalia
14. Zimbabwe
15. Benin

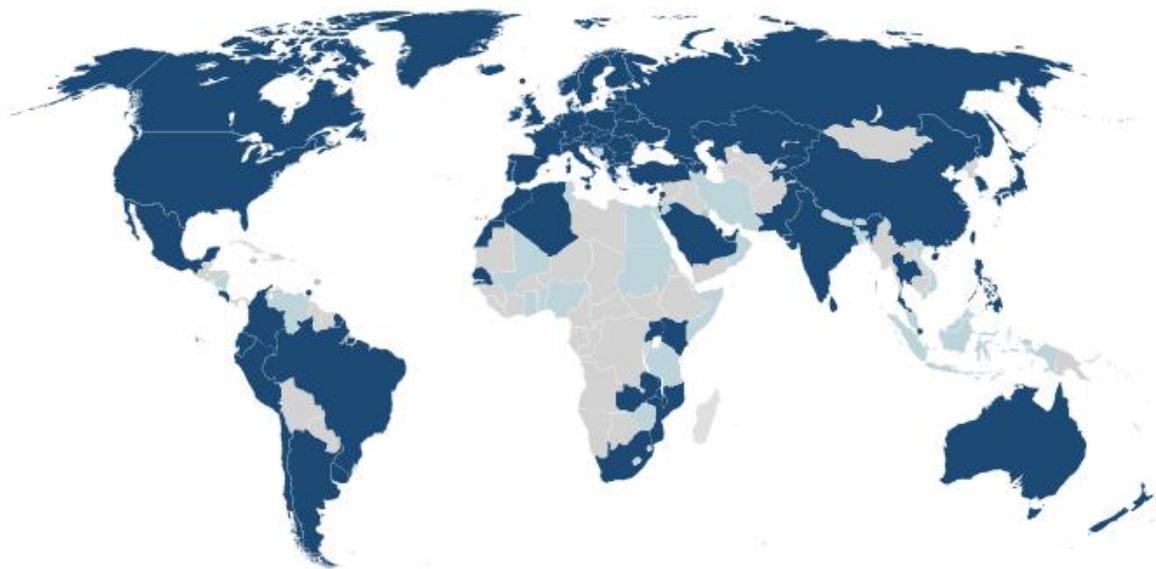
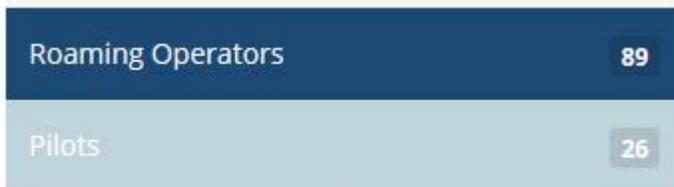
Below are marked the countries that are eduroaming worldwide at: <https://www.eduroam.org/where/>.



Just remembering that membership of the European Confederation is within the scope of this group and not reported to the GeGC (Global eduroam Governance Committee). Same with the Latin American Confederation (CLATe).

So, as result of MAGIC project, there are 15 new pilots and 22 new territories - all supported by MAGIC with 4 in Europe, 6 in CLATe and 3 in combination with the XeAP project within TEIN*CC/TEIN/APAN/AARNet.

The actual eduroam world map is:



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6. CONCLUSION

In the beginning of MAGIC project, there were 74 roaming operators and 13.390 hotspots all over the world, now eduroam is available in 89 territories worldwide with more than 20.280 hotspots. This advance is result of many training sessions, speeches in conferences and in some regions even consulting. This shows that when a project is running with feasible goals it is possible to motivate partners to reach them. In the MAGIC project, although the goals were challengeable, the project team have motivated their partners in order to implement eduroam service in every continent.



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European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D3.1
Collaboration portal implemented for 2 new
NRENs

Progress Report

MAGIC Deliverable: D3.1 Collaboration portal implemented for two (2) new NRENs

Document Full Name	MAGIC WP3 D3.1 Collaboration Portal Implemented for two new NRENs
Date	14-09-2015
Activity	Cloud Provisioning and Groupware Standards
Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: The MAGIC project, in its work package 3, has the goal to deploy Colaboratorio service instances in several NRENs. The initial commitment was to achieve two new instances, and it was accomplished and over-achieved with a total of 3 NRENs, in 2 regions. The new implementations of Colaboratorio were done in Ecuador (CEDIA), Costa Rica (CONARE) and Nigeria (NgREN).



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MAGIC (Middleware for collaborative Applications and Global virtual Communities – Project number: 654225) is a project co-funded by the European Commission within the Horizon 2020 Programme (H2020), Directorate General for Communications Networks, Content and Technology - eInfrastructure. MAGIC began on 1st May 2015 and will run for 24 months.

For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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From	Gustavo García	CLARA	10-09-2015	CLARA
Revised by	Guido Aben	AARNet	11-09-2015	AARNet
Revised by	Ognjen Prnjat	GRNET	14-09-2015	GRNET
Revised by	Claudio Chacón	CEDIA	14-09-2015	CEDIA
Revised by	Maria Rocio Cos	CUDI	14-09-2015	CUDI
Approved by	Florencio I. Utreras	CLARA	14-09-2015	CLARA



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1. INTRODUCTION

RedCLARA as member of the global academic and research networking community, has been working for several years in deploying and implementing services for its communities. The Colaboratorio service is one of the most remarkable advances regarding this work. The service can be described as an application market focused on the communities, and its implementation can help to bring together communities in different regions. Nowadays, the Colaboratorio offers services like a communities management framework based on Jomsocial, a Webconference system based on MCONF, a Wiki service, the Filesender (developed/funded/supported by the NRENs AARNet, BELNET, HEAnet, SURFnet, and UNINETT), a Videoconference scheduling service called SIVIC, and tools for news, funds notifications, and events management. This effort brings all the created content, and collaboration efforts in a common space provided by the NRENs for the NRENs. This report contains a description of this work, and references of three (3) new Colaboratorio implementations that are part of the future work in the MAGIC project.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the editor, Gustavo Garcia (RedCLARA), and copied to the Management of the MAGIC project.

3. GLOSSARY

AARNet	Australian NREN
BELNET	Belgium NREN
CEDIA	Ecuadorian NREN
CKLN	Caribbean Knowledge and Learning Network
CONARE	Costa Rica's NREN
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
DNS	Domain Name System





HEAnet	Ireland NREN
NgREN	Nigerian Research and Education Network
NREN	National Research and Education Network
RENATA	Colombian NREN
SURFnet	The Netherlands NREN
UNINETT	Norway NREN
WACREN	West and Central Africa Research and Education Network

4. REFERENCES

[R1] MAGIC Website <http://www.magic-project.eu>

5. EXECUTIVE SUMMARY

The Colaboratorio service has been implemented in the past at RedCLARA (Latin-America), the Caribbean (CKLN), and Colombia (RENATA). During the first phase of the MAGIC project, the work package 3 team has deployed the Colaboratorio in three new NRENs: Ecuador (CEDIA), Costa Rica (CONARE) and Nigeria (WACREN/NgREN). The Argentinean NREN is also in pilot, so that future implementations are already in preparation. The original goal for the reporting period was to have two (2) new implementations. The promotion of the MAGIC project, and the interest in working with the international community, was the key factor to surpass the committed number of implementations. Another important element, is the inclusion of NgREN - the Nigerian NREN - which makes the African continent as the third region to implement the Colaboratorio service.

6. DESCRIPTION OF THE INTEGRATION WORK

The Colaboratorio service integration works as a traditional service provider (SP) role in an identity federation. The service is provided by an specific organization, and database resides in the service provider infrastructure. Nevertheless, in addition to the SP integration using the SAML2, the Colaboratorio uses a HTML/JavaScript/Iframe integration allowing customer portal to use the service as their own. The following figure shows how the integration is done, and the interfaces in each part. It is worth mentioning that Colaboratorio's goal is allowing



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to each NREN to provide feeds for content and services. The Colaboratorio can include local services in the interface (Colombia's NREN is a good example of using this), allow to use RSS feeds for news and events (under development), and integrate NREN service instances for applications like Videoconference scheduling or Web-conference.

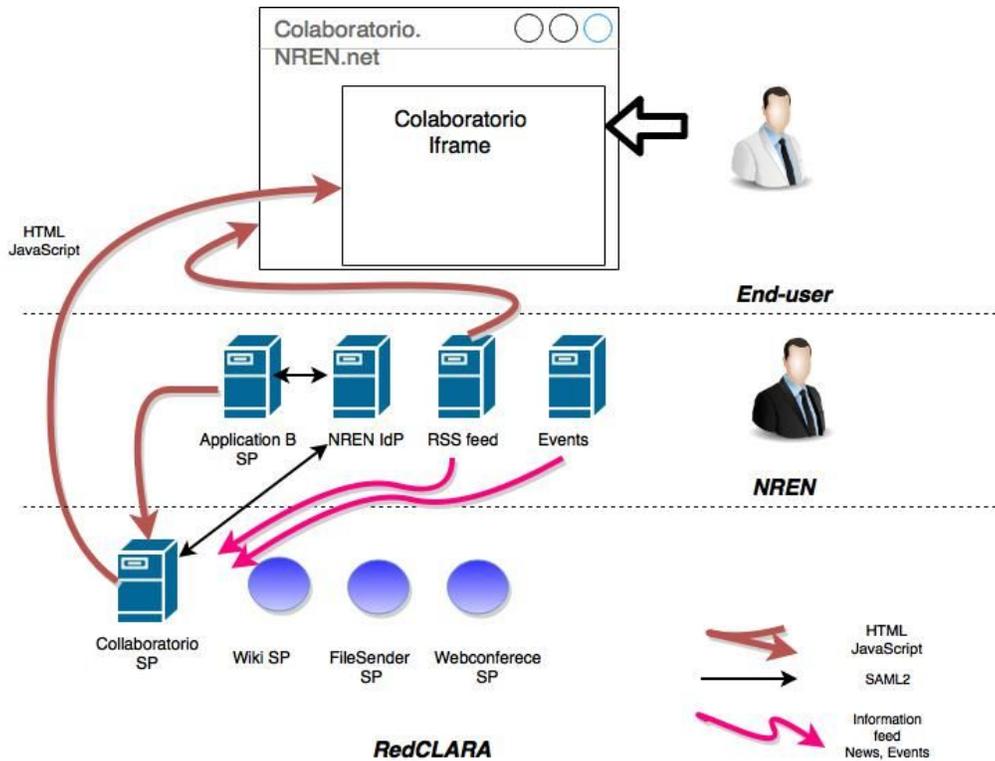


Figure N°1. Architectural description.



7. INTEGRATED SERVICES

All the integrations reported in this document include the following services:

Communities portal: Is an application portal that allows to create and manage communities. Each community member in the portal can share information, post messages, create events, invite other members, and use applications in the communities context.

VCEspresso: Is a web-conference service based in the MCONF branch of the Bigbluebutton application. The MCONF application work in a federated network of Web-conference servers where multiple servers can be use to provide specific services or redundancy. The VCEspresso allows multiple video, and audio conferences with content sharing and recording capabilities, all associated to the communities in the Colaboratorio.

Wiki: The wiki service is based on Mediawiki with a customized interface to Colaboratorio. The Wiki is used for creating web content in a collaborative way.

FileSender: The Filesender application allows sharing big files. The user can upload a file and share the link with a group of users. The Filesender is a application developed/funded/supported by the NRENs AARNet, BELNET, HEAnet, SURFnet, and UNINETT.

Indico: All events in the Colaboratorio are automatically created in an event management system based on Indico. The Indico can handle all aspects in an event like participants, registration, presentations, schedule and many others. The Indico is an application developed by the CERN.

8. THE NEW IMPLEMENTATIONS

In this sections are shown the Colaboratorio instances which were developed, are described. The total number of users in the Colaboratorio has increased by more than 80% since 2014. One of the NRENs that contributed considerably in this respect was RENATA from Colombia with a total of 2441 users. Also, Ecuador, Costa Rica, WACREN, CKLN and Argentina that contributed with 1118 users. The following table shows a summary of the users registered in the Colaboratorio by



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NREN or organization. It is worth noting that NgNREN/WACREN implementation is very recent and thus the number of active users is expected to grow.

NREN/Organization	Country/region	User count
CEDIA	Ecuador	313
CKLN	Caribbean	154
CONARE	Costa Rica	436
InnovaRed	Argentina	208
RedCLARA	Latin-America	2636
RENATA	Colombia	2441
WACREN	West-Africa	5
TOTAL		6193

In the following sections, are shown the implementations carried out by the NRENs with the support of the MAGIC WP3 working group are shown.



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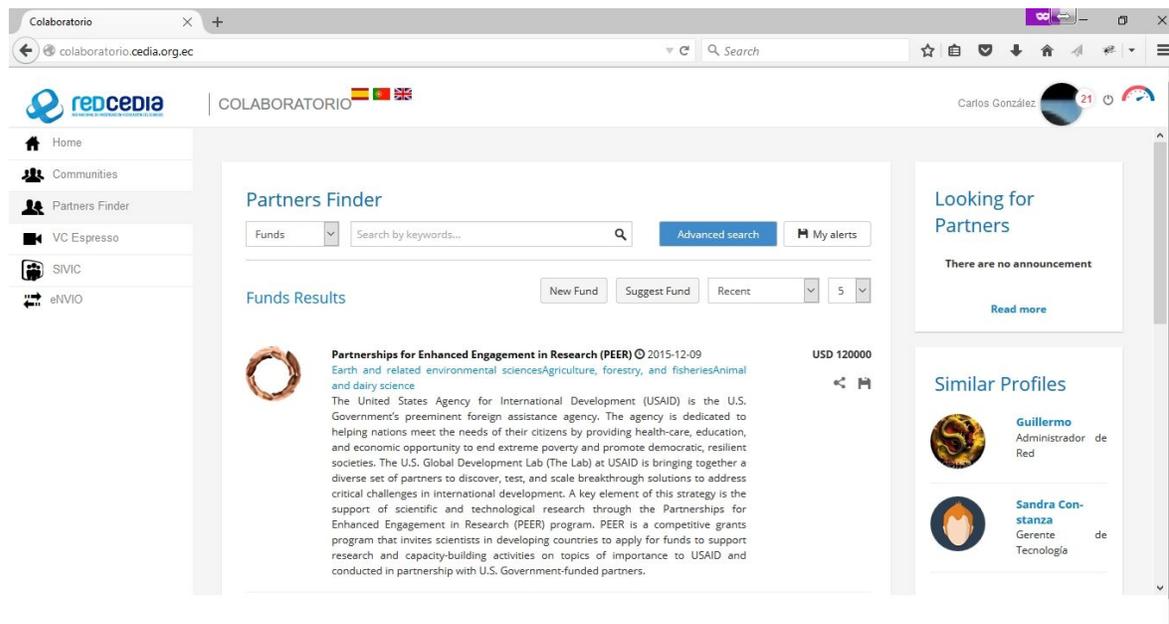


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8.1. CEDIA

URL	http://colaboratorio.cedia.org.ec
Implemented on	August 2015
Responsible	Claudio Chacón claudio.chacon@cedia.org.ec



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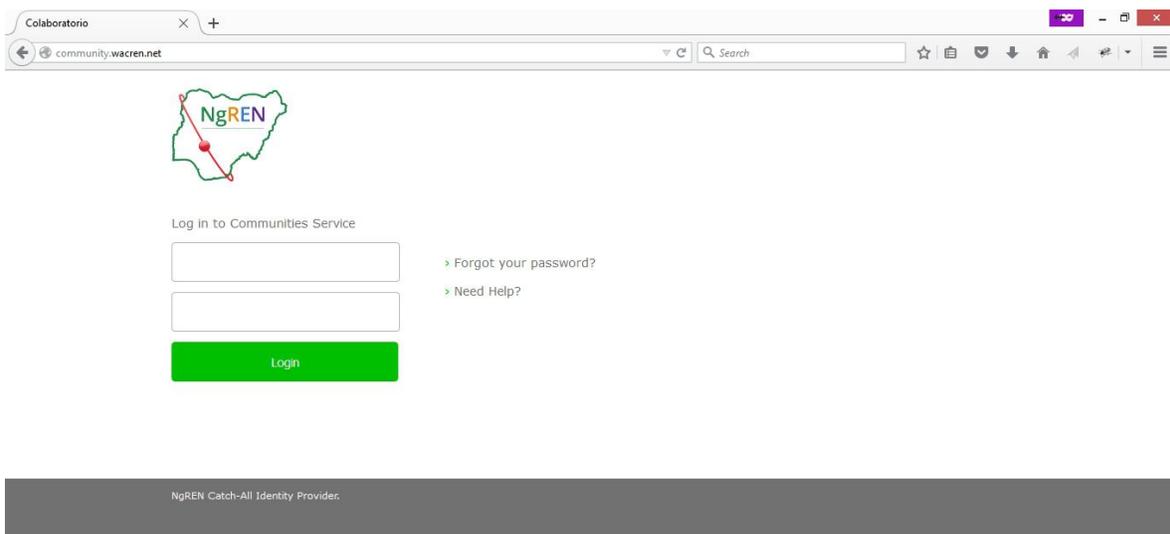


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8.2. WACREN

<i>URL</i>	http://community.wacren.net
<i>Implemented on</i>	July 2015
<i>Responsible</i>	Omo Oaiya omo@wacren.net



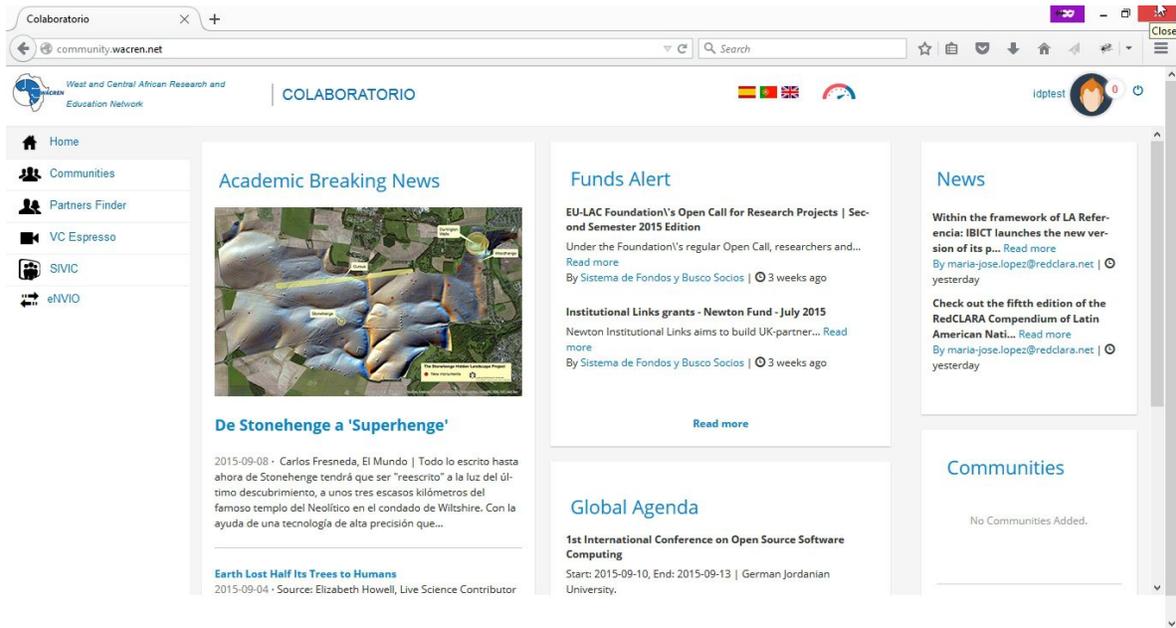
7



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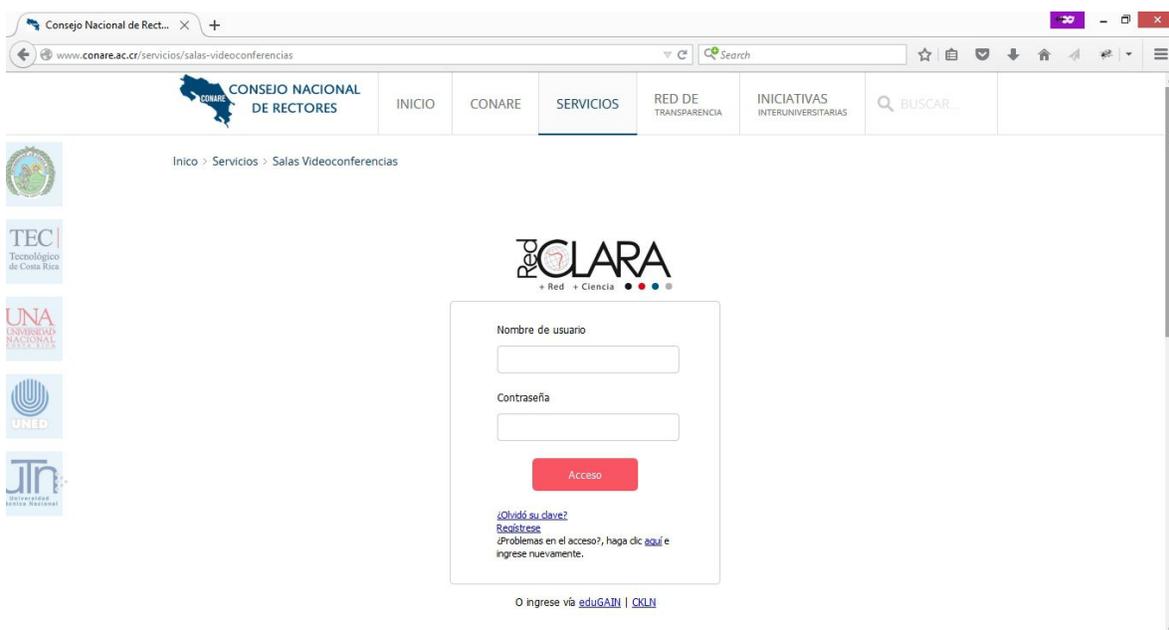
This project is co-funded by the Horizon 2020
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8.3. CONARE

URL	http://www.conare.ac.cr/colaboratorio/index_doc.html
Implemented on	August 2015
Responsible	Danny Silva dsilva@conare.ac.cr



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9. UNDERGOING INTEGRATIONS

In addition to the described work, the MAGIC project team has also made initial contacts and the evaluation work is on going with CUDI (Mexico), ASREN (Arab States) and UbuntuNet (Eastern and Southern Africa). While INNOVARED (Argentina) has a testing environment in place and further advance is expected in the following months.

10. CONCLUSION

The Colaboratorio service is growing, both in terms of geographical spread and in terms of the numbers of users. The MAGIC project is playing an important role in its development and adoption, while the deployments carried out by the NRENs themselves help to improve the service by providing feedback. The next steps in the MAGIC development will be:

- a) To promote the adoption of Colaboratorio in other regions like South Africa, Middle East, and Europe.
- b) To improve inter-operability by defining and working in the group management standards
- c) To add more services, provided by different NRENs



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European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D3.2
Assessment of the existing Group Management
Standards and Value Services for Global
Communities

Progress Report

MAGIC Deliverable: D3.2 Assessment of Group Management Standards, NREN tools and value services

Document Full Name	MAGIC WP3 D3.2 Assessment of group management standards, NREN tools and value services for global communities
Date	19-10-2015
Activity	Cloud Provisioning and Groupware Standards
Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: The Group Management in Federation (GMF) technologies and standards was the focus of this deliverable. The document contains the results from the research on the existing technologies like Openconext, Perun, Sympa, Oauth, SAML2, among others. This work will be the base for the terms of reference in order to advance in the MAGIC WP3 goals.



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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo García	CLARA	10-9-2015	CLARA
From	Michal Procházka	CESNET	10-09-2015	CESNET
Contribution by	Soňa Mastráková	CESNET	14-09-2015	CESNET
Contribution by	Michal Procházka	CESNET	14-09-2015	CESNET
Contribution by	Nicolas Liampotis	GRNET	12-10-2015	GRNET
Contribution by	Ognjen Prnjat	GRNET	12-10-2015	GRNET
Contribution by	Christos Kanellopoulos	GRNET	12-10-2015	GRNET
Contribution by	Niels Van Dijk	SURFNET	15-10-2015	SURFNET
Contribution by	Ricardo Makino	RNP	16-10-2015	RNP
Contribution by	Carlos Gonzalez	CLARA	16-10-2015	CLARA
Contribution by	Michal Procházka	CESNET	22-10-2015	CESNET
Approved by	Florencio Utreras	CLARA/CEO	23-10-2015	CLARA



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1. INTRODUCTION

The MAGIC project stands for defining a Group Management in Federations (GMF) solution to foster sharing applications and resources in the community. The focus of GMF is in maintain group information in a central and secure location, and providing the capacity to share digital resources with other organizations or domains. For instance, the NRENs will be capable of handling the authorization based on group ownership. The NREN users could share resources with a complete group, access to specific functions or applications depending on their role, among others. Standards and technologies to handle GMF in a domain scope already exists, and there are initiatives of protocols to share this information like VOOT or Grouper, under the concept of virtual organizations. The MAGIC group will select a solution to be implemented in one application market, and establish a pilot with other one sharing group details in two applications. The first step towards this goal is to compare and evaluate the possible solution. This document presents the evaluation of the most advanced solutions in the area, and it will serve as the base ground to build requirements and advance to the committed pilot implementations.

KEY FUNCTIONS AND CAPABILITIES

We can reveal the GMF importance through the exposure of some use cases commonly seen in the collaboration environment. For the MAGIC group, the GMF should address cases like:

Authorization: An application in one service provider domain has a user connected to it. When the user wants to use an specific feature, the GMF should check if he belongs to an specific group or role, and allow or deny the access. All of this shall be done in a federated approach, and the user group information could be anywhere in its home institution.

Share information about groups: Some user applications could require or need to share its information to other domains. For instance, A specific group in Biology can benefit from having its existing public to the global community, and be able to use it in a remote application. This information can include: Global group type classification, Participants in the group, among others.



Single Management interface (create and update group information):

Nowadays, the organizations have to create groups and manage them in almost every application. The above leads to a highly redundant information, and complexity in its administration. A single domain shall have a single repository, and administration interface for its groups.

Federated management: Is the simplest and central capacity that GMF will fulfill. The groups information must be always up to date, and this requires management at the source. Every institution shall have the capacity to handle their groups information, and make it available to the entire community with the options to segment access or customize privacy features.

2. DESCRIPTION OF TECHNOLOGIES AND STANDARDS

In the following section, the WP3 working group describe the group management technologies available and their characteristics. The listed solutions have been deployed in several organizations across the academic community. The evaluation of the technologies is focused on their features, and how it can be used in a multi-virtual-organization environment.

2.1. SAML2

The Security Assertion Markup Language 2.0 (SAML2) is an open standard and one of the key technologies for federated identity. It enables single sign-on (SSO), which is used to decouple authentication and authorization process from application. It means that a user can use a single credential to access multiple applications. User's credentials are not stored in these applications, they are stored in trusted attribute authorities, which handle authentication and authorization processes by themselves. SAML2 is used to exchange these authentication and authorization data, called assertions. Assertions are in XML format. One assertion represents a set of information about an identity, made by SAML authority (e.g. SAML server). Assertions are exchanged between identity provider, an entity which is able to verify user's credentials and service provider, an entity which needs identity provider to verify user's credentials.

According to this request-reply model, there are 3 kinds of assertions: authentication assertion, attribute assertion and authorization assertion. Authentication assertion serves to assert, that the identity was authenticated by authentication mechanism at a certain time. Attribute assertion serves to assert,



that the identity was associated with the specified attributes (name, surname, etc.). Authorization assertion contains a proof, that the identity has been authorized to access specific resource with specific rights.

Groups information can be carried by SAML2 in two ways:

1. Attributes: In this scenario, the group information is carried as SAML attributes as part of the Authentication statement. Many attributes in the commonly used eduPerson schema actually represent groups:
 - a. eduPerson{Scoped}Affiliation provides a fixed naming scheme for labeling people into groups like student, faculty, member, etc
 - b. eduPersonEntitlement is used to express roles and rights and may represent groups of people.
 - c. eduMember IsMemberOf is commonly used to express group memberships

In addition SAML allows arbitrary attributes to be used to express group membership.

Note that in this scenario the information is only available when a user logs in. This may therefor not serve all use-cases

2. SAML Attribute Query: This protocol provides a back channel for querying attribute- and thus also group- information from an SAML Attribute Authority. Note that authorisation management between the SAML Attribute Authority and the requestion Services is based on the same mechanisms as between Identity Providers and Service Providers (SAML metadata). This mechanism is rather course, and may therefor not serve all use-cases.

Finally, it should be noted that SAML supports a variety of security mechanisms at transport- and message-level, namely SSL 3.0 or TLS 1.0 for transport-level security and XML Signature and XML Encryption for message-level security.

For more information about SAML2, please see <https://www.oasis-open.org/standards#samlv2.0>.

2.2. OAUTH2

The OAuth 2.0 authorisation framework (OAuth2¹) is an open standard that enables a third-party application to obtain limited access to an HTTP service, either on behalf of a resource owner by orchestrating an approval interaction between the resource owner and the HTTP service, or by allowing the third-party application to obtain access on its own behalf. Instead of requiring the resource owner to share their credentials with the third party, OAuth allows issuing a different set of credentials than those of the resource owner when a client requests access to

¹Hardt, D., “The OAuth 2.0 Authorization Framework”, RFC 6749: <https://tools.ietf.org/html/rfc6749>

resources controlled by the resource owner and hosted by the resource server. More specifically, the client obtains an access token, i.e. a string denoting a specific scope, lifetime, and other access attributes, which can then be used to access the protected resources hosted by the resource server. Thereby, OAuth separates the role of the client from that of the resource owner and provides the following advantages over the traditional client-server authentication/authorisation model:

- a) Third-party applications are not required to store the resource owner's credentials, typically their password in clear-text.
- b) Servers are not required to support password authentication
- c) Resource owners have the ability to restrict duration of access and/or provide access to only a limited subset of resources.
- d) Resource owners can revoke access to an individual third party without revoking access to all third parties.

OAuth is commonly used to allow users to sign into third party websites using their Google, Facebook or Twitter accounts without exposing their password.

It should be noted that the 2.0 specification replaces and is not backward-compatible with the original OAuth 1.0² protocol described in RFC 5849. OAuth 1.0 was vulnerable³ to session fixation attacks. OAuth 2.0 does not support native encryption capabilities, thus it relies on the SSL/TLS protocol to provide encryption of the sensitive data being exchanged between parties.

2.3. OPENID CONNECT

OpenID Connect⁴ is a new emerging standard for single sign-on and identity provision, published in 2014. It adds an identity layer on top of the OAuth 2.0 protocol, thereby allowing clients to verify the identity of an end-user based on the authentication performed by an authorisation server, as well as to obtain profile information about the end-user. Compared to other popular federation approaches, such as SAML and OpenID 1.0/2.0, its main strengths include usability and simplicity. In OpenID Connect, client applications receive the user's identity encoded in a secure JSON Web Token (JWT), called ID token. Apart from being portable, such ID tokens support a wide range of signature and encryption algorithms. In this context, the ID token resembles the concept of an identity card,

²Hammer-Lahav, E., "The OAuth 1.0 Protocol", RFC 5849: <https://tools.ietf.org/html/rfc5849>

³ OAuth Security Advisory: 2009.1: <http://oauth.net/advisories/2009-1/>

⁴ Sakimura, N., Bradley, J, Jones, M., de Medeiros, B., Mortimore, C., "OpenID Connect Core 1.0", http://openid.net/specs/openid-connect-core-1_0.html



in a standard JWT format, which is signed by the OpenID Provider (OP). To obtain one, the client needs to send the user to their OP with an authentication request. The returned token asserts the identity of the user, called subject in OpenID (sub). Each token specifies both the issuing authority (iss) and the particular audience, i.e. client (aud), for which it was generated. It may specify when (auth_time) and how, in terms of strength (acr), the user was authenticated. It may include additional requested details about the subject, such as their name and email address. Being digitally signed, it can be verified by the intended recipients. It may optionally be encrypted for confidentiality. The ID token statements, or claims, are packaged in simple JSON objects, thus supporting web applications, as well as native / mobile apps.

The OpenID Connect specification defines a set of standard scope values to request the above information to be made available as claim values (e.g. "sub", "name", "email" - see Standard Claims section⁵) from the UserInfo Endpoint. In order to carry group information, OpenID Connect allows additional scope values to be defined and used. For instance the "memberOf" scope is commonly used to get all the groups that the user is member of.

Although SAML had levels of flexibility, security and reliability much greater than OpenID, OAuth or any combination of those two standards, the latest versions of OpenID Connect and OAuth 2.0 provide most, if not all, the benefits that SAML has to offer. For example, from a security perspective, OpenID Connect can provide ISO/IEC 29115 Level of Assurance 1 to 4, through the use of cryptographic and other techniques. Thus, while OpenID Connect is most commonly known for its adoption by Social Media sites for sign-in purposes, it is also gaining traction in enterprise-targeted services, such as Windows Azure Active Directory (WAAD), Ping Federate and PingAccess. There are also mature deployments underway by Deutsche Telecom, AOL, and Salesforce. OpenID connect can also be integrated with provisioning protocols such as System for Cross-domain Identity Management (SCIM) (see below). Finally, it is worth mentioning that while OpenID Connect has many architectural similarities to OpenID 2.0, the identifier format is different and thus Relying Parties need to migrate⁶ those user identifiers to continue serving these users.

⁵ http://openid.net/specs/openid-connect-basic-1_0-28.html#StandardClaims

⁶ Sakimura, N., Bradley, J., Agarwal, N., Jay, E., "OpenID 2.0 to OpenID Connect Migration 1.0", http://openid.net/specs/openid-connect-migration-1_0.html



2.4. SCIM

The System for Cross-domain Identity Management (SCIM) open standard provides a platform-neutral schema and extension model for representing users and groups in JSON format. The SCIM standard can be used to automatically add/delete users from systems or to share information about user attributes, group attributes, attribute schema. SCIM is suitable for cloud-based applications and services, because it is simpler than other existing standards and builds on prior standards. SCIM model consists of the main object, called Resource. Each SCIM Resource is a JSON object. All other objects are derived from the Resource. First derived object is ServiceProviderConfig⁷, which enables service provider to discover SCIM specification features in a standardized form, as well as provide additional implementation details to clients. Second derived object is Schema, which specifies metadata about Resource. Third derived object is CoreResource. There are user and group data contained in the CoreResource object, within their own objects User and Group. More specifically, each user is member of a set of groups (may be empty). For each group that the user is member of, the membership is represented with the existence of an membership object. The membership object has no required properties, but a set of optional properties. For good manipulation with resources, SCIM provides REST API. It is possible to create, update, delete, search, read, replace or bulk resources. Data for the API can be formatted in JSON or XML.

For more information about SCIM, please see <http://www.simplecloud.info/>.

2.5. VOOT

Virtual Organisation Orthogonal Technology (VOOT) standard extends SCIM to exchange information about groups and its members in federated environment. Old version 1.0, which is currently used in some products (Perun, OpenConext, Grouper, COmanage), is not compatible with the new one. Version 1.0⁸ defines a protocol for read-only access to information about users' group membership within an organisation or aggregated across organisations and their role in these groups. VOOT 1.0 provides REST API, which supports 2 calls: retrieve a list of groups the user is member of and retrieve the list of people that are members of a group the user is also member of. Only JSON data format is supported.

⁷ "draft-ietf-scim-core-schema-22 - System for Cross-Domain ..." 2012. 31 Aug. 2015
<<https://tools.ietf.org/html/draft-ietf-scim-core-schema>>

⁸ "Old version - VOOT." 2014. 1 Sep. 2015 <<http://openvoot.org/v1/>>



Current version 2.0 defines a protocol and a data model. Protocol provides information about groups and roles. All requests towards VOOT provider have to be authenticated with an OAuth2.0 Bearer Token. Information about authorization can be found here <https://tools.ietf.org/html/rfc6750>. Protocol can work very well also with OpenID Connect. Data model extends SCIM model with membership object and group types object, so it has four entities: user, membership, group and group type. Group type can be chosen according to the situation, there is no detailed specification in core itself about group types, so it is up to communities to standardize it. Thanks to these 2 additional entities, comparing to SCIM, it is possible to build more flexible environment using VOOT 2.0 data model. For example, when user wants to belong to one group and have 2 different roles in this group, it is possible now with the membership entity, which is a big advantage.

For more information about VOOT, please see <http://openvoot.org/>.

3. EXISTING GROUP MANAGEMENT SYSTEMS

3.1. HEXAA

HEXAA is an External Attribute Authority (EAP) based on SAML2 that can manage Virtual Organisations with fine-grained role management requirements, as well as user profile management to share common data with multiple Service Providers. It is also possible to handle user consent (aligned to the EC data protection directives) and implement custom provisioning hooks.

License: Open source

Current deployments: Hungarian Identity Federation (EDUID), NIFI NREN HPC, e-Science gateway

Modes of deployment:

Sustainability model: Project runs until March 2015, MTA SZTAKI and NIIFI will maintain it after it.

3.2. OPENCONEXT

OpenConext is an open source collaboration management platform. It provides a SAML2 proxy for identity federation, a group proxy for group management and built-in tools for the management of the service registry and of group providers. OpenConext is an infrastructure that enables groups, teams or organizations to bring together a set of federated tools such as wiki's, mailing lists, or video



conference software for use in a collaboration. More specifically, OpenConext comprises two core components:

- a) Engine is a SAML2.0 (SAML2Int WebSSO profile) compliant authentication proxy capable of acting as an IdP or SP. Apart from the authentication proxy, it also provides a "Where Are You From" (WAYF) service. Moreover, an interface allowing users to express their consent regarding the release of their identity attributes is available. Finally, the OpenConext Engine includes an interface enabling users to view and manage profile and group membership information.
- b) API: Serves as the group proxy, also providing a management tool, named Manage. It supports both the Grouper API and VOOT with either OAuth (2.0) or Basic Auth authentication.

All other components are provided by 'third parties', including SPs, IdPs and group providers.

To ease OpenConext deployment, several sample implementations of these components can be installed as part of the OpenConext VM. These include: i) Teams, a federated self-service GUI for managing collaboration groups which uses Internet2's Grouper as its back-end; ii) Mujina, a mock SAML2 IdP and SP, and iii) Profile, an SP that displays profile, groups and application information to end-users. A MySQL database is shared among OpenConext components for storing configuration data.

The remainder of this section focuses on Teams and Grouper, which serve as the basis for the group management capabilities of OpenConext. More specifically, besides serving as an authentication proxy, OpenConext can be configured as a Group proxy. In this context, it allows Group providers to be connected using the Grouper API or the VOOT API. When an SP submits a query to the Group API, all available group information of a given user can be combined taking into account the access control list(s) and attribute release policy in effect for that particular SP. The default OpenConext installation contains the Teams application for managing groups. This provides an easy to use interface for end-users to self-manage groups after login into the application via an IdP. Teams allows an authorised end-user to: create teams; invite and re-invite other team members via email; manage team members; assign basic roles like admin, manager and member; combine groups from connected group providers into new (virtual) teams; search for publicly available teams; request membership information of existing teams. Finally, OpenConext exposes the OpenSocial/VOOT API for the exchange of user and group information using a standardised REST API. The OpenSocial/VOOT API

only implements People and Group REST API calls, it is thus a partial OpenSocial⁹ Container implementation. For authorisation purposes, the REST API uses OAuth 2.0 (preferred) and optionally OAuth v1 (deprecated, though still functional).

License: Apache License Version 2.0

Current deployments: SURFnet (SURFconext), AARnet, Dutch Hacker Space, TraIT; see <https://www.openconext.org/showcases>

Modes of deployment: as a VM

Sustainability model: Maintained by SURFnet and the open source community. It also relies on external open source projects, such as Janus, Grouper, simpleSAMLphp, Shibboleth

3.3. PERUN

Perun is an identity and access management system. It covers management of the whole user life cycle, including user registration, expiration or suspension of the user. It is a tool, whose key features are virtual organisation management, user management, group management, resource management and service management. The system can be customized for various use cases. Perun has been designed to work in distributed environments like identity federations and grids.

Perun does not manage primary user identities; users have to come with some existing identity like federated identity, social identity or digital certificate. Users can link those identities, so they will be recognized properly even if they use different identities. Users does not need to create any additional credentials, because Perun can publish linked identities to the end services.

Because user communities usually already have some local user/group management system which cannot be simply connected to the federated services, Perun supports import/export of existing users/groups. Currently, there is support for communication with external sources using VOOT, SAML2, LDAP, VOMS, SQL (MySQL, Oracle, SQLite) or import data from XML and CSV files. Synchronization can work in both ways.

⁹ OpenSocial Specification: <http://opensocial.github.io/spec/trunk/OpenSocial-Specification.xml>



Basic component for group management is virtual organisation (VO), this concept has been adapted from computational grid environments. Every VO can have several groups and each group can be nested like a tree, so it can have its own subgroup, where the access rights are inherited in the same way. Users be in several VOs as well in any number of groups. Each VO and each group has its own VO/group managers. VO can have not only groups but also resources which represent services to which VO members can have an access. Actually, access management in Perun is done on group level. Every group can have an access to VO's resources. The responsibility for the group management can be delegated from VO manager to the group manager. The group manager can be specific user from the VO or other existing group in VO. Those group administrators obtain permissions to handle the access to resource/service via group membership, so the VO manager is not the only responsible person and does not have to handle all permission/membership issues in the VO.

Perun is specific for its push mechanism which is used for delivering data about users and groups (authorization data) to the end services. Access management for federated services is supported by attribute authority (managed by Perun), but the services which need to know about the user in advance (e.g. videoconferencing systems, reservation systems, computational resources) cannot use attributes about the users from identity federation, because they come when the user logs in. Perun is able to push the information about users/groups to those services via various communication channels.

Perun provides its functions and components via various APIs. The basic API is REST-like API, using JSON as a data container. In case some external system wants to use Perun's functions and components and does not want to use REST-like API, there is possibility to connect via Java library, JavaScript library, PERL library or PHP library. Perun pushes also information to the LDAP which is then used by Attribute Authority or Identity Provider, so information stored in Perun can be used in identity federation world.

Perun has several production deployments where manages tens of thousands users, hundreds of virtual organizations and manages access to nearly 2000 services.

License: FreeBSD License

Current deployments: Czech eInfrastructure, EGI, ELIXIR, SAGRID, Masaryk University

Modes of deployment: as a service or as a VM



Sustainability model: Maintained by CESNET and Masaryk University

3.4. SYMPA

Sympa is not only the [more complete opensource mailing-list manager](#). Sympa wears in its genes group management since 18 years, with a userfriendly web interface. In Sympa, the groups can be provisionned by multiple protocols : VOOT, LDAP, SQL, flat files, SMTP, SOAP and other Sympas. In Sympa the groups membership can be requested by various protocols : VOOT, SAML2, SQL. Sympa proposes 4 different roles. Sympa accepts various authentication method : Federation (SAML2), LDAP, X509. Sympa is scalable for big VOs (with more than 1.000.000 members).

At RENATER ([the service is called Universalistes](#)) we have linked Sympa with the tools so that each VO hosted at RENATER can benefit, in one clic, from mailing list, wiki (with public and private pages), foodles, limesurveys filesenders. We also have copled Sympa with an Attribute Authority in order to permit Sympa group authorizations on any external Services Providers using SAML protocol. The RENATER's Sympa infrastructure is used by more than 1600 VOs with up to 300000 members, but there are biggest deployments in the world.

Licence: Free Software distributed under GNU General Public License, version 2

Current deployments: All over the world, [here are some of the well known organizations that use Sympa](#)

Modes of deployment: As a Service in Universalistes or as a Software

Sustainability model: maintained by RENATER [and the OpenSource community](#)

3.5. UNITY

Unity is a complete solution for identity, federation and inter-federation management. Unity allows its administrators to enable authentication using various protocols, with different configurations for many relaying parties. The actual authentication can be performed using the built-in, feature-rich users database or can be delegated to one of supported upstream identity providers (IdPs). The



information obtained from upstream IdPs can be flexibly translated and merged with the local database (if needed) and re-exported using other protocols.

License: BSD

Current deployments: EUDAT (Work in progress)

Modes of deployment:

Sustainability model:

4. FUNCTIONS COMPARATIVE

Possibilities of interoperability:

Does system support import/export of its data?

If yes, please explain briefly in the *comment*.

Systems	Yes / No	Comment
Hexaa	yes	
OpenConext	yes	SAML2 Metadata import/export in XML is possible in the Janus Service Registry
Perun	yes	Import of users/groups is possible via LDAP, SQL, XML, CSV, VOOT interfaces
Sympa	yes	
Unity	no	

Supported standard protocols:

Does system support standard protocols like SAML2, OAuth, VOOT, SCIM, ...?

If yes, please specify which ones in the *comment*.

Systems	Yes / No	Comment
Hexaa	yes	Hexaa currently supports REST API and SAML2 AA.
OpenConext	yes	OpenConext currently supports VOOT and SAML2 AA. OpenID 2 support is under development.
Perun	yes	Perun currently supports VOOT, SAML2 and REST API. OpenID Connect support is under development.
Sympa	yes	Sympa currently supports VOOT, SAML2 and SOAP.

Unity	yes	Unity currently supports SAML2 AA and SAML2 IdP. OpenID Connect and OpenID 2 support is under development.
-------	-----	---

Multilingual support:

Can system talk to the end-users using different languages?

If yes, please specify which ones in the *comment*.

Systems	Yes / No	Comment
Hexaa		
OpenConext	yes	Metadata is stored in multiple languages. The interfaces support multiple languages.
Perun	yes	English is a default. Notifications and application forms are multilingual.
Sympa	yes	23 languages(English,French,Spanish,Deutsch,Italiano,Nederlands,Portugues,Romana,Català,Cesky,Eesti,Suomi,Turkce “Arabic-in progress”...)
Unity		

Federation and inter-federation support:

Is system able to be connected to the identity federations?

If yes, please explain briefly in the *comment*.

Systems	Yes / No	Comment
Hexaa	yes	
OpenConext	yes	SALM2int and eduGAIN compliant.
Perun	yes	
Sympa	yes	
Unity	yes	

External/homeless identity management:

Does system provide registration of homeless or external (Google, Facebook) identities?

If yes, please specify which ones in the *comment*.



Systems	Yes / No	Comment
Hexaa	No	
OpenConext	yes	Google, Facebook, Twitter, LinkedIn (via simpleSAMLphp proxy)
Perun	yes	Google, Facebook, LinkedIn (via Social bridge IdP)
Sympa	yes	Native registration of sympa+ Google, Facebook..(via proxy)
Unity	Will	It is under development

User-life cycle management:

Does system care about user enrollment/expiration/suspension?

If yes, please explain briefly in the *comment*.

Systems	Yes / No	Comment
Hexaa	No	
OpenConext	No	This is a responsibility for the IDP
Perun	yes	User can have different status within different virtual organisations (valid/invalid/suspended/expired/disabled). Expiration of user membership are per virtual organization.
Sympa	yes	Care about user enrollment/expiration/suspension Care about enrollment/expiration/suspension of a group of users Enrollment also possible from multiple databases (SQL,LDAP)
Unity		

Delegated administration:

Does system provide capabilities to delegate administration of groups?

If yes, please explain briefly in the *comment*.

Systems	Yes / No	Comment
Hexaa	No	
OpenConext	yes	Serves as the group proxy, also providing a

		management tool, named Manage. It supports both the Grouper API and VOOT with either OAuth (2.0) or Basic Auth authentication.
Perun	yes	
Sympa	yes	
Unity		

5. NREN TOOLS AND SERVICES FOR GMF PILOT

The WP3 working group suggested the following tools as the possible candidates for a pilot implementation in GMF:

- A. **Colaboratorio**: Developed and shared by RedCLARA, the Colaboratorio is a space to share applications and manage communities. The Colaboratorio integrates services like Webconference, Wiki, and FileSender around a community. The GMF functions in the Colaboratio could be oriented to share communities associated with a user, so other services can take access decisions on it. For instance: a) a user wants to use Foodl to invite all people in a Astronomy community for a meeting, b) a user wants to share an article about Cancer to the medicine related groups, etc.
- B. **Webconference (MCONF/Jitsi)**: Webconferencing is an application that usually handle groups. It is really common to invite people in a group to attend to meeting or online event. RedCLARA already do this using the communities in scheduling application (SIVIC) in Colaboratorio. With MAGIC, this feature could become an inter-domain feature.
- C. **Shared cloud storage**: Systems like ownCloud allows people in the community to store files in the Cloud. Experience have shown that public clouds are not a safe place for highly sensitive information because of the privacy guarantee. Several NRENs are working on implementing secure cloud storage for its communities. When this environment is in place, a method to share and authorize access to this resources will be required.
- D. **Zimbra**: Is a corporate class email, calendar and social platform with a free version for the communities. This kind of solutions will be a good pilot for academic institutions.



- E. **Wiki:** Collaborative edition of online published content is the main value of any wiki solution. This feature requires permission management, that in most cases is handled within an authentication domain, or just providing full read and write permissions to everyone that is authenticated. A GMF could add value to the wikies by improving its security, and providing a method to provide the right permission to the right people/group.

- F. **eLearning:** Learning Management Systems (LMS) or Massive Open Online Course (MOOC) platforms are one of the most used elements across the academic and research communities. Facilitate course sharing and diffusion could be a great advantage of including GMF in this solutions.

6. CONCLUSIONS

Group Management in Federations (GMF) is taken a lot of interest and attention in the community. We can saw this by the solutions, standards and development involved in this area. The MAGIC work package 3 have studied the solutions available and found that OpenConext, Perun, Sympa, SCIM, and Unity could potentially fulfill the need to manage working groups. There are technologies like OpenConext that has the advantage of the support and the architecture itself that brings together the whole elements for identity and group management. On the other side, solutions focused specifically in the group management and authorization part like Perun or Sympa can be easier to be integrated to the current Latin-American applications market of RedCLARA because less architectural changes would be required. It is foreseen that a standard like OAuth2.0/OpenID Connect or VOOT would be directly or indirectly involved in the integration. Further research in testing and integration results shall be done. The next step in the MAGIC path is to evaluate the define a set of requirements for the GMF solution, and from there taking the next step in adopting one of the evaluated technologies.



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eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D3.3

Planning and design requirements for the group
management and inter-operations standards and
pilot implementation

Progress Report

MAGIC Deliverable: D3.3 Planning and design requirements for the group management and inter-operations standards and pilot implementation

Document Full Name	D3.3 Planning and design requirements for the group management and inter-operations standards and pilot implementation
Date	18-01-2016
Activity	Cloud Provisioning and Groupware Standards
Lead Partner	CLARA
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Classification Attribute	Public
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Abstract: This document contains the requirements for the Group Management in Federation (GMF) technologies and standards for the MAGIC project pilots. The document contains the results from the evaluation of the required use cases, and implementation candidates.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo García	CLARA	10-12-2015	CLARA
Revised by	Michal Procházka	CESNET	14-12-2015	CESNET
Revised by	Nicolas Liampotis	GRNET	14-12-2015	GRNET
Revised by	Carlos Gonzalez	CLARA	14-12-2015	CLARA
Revised by	Alejandro Lara	REUNA	08-01-2016	REUNA
Revised by	Chris Rohrer	UbuntuNet	20-01-2016	UbuntuNet
Approved by	Florencio I. Utreras	CLARA	25-01-2016	CLARA



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1. INTRODUCTION

The MAGIC WP3 work team has been advancing in the evaluation of group management standards and existing technical solutions. Specifically, the team has identified the need for a Group Management solution that allows federated applications to provide authorized user access to certain resources based on group membership, as well as to share group membership information with applications in support of value-added collaboration features for groups. In this deliverable, the work package team has defined a set of requirements for the group management solution in terms of usability, security, privacy and provided functionality. The requirements particularly focus on implementing a standards-based pilot showcasing the group management capabilities in a federated environment. Among the technically feasible pilot applications we evaluated, two have been selected, namely the Docuwiki used in CESNET and the FileSender available at RENATER.

2. GROUP MANAGEMENT DESIGN REQUIREMENTS

This section describes the group management capabilities and features. It contains the functions and why they are needed, as well as classifying the functions by giving them a qualification of importance. As such, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this section are to be interpreted as described in RFC 2119¹.

Supported standards and protocols: The provided solution shall support multiple open standards and protocols that facilitate the integration with other organizations and solutions. The protocols requested will full support in the latest stable version:

1. VOOT for group management or authorization in federations.
2. SAML for attribute sharing and IdP/SP interaction.
3. Desirable SCIM for group management or authorization in federations.
4. Desirable OpenID Connect (OIDC) for commercial providers integration.

¹ <http://tools.ietf.org/html/rfc2119>



5. LDAP connectors for getting information of groups from legacy systems.
6. SQL connectors to gather users and group information from SQL databases.

Information gathering: The system shall be able to implement different trust relations with other federated organizations or resources. Having this as the first premise, the solution shall be capable of providing information that includes:

- An unique, persistent, non-reassignable group identifier that can be shared across other domains without conflicts.
- The group members to be used in specific applications like mailing lists.
- Activities and statistics about the group in order to track federated interactions and behaviour.
- Groups which a user belongs to. Information that will be used for authorization purposes.
- Roles of users within their groups (e.g. “admin”) for the same goal as the above.

The up-to-dateness of user information should be guaranteed through an on-demand and/or recurring verification process, e.g. to deal with changes in a person’s affiliation.

User management: The solution has to deal with getting users in. It must support at least these user enrollment workflows:

- Importing users from existing identity and group management systems via standard protocols. Import of the users can be on-time or recurrent.
- User enrollment based on an application form.
- Invitation of users into the group, e.g. via mail.

User **interfaces and APIs:** The provided solution shall allow creating and updating group information in the host domain. This functionality shall be done through a management interfaces with different permission levels as follows:

- A. The solution shall provide a graphical user interface for privileged users, i.e. administrators.
- B. The solution shall provide a graphical user interface for end-users to see their memberships and allow updating their own information (e.g. affiliation).
- C. The solution shall provide a REST API for allowing clients written in different programming languages to manage group information. Access tokens must be supported for authenticating API calls.



1. The graphical management interface should provide import and export functionality for group information.
2. Based on the type of the service the solution should be able to actively provision information about the groups to the services.
3. The graphical management interface should be easy to localise for target audiences that vary in region and/or language. Multilingual support should include English, Spanish, French and Portuguese in the implementation.
4. The graphical management interface should be user-friendly and intuitive.

Federated management: Integration to SAML2 protocol must be supported. The solution must allow sharing of group information using a SAML2 attribute authority. Support for LDAP- or SQL-based attribute authorities is recommended. This federated function must have the following capacities:

1. The manager must be able to restrict attribute release based on the targeted service provider.
2. The group management information must contain location and language

Secure & *privacy-aware processing of data*: Security and privacy are key requirements. The group management must be secure, and allow to define a set of permissions that guarantee group and users' information is not shared without consent. The main features that the solution must comply with are:

- The solution should satisfy the goals of security as listed in Chapter 2 of RFC 3552², most notably those under “Communication Security” (e.g. Confidentiality, Peer Entity Authentication). As such, X.509 certificates will be used for message signing, securing web service connections, and encrypting data where necessary. The use of certificates signed by public trusted CAs is recommended for all user browser-facing HTTPS connections.
- The solution must provide a mechanism to obtain user consent for sharing group data.
- Users must be able to revoke sharing permissions.
- The solution should allow users to inspect any personal information held. In addition, any user-asserted identity attributes (i.e. not provided by the Home Organisation / Group Manager) should be self-editable.

² <https://tools.ietf.org/html/rfc3552>



3.1. IMPLEMENTATION REQUIREMENTS

- Group management software must securely store the data.
- Service must require only minimum set of data (user attributes) which are required for proper service delivery.
- Access to the group management user interface and APIs must be protected by TLS using trusted X.509 certificate (e.g. TCS³, Let's Encrypt⁴, commercial CA).
- User interface must be at least in English language
- API of the group management software must be documented at least in English and the documentation must be publicly available.
- Group management software and services must be available at least to the end of the project.
- All the accesses to the user interfaces and API must be authenticated.
- Group management software and services should be available through the eduGAIN.
- In SAML protocol group information will be transferred in eduPersonScopedEntitlement attribute.

3.2. APPLICATION INTEGRATION REQUIREMENTS

- a) The pilot implementation must include a use case:
 - i) where group information is obtained in real-time from the federation, in this way, the service provider will get the most updated group membership/information available from the specific user.
 - b) where group information is requested directly by the service, in this way, the services can have information about the group before the user access the service.
- c) The service provider must contain a use case that covers one of the following scenarios:
 - i) **Authorization:** The service provider provides access to an access controlled resource based on the group information.
 - ii) **Group members action:** The service provider will obtain group members list from the federation, and execute an action (invite, share,

³ <https://www.terena.org/activities/tcs/>

⁴ <https://letsencrypt.org/>



etc) for each of its members. A clean example of this is the invitation for a conference to the members of a specific group.

iii) **Group mailing list:** The service provider will execute a notification action based on the mailing list address related to the group, and obtained through the standard group management protocol request.

d) In the pilot implementation, the service provider must use a standard protocol designed for group management in federations. The above excludes direct LDAP or SQL access implementations suited for local environments, and therefore can't be extended to multi-domain approaches.

3.1. ACTIVITIES DESCRIPTION

Activities are divided into groups. First is dedicated to setting up group management systems and the second one is dedicated to service configuration.

3.1.1 Group management systems involved

Perun

Responsible partner: CESNET

Instance dedicated to the pilot: <https://perun.cesnet.cz/edugain/gui/>

Authentication to the user interface: via eduGAIN

Authentication to the API: X.509, username/password, SAML

Attribute Authority: available through the eduGAIN

SYMPA

Responsible partner: RENATER

Instance dedicated to the pilot: <https://groupes.renater.fr/>

(The instance dedicated to the pilot could be: <https://name.domain.tld/>)

Authentication to the user interface: via eduGAIN

Authorization: based on the email user's groups

Group name: magic@groupes.renater.fr

(The group name could be: `groupname@name.domain.tld`)

Services already (automatically) integrated to Sympa:

- Survey tool for members of the group.
- Wiki for members of the group.
- Foodle for scheduling meeting between members of the group.



- Share documents between members of the group.

3.1.2 Services involved

Docuwiki

Responsible partner: CESNET

Instance dedicated to the pilot: <https://docuwiki-magic.cesnet.cz>

Authentication used: via eduGAIN

Authorization: based on the eduPersonScopedEntitlement containing user's groups

Filesender

Responsible partner: RENATER

Instance dedicated to the pilot: <https://filesender-premium.renater.fr/>

(The instance dedicated to the pilot could be: <https://name.domain.tld/> a little more work to do that)

Authentication used: via the French federation (could be via eduGAIN, needs to be discussed with RENATER)

Authorization: based on the "mail" and the "common name"

Colaboratorio Communities

Responsible partner: RedCLARA

Instance dedicated to the pilot: <http://colaboratorio-dev.redclara.net>

Authentication used: via Test IdP

Authorization: based on the eduPersonScopedEntitlement containing user's groups

3.2. SCHEDULE OF MILESTONES

End of the January:

- Perun instance ready to support MAGIC users.
- Perun attribute authority ready to provide attributes to the pilot services.
- Docuwiki ready to accept groups from registered AAs.

Mid February

- Defined developers and integrators with implementation quote

End of the February:

- RedCLARA's group manager installed





- Defined specific FileSender module modifications.
- FileSender instances in place

Mid March

- Testing Docuwiki's integration
- Defined specific FileSender module modifications.

End of the March:

- RedCLARA's group manager installed

End of the April:

- FileSender group pilot integrated
- Testing for Docuwiki and Filesender done



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Progress Report

MAGIC Deliverable: D3.4 Pilot service with one application sharing group information and service catalogue

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Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: After planning and designing the requirements for the group management and inter-operations standards, a set of Group Managers were deployed, adapted or reconfigured to be compliant with them and be able to exchange data about the groups or their users. This document contains the result of this implementation and shows what services allow the users to use their group information even if that information resides in other NRENs.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Carlos Gonzalez	Lead Software project engineer	2016-7-28	RedCLARA
Contribution by	Gustavo García	Technical Manager RedCLARA	2016-8-2	RedCLARA
Revised by	Ognjen Prnjat	GRNET	2016-8-23	RedCLARA
Contribution by	Gustavo García	Technical Manager RedCLARA	2016-12-9	RedCLARA
Approved by	Florencio Utreras	RedCLARA/CEO	2016-12-13	RedCLARA



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1. INTRODUCTION

The WP3 activity on group management is oriented to deploy a pilot test of services sharing group information across two federated domains. The WP3 worked on studying and defining the standards required to do so. Once the standards were identified, the group chose the Pilot implementation and the structure of the components, including the set of services to demonstrate the use cases. The services selected were FileSender and Dokuwiki. The main goal was to have services where final users could access and develop activities based on their groups membership. The group sharing will be transparent, and regardless of the group location, whether it is located on the organizational group manager or on another partner institution. For example, a user from NREN A should be able to use a file transfer service from NREN B and in this system she/he should find the groups where she/he is registered, even if these groups were hosted in NREN A or B. This document describes the work regarding the Pilot developed, and shows the components, workflow design as well as the services implemented for its deployment.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the editor, Gustavo Garcia (RedCLARA), and copied to the Management of the MAGIC project.

3. GLOSSARY

AARNet	Australian NREN
BELNET	Belgium NREN
CEDIA	Ecuadorian NREN
CKLN	Caribbean Knowledge and Learning Network
CONARE	Costa Rica's NREN
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
DNS	Domain Name System





HEAnet	Ireland NREN
NgREN	Nigerian Research and Education Network
NREN	National Research and Education Network
RENATA	Colombian NREN
SURFnet	The Netherlands NREN
UNINETT	Norway NREN
WACREN	West and Central Africa Research and Education Network

4. REFERENCES

[R1 MAGIC Website <http://www.magic-project.eu>]

5. EXECUTIVE SUMMARY

In this deliverable, the work package 3 team provides the description of the development of the pilot on group management in federations. This pilot establishes a practical use case of sharing groups between to NREN domains, managing the applications Filesender, Dokuwiki and SIVIC. Filesender is used to share big files between users through a web interface, Dokuwiki is an online collaborative edition platform that allows building web documents with multiple authors at the same time, and the SIVIC that is a video conference reservation system where users can schedule a conference, reserve resources and invite participants. The pilot implements actions for authorization for Filesender premium and Dokuwiki based on the group membership, so in Filesender, the members of group A will have the premium features like unlimited file size capacity and share multiple files at once. Furthermore, the sharing of group information is implemented in SIVIC in order to Invite members from a group to video-conference, by giving the group name to invite all of its members. The best result from this implementation is that it involves three organizations in different domains: RENATER in France, that hosts the Filesender application, CESNET in Czech Republic that hosts Dokuwiki, and RedCLARA that hosts the Colaboratorio and SIVIC applications in Latin-America.

In addition to the described result, the work package team also worked in the implementation of a service catalogue. The service catalogue will serve as the base for the registration of services and application in different domains. The



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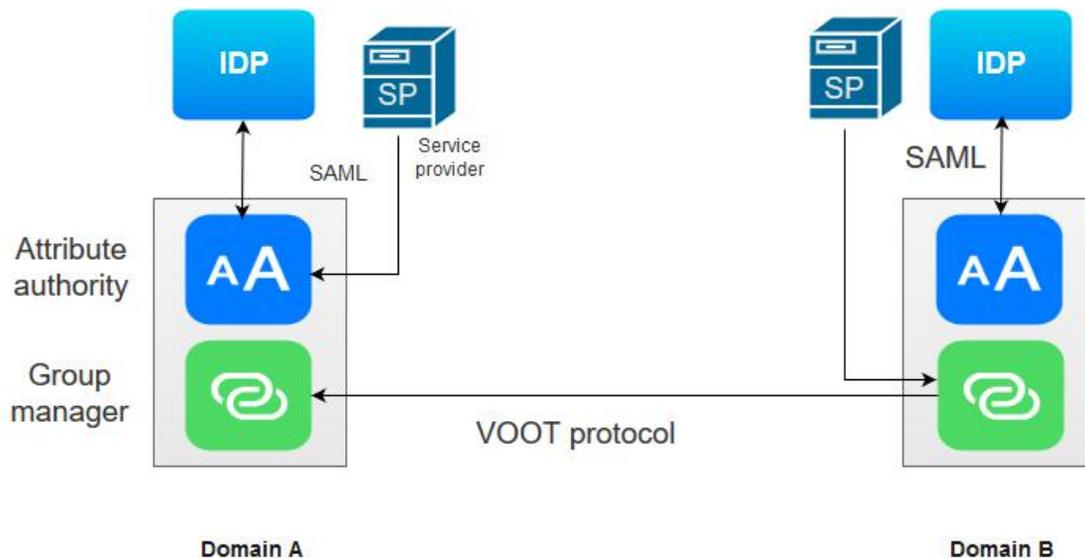


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catalogue is based on the GÉANT's, who kindly provide support, the base attributes and the application source code to facilitate the implementation.

6. PILOT IMPLEMENTATION ARCHITECTURE

MAGIC WP3 studied the group sharing technologies, and in the last face-to-face meeting agreed on the architecture for the group management in federations. The subject was also elaborated on in previous virtual meetings, and finalised face-to-face meeting with the definitions of services and structure for the pilot implementation. The pilot shall use a Group Management entity attached to an SAML Attribute Authority (AA) as summarized as in the following picture:



The main components of this schema are:

A) Service Providers (SP): The services themselves (file transfers, wiki managers, H323 Booking systems, etc).

B) Identity Providers (IdP): software components that allow the users to authenticate. This component is the one able to say to the service: “The user is the one that she/he claims to be”.

C) Attribute Authorities (AA): components that will release the list of groups a user belong to. This is the component that says to the service: “The user belongs to all these groups”.

D) SAML: is the communication standard used to exchange information between the Service Providers, Identity Providers and Attribute Authorities.

E) Group Managers: software components that will hold the information of users and groups, that will feed the Attribute Authority and that will store the information from other Group Managers.

F) VOOT Protocol: is the chosen protocol for group information exchange between Group Managers.

7. PILOT USE CASES

The pilot implementation addresses the following use cases defined in the deliverable “D3.3 Planning and design requirements for the group management and inter-operations standards and pilot implementation”:

- a) **Service authorization based on groups:** A group established at domain A (RedCLARA Latin-America) accesses a service in domain B (CESNET), and they have an special permission (write documents) by validating the group.
- b) **Group members action:** A user application in domain A (Scheduling system SIVIC at RedCLARA) gets the members of a group from domains B/C (RENATER and CESNET), and executes an action over these members.
- c) **Group mailing list:** A user application in domain B (FileSender at RENATER) gets the name of the mail-list from a group in domain A (RedCLARA), and sends an invite using this address.

These pilot services in action are described in the following section.



8. SERVICES AVAILABLE

The following services were chosen and deployed.

8.1. CESNET'S DOCUWIKI

Service URL: <https://dokuwiki-magic.cesnet.cz>

Service Description: DokuWiki is a simple to use and versatile Open Source wiki.

Read access: Open.

Write access: Groups defined on RedCLARA's GM.

Use of Group Management: The standard was used to grant write access to the groups defined in a third-party Group Manager. So, although the service is being provided by CESNET, in Europe, the authorization is done by RedCLARA, in Latin-America.

How to use the service:

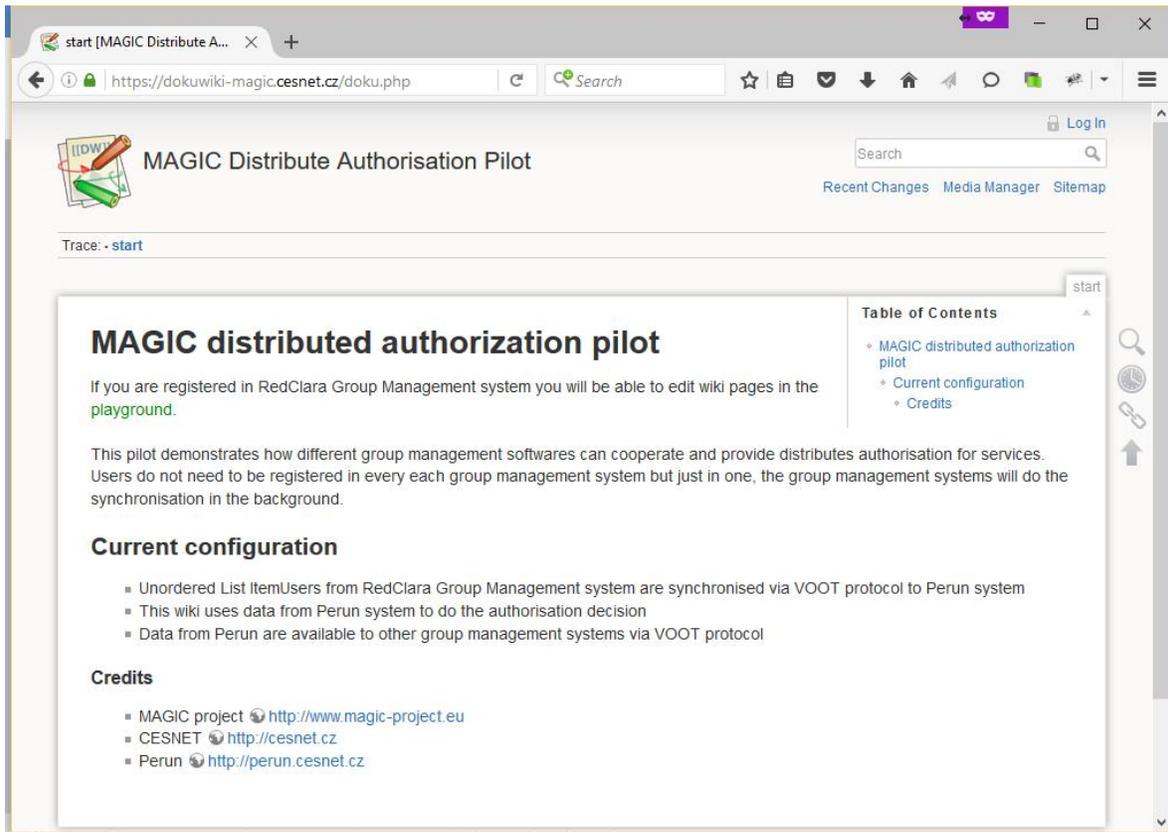
1. Go to the Service URL <https://dokuwiki-magic.cesnet.cz>



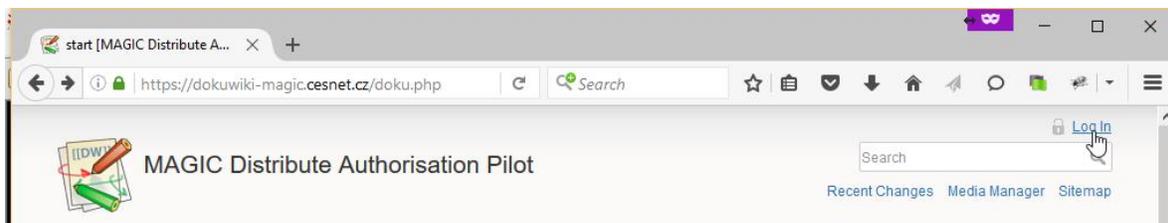
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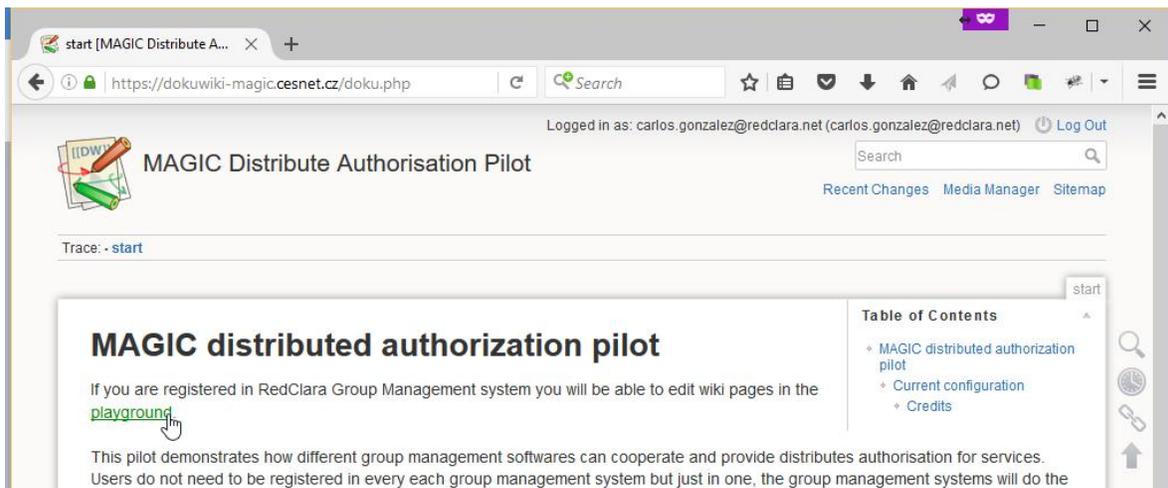


2. Log in with your eduGAIN account. To test your edit permissions, use a RedCLARA's IdP account.

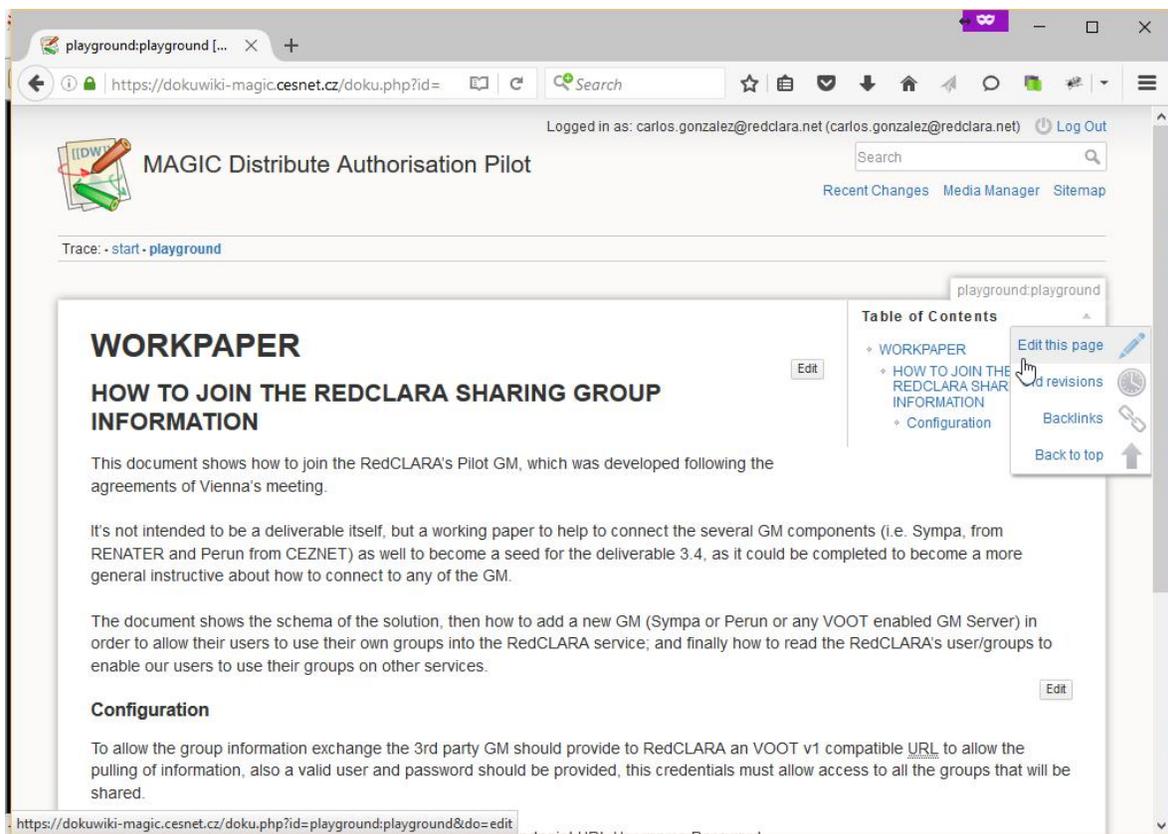


3. After login, go to the space configured for the pilot: "playground"





4. If your account is part of one of the RedCLARA's group, you will be able to edit the wiki pages, and to use the edition option.



8.2. SIVIC'S COLABORATORIO BY REDCLARA

Service URL: <https://colaboratorio.redclara.net>

Service Description: Sivic is a system for booking H323 Latin-American infrastructure.

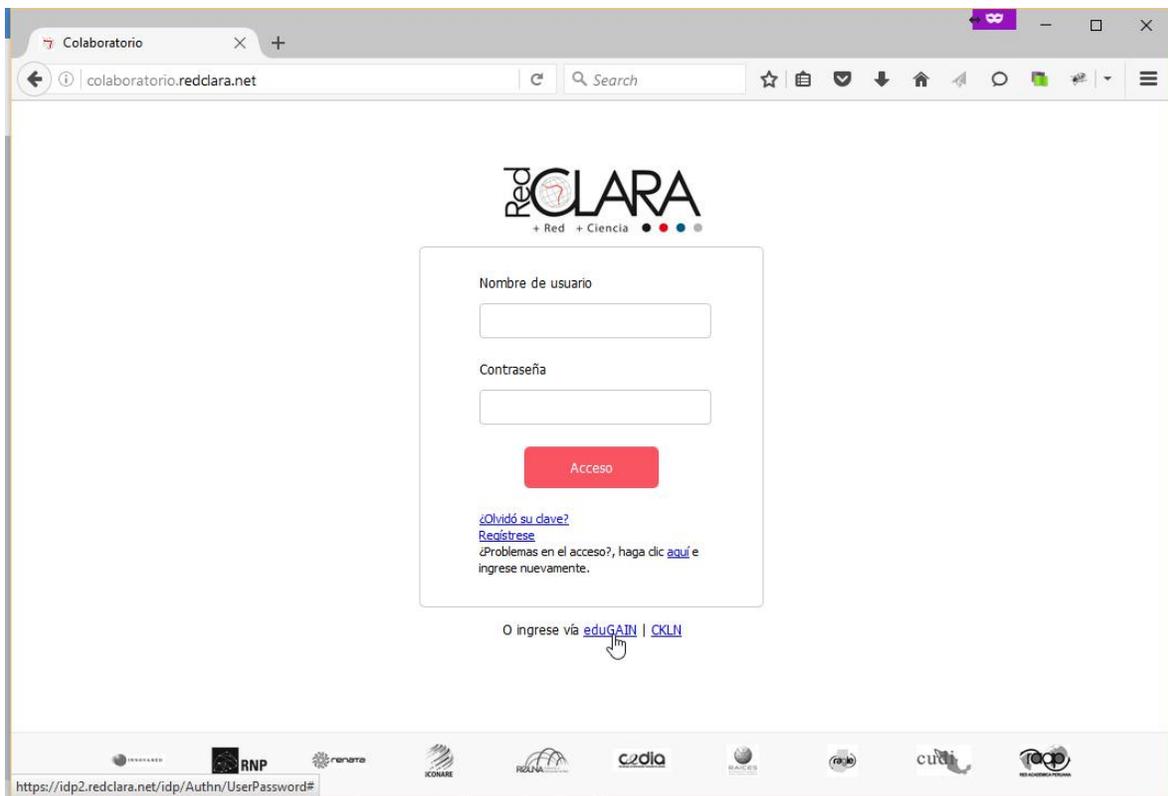
Read access: Everyone on edugain.

Write access: Everyone on edugain.

Use of Group Management: The standard was used to allow the users that book a conference to see their groups, no matter if they're on RedCLARA's, WACREN's or RENATER's Group Manager.

How to use the service:

1. Go to the Service's URL and login using your RedCLARA's or edugain account

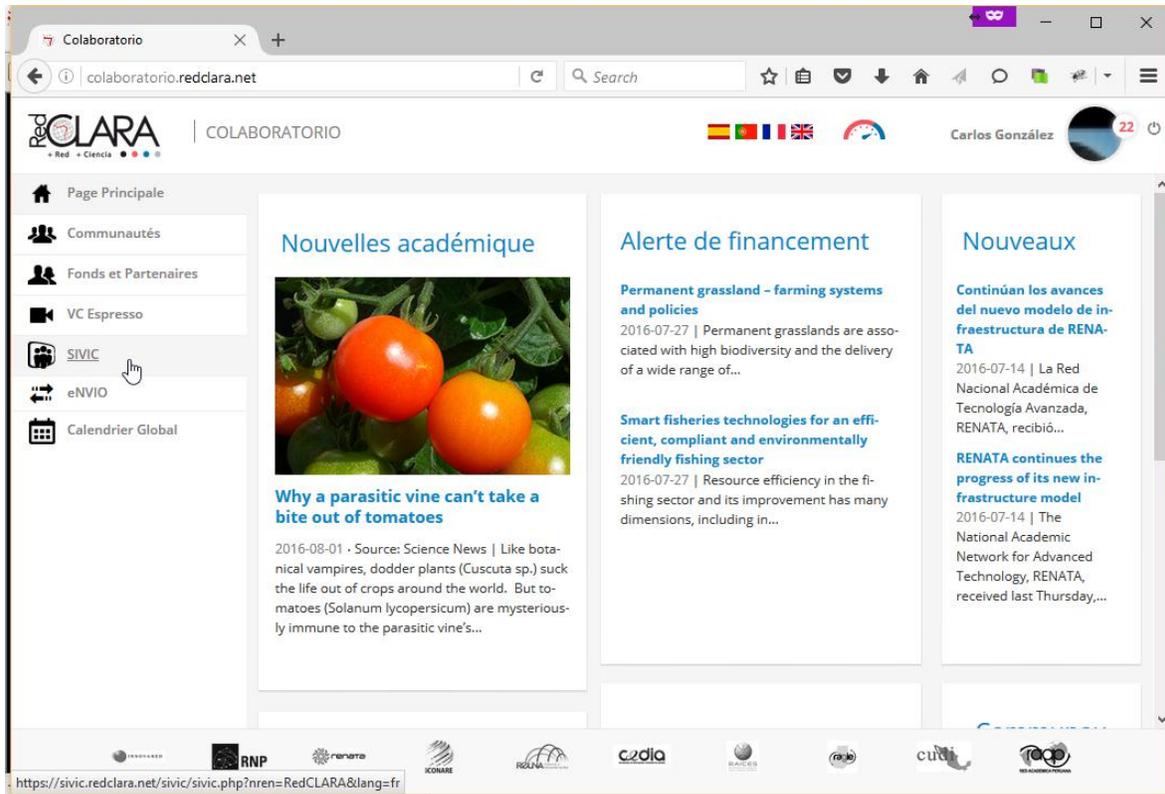


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2. Click on SIVIC link



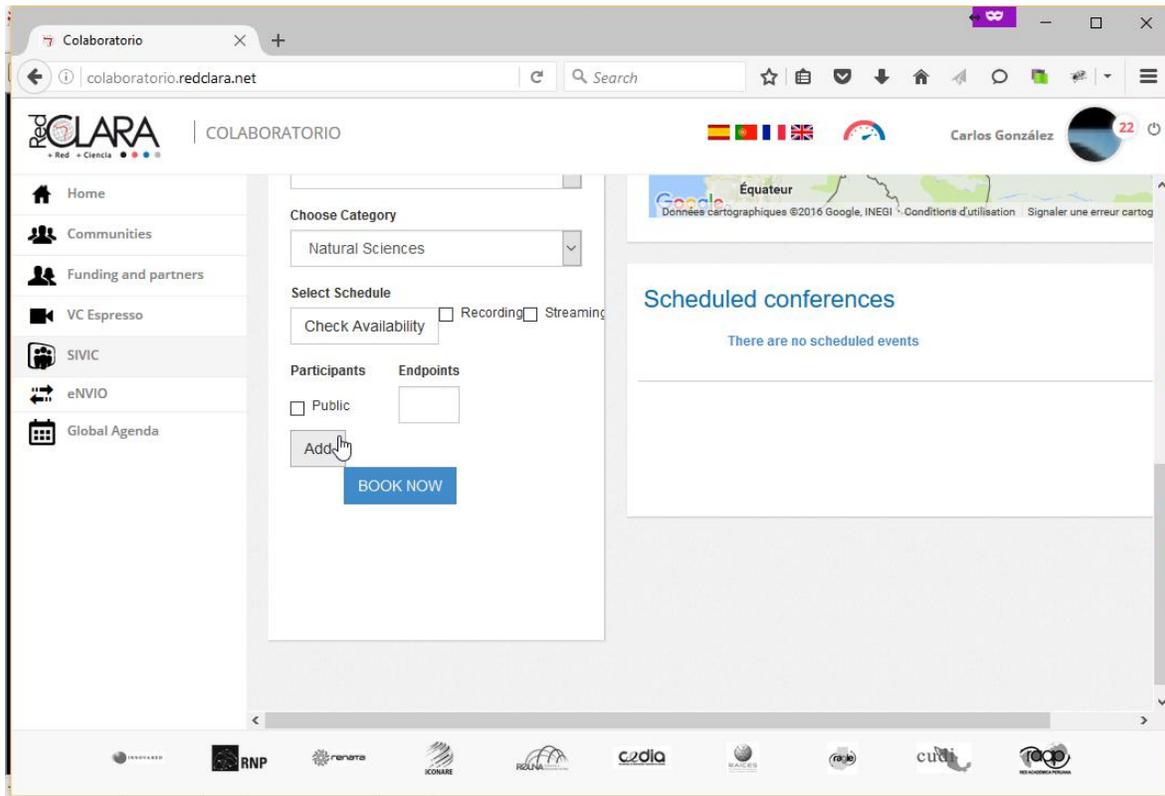
3. Book a conference. When booking, click on “Add” to add invitees.



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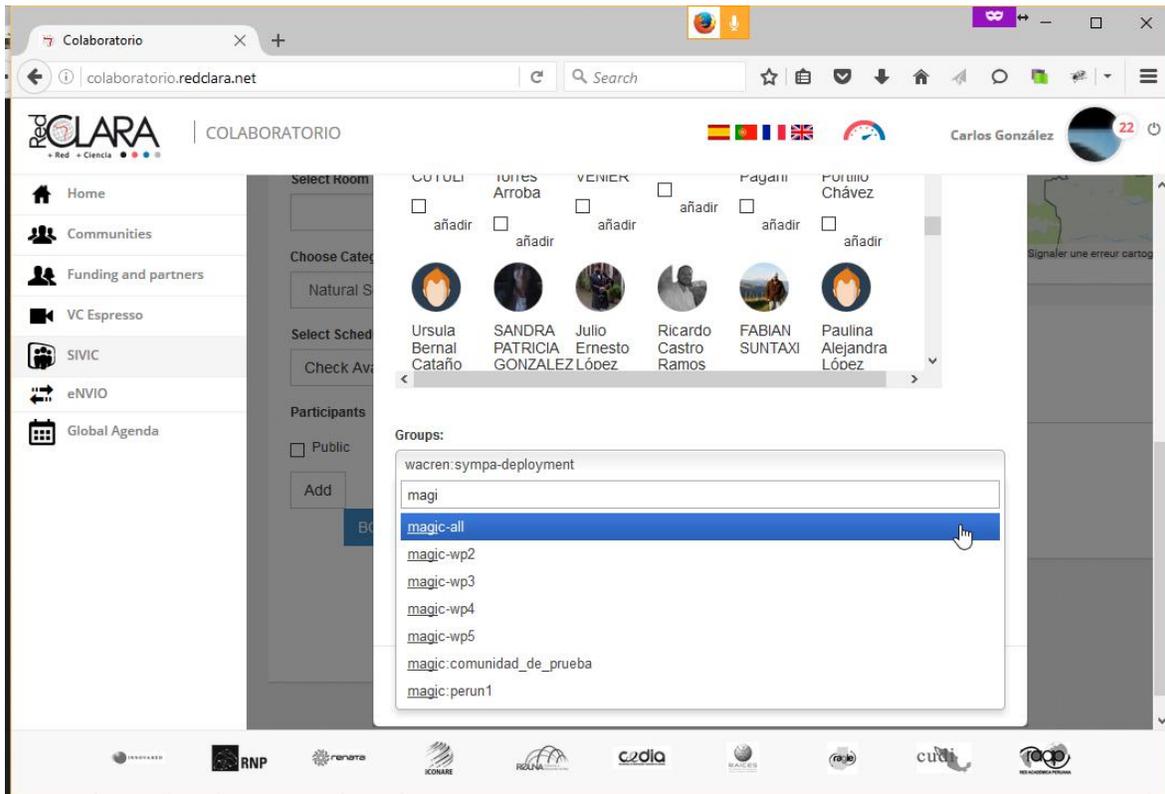
4. You'll be able to see your groups and pick one of them. If you book the conference, an e-mail with the data of the H323 conference will be sent to the members of the group.



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8.3. FILESENDER PREMIUM FROM RENATER

Service URL: <https://filesender-premium.renater.fr>

Service Description: This is a secure way to share large files with anyone. It is based on FileSender and hosted for members of the RENATER community.

Read access: RENATER community and other on-demand authorized edugain's members.

Write access: RENATER community and other on-demand authorized edugain's members.

Use of Group Management: The standard was used to allow the users that upload a file, to see their groups, no matter if they're on RedCLARA's or RENATER's Group Manager and to pick one of them to inform their members there's a file for them.

How to use the service:

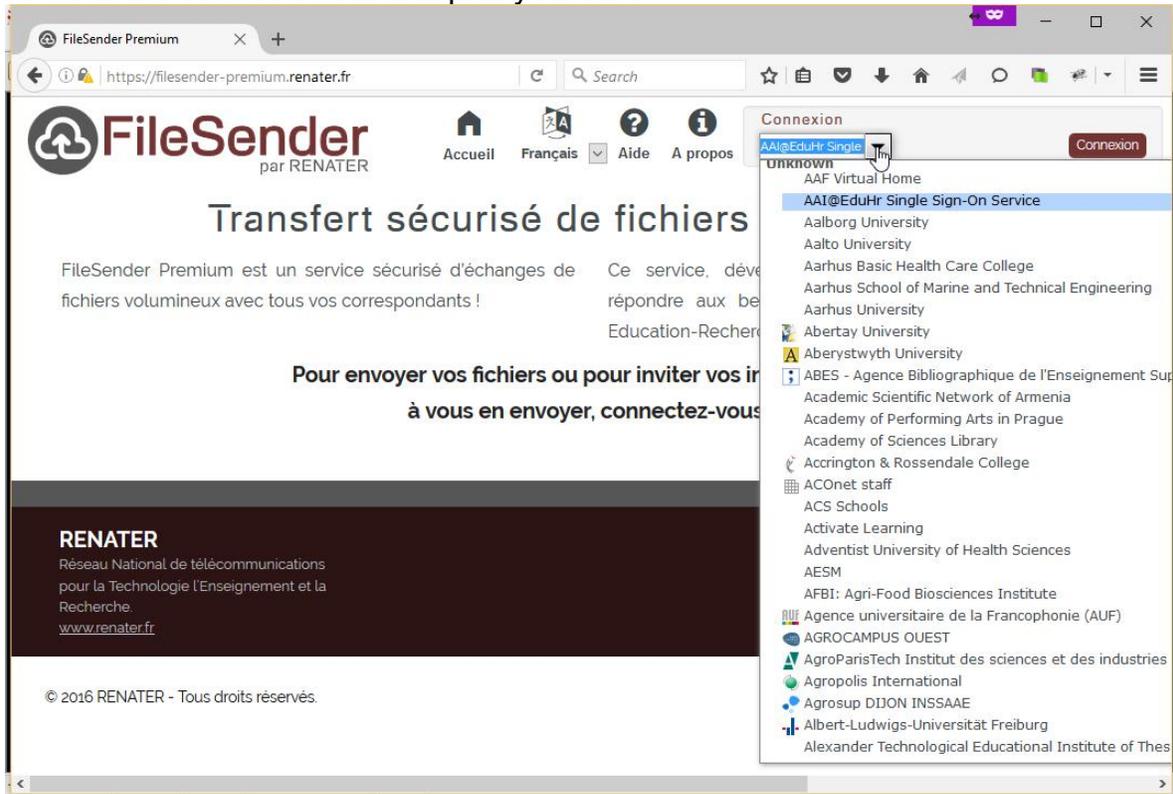


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1. Go to the service's URL and pick your IdP.



8.4. A WORD ABOUT THE GROUP MANAGERS PROVIDERS

All the described services are reachable via eduGAIN, as required by the *D3.3. Designing the requirements for the group management and inter-operations standards*.

Also, the organizations that will deliver information about groups to these services are:

1. CESNET's Perun
2. RedCLARA's Colaboratorio
3. RENATER's Sympa
4. WACREN's Sympa



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9. SERVICE DIRECTORY

WP3 also worked on the design and initial implementation of a service catalogue for MAGIC. The idea of this tool is to have a central information point where NRENs, end-users, and communities can find the services existing in other NRENs and organizations. The application and the service attributes are based on the existing GÉANT service catalogue. The catalogue was deployed and installed at:

<http://catalogo.redclara.net:8000>

The services registered on this catalogue are:

- Colaboratorio
- VCEspresso
- SIVIC
- FileSender at RedCLARA
- MediaWiki
- Funding and partners
- LReferencia
- Sakai
- VC - CUDI
- SNAAC RENATA



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Progress Report

MAGIC Deliverable: D3.5 Evaluation of pilot and services, user perception, and implementation effort

Document Full Name	MAGIC WP3 D3.5 Evaluation of pilot and services, user perception, and implementation effort
Date	30-12-2016
Activity	Cloud Provisioning and Groupware Standards
Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: After making the integration of application services across domains and with group features, the work package 3 has conducted an end-user survey with the project related communities. This report contains the results of this evaluation of the services, including those that are part of the WP3 pilot such as the communities portal, FileSender, SIVIC, and others.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo García	Technical Manager	2017-01-13	RedCLARA
Contribution by	Florencio Utreras	CEO	2017-01-16	RedCLARA
Revised by	Gustavo García	Technical Manager	2017-01-17	RedCLARA
Contribution by				
Approved by	Florencio Utreras	CEO	2017-01-18	RedCLARA



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1. INTRODUCTION

The work package 3 has the goal to evaluate users' perception of the services involved in the scope of the project. The evaluation was done through a survey that asked questions about knowledge of the service, perception of usability, response time and overall qualification. The services evaluated were the communities service (Colaboratorio), the File Transfer (Filesender), the Wiki service, and the Funding&Partners system.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the editor, Gustavo Garcia (RedCLARA), and copied to the Management of the MAGIC project.

3. GLOSSARY

AARNet	Australian NREN
BELNET	Belgium NREN
CEDIA	Ecuadorian NREN
CKLN	Caribbean Knowledge and Learning Network
CONARE	Costa Rica's NREN
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
DNS	Domain Name System
HEAnet	Ireland NREN
NgREN	Nigerian Research and Education Network
NREN	National Research and Education Network
RENATA	Colombian NREN
SURFnet	The Netherlands NREN
UNINETT	Norway NREN
WACREN	West and Central Africa Research and Education Network



4. REFERENCES

[R1] MAGIC Website <http://www.magic-project.eu>

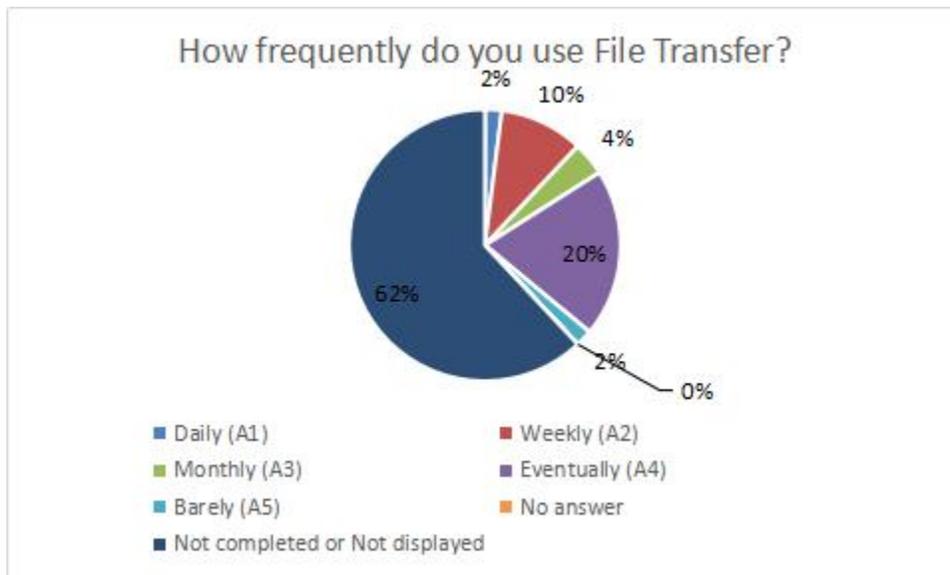
5. EXECUTIVE SUMMARY

In this deliverable, the work package 3 shows the results of the carried out survey regarding the Collaboration tools. The results of the survey shows that the most used service was the “Funding and partners” with 50% of positive results, followed by the “File Transfer” service with 30%. The lowest score was obtained by the Wiki service with only 18% usage. There is a room for improvement in service promotion area to increase the usage numbers for all the services. In the timing space, the File Transfer service was very well rated what means that the service is fast in all its functions. The Colaboratorio usability results were good, nevertheless, 24% of the users mentioned “Too complicated” so it is a good focus to work on simplicity and training. The service with more usage frequency was the Funding and Partners, what shows the potential of this service. In most services, with the only exception of the Wiki, there is a very high probability that users recommend the service to a colleague. In the usability space, all ratings were mostly in “easy” and “very easy to use” with the only exceptions of the “creating your own profile and selecting the scientific areas of interest” in Colaboratorio, and “Uploading images”, and “Creating content” in the wiki service.

6. QUESTIONS ABOUT THE FILE TRANSFER SERVICE

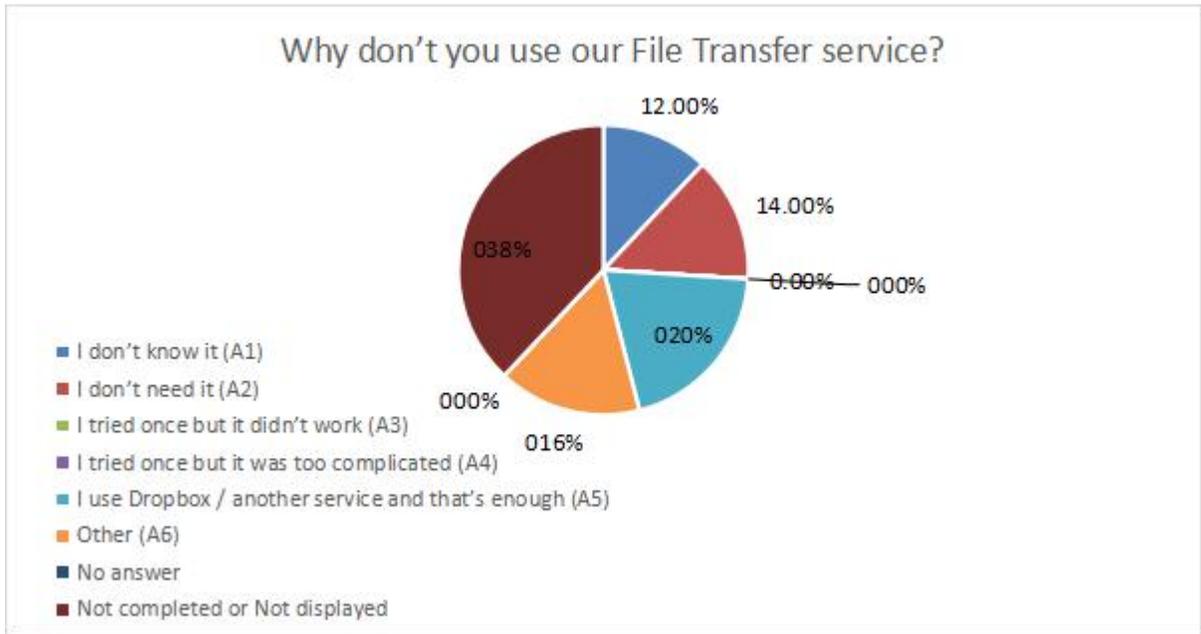
The first question for the participants was if they use the File Transfer service. The result was that 38% of the people have used the service. Furthermore, the frequency was declare mostly in eventually and weekly that scored 30%. It is recommended to work on the promotion of this service.





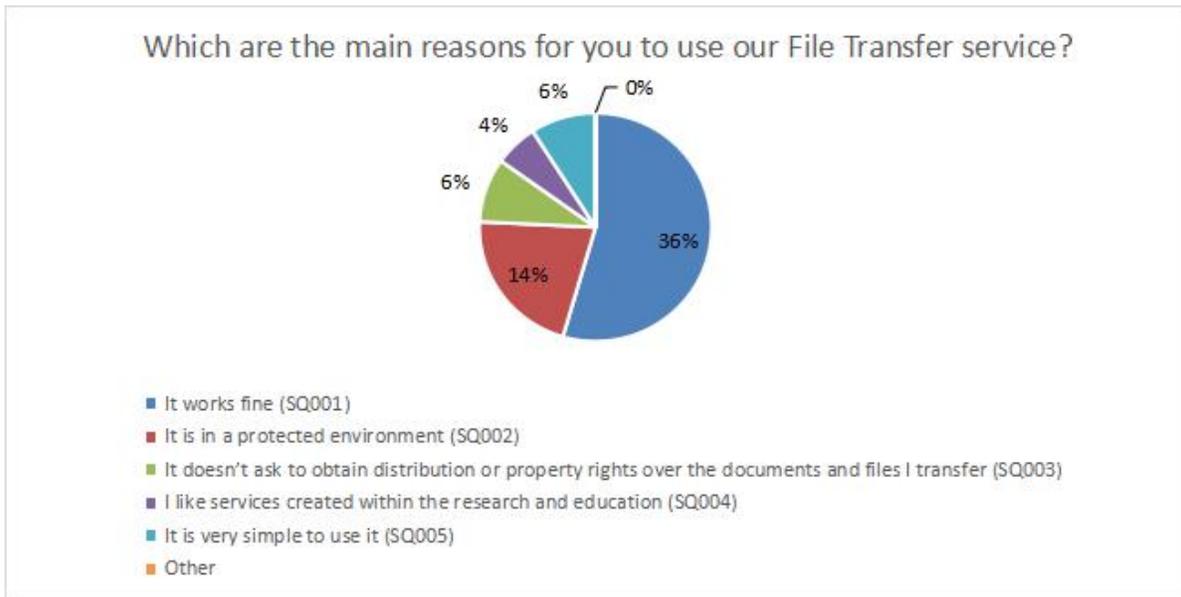
The main arguments for not using the File transfer were: a) the use of Dropbox or another software (20%); the users do not need it (14%), and the users do not know it (12%). The first and third answers that sum 32% can be addressed with product marketing.



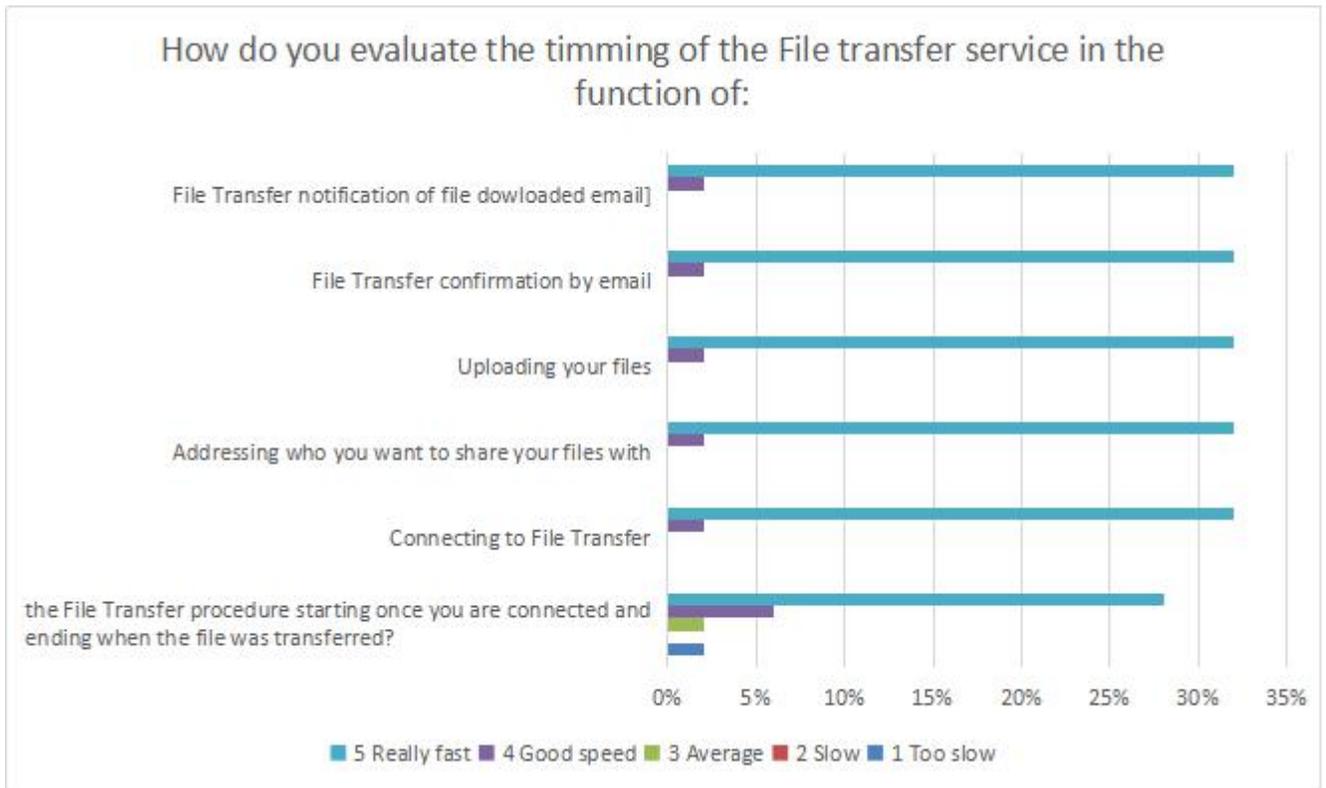


34% of the users mentioned that they use the File Transfer service because it is in a protected environment. These shows the increasing need and requirements for privacy.





Regarding the timing of the functions of the application like entering, uploading, addressing destinations and the notifications, the File Transfer service have good evaluations. All functions were rated mostly as really fast, more than 30% over 38% of the users who have actually used the application. The point that can be improved is the “File transfer once you are connected until the transfer is finished”, most users considered very good or good, nevertheless, this is the only point that obtained a couple of regular and bad qualifications.



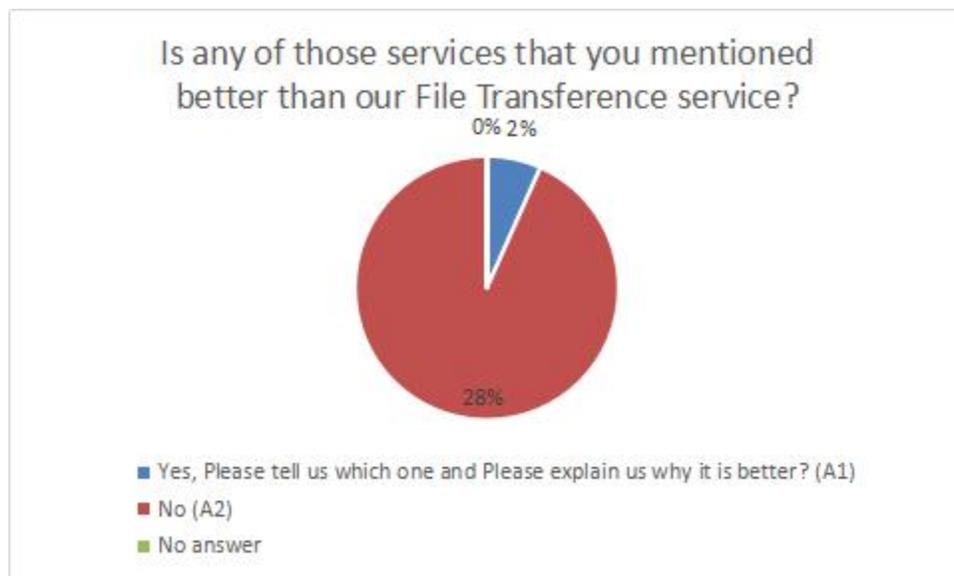
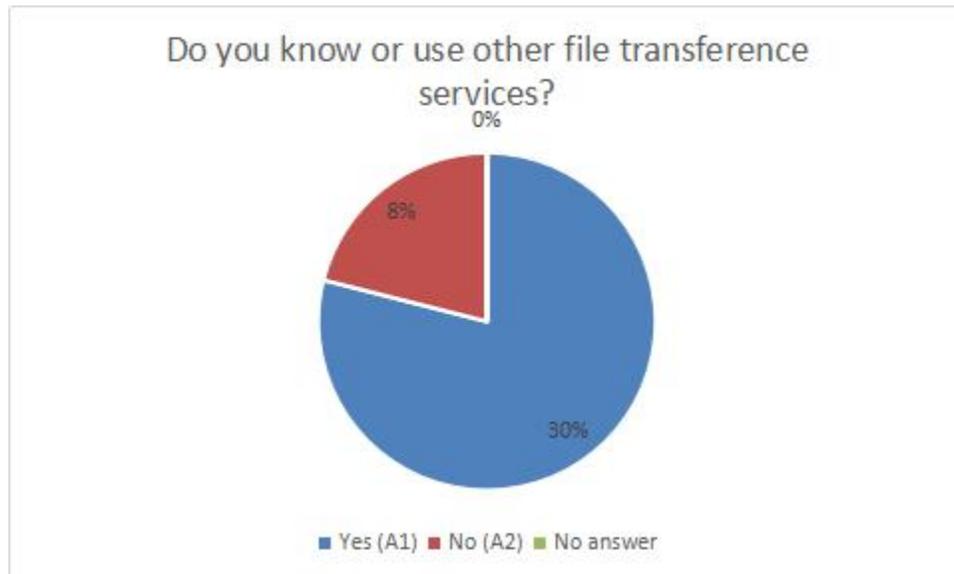
A good portion of the users know other File Transfer services, nevertheless, only a low percentage (2%) consider that these services are better than the MAGIC File Transfer service. Another real good result is that almost all users will extremely likely recommend the service to other users.

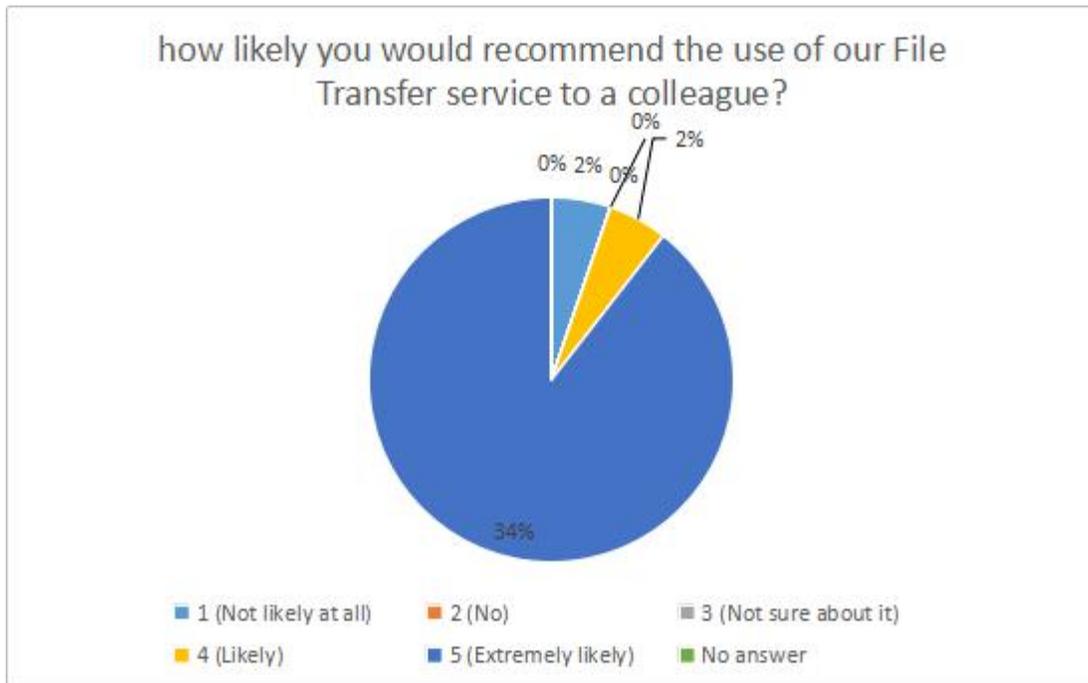


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7. QUESTIONS ABOUT THE COMMUNITIES MANAGER SERVICE

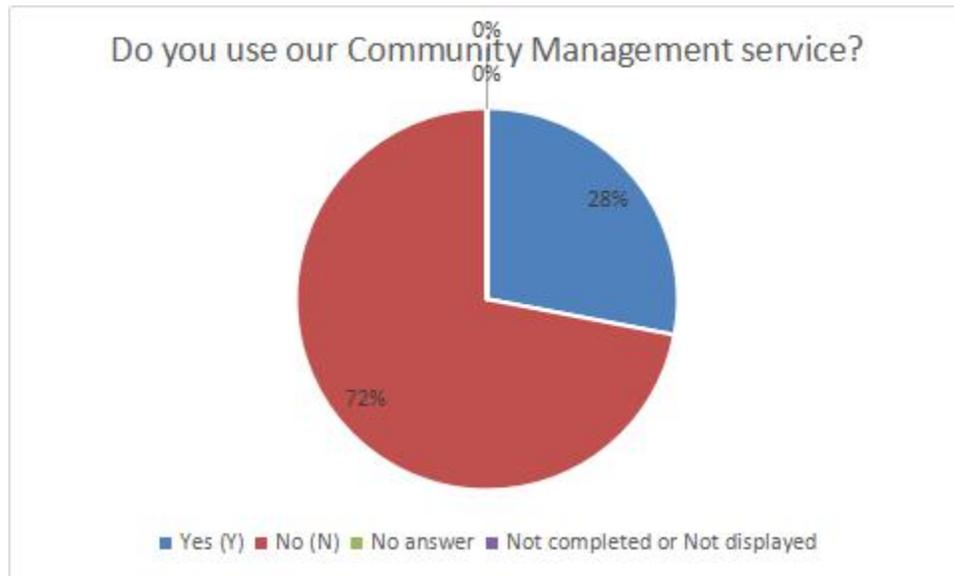
The usage of the communities service is not as expected with only 28% of the people that use it.



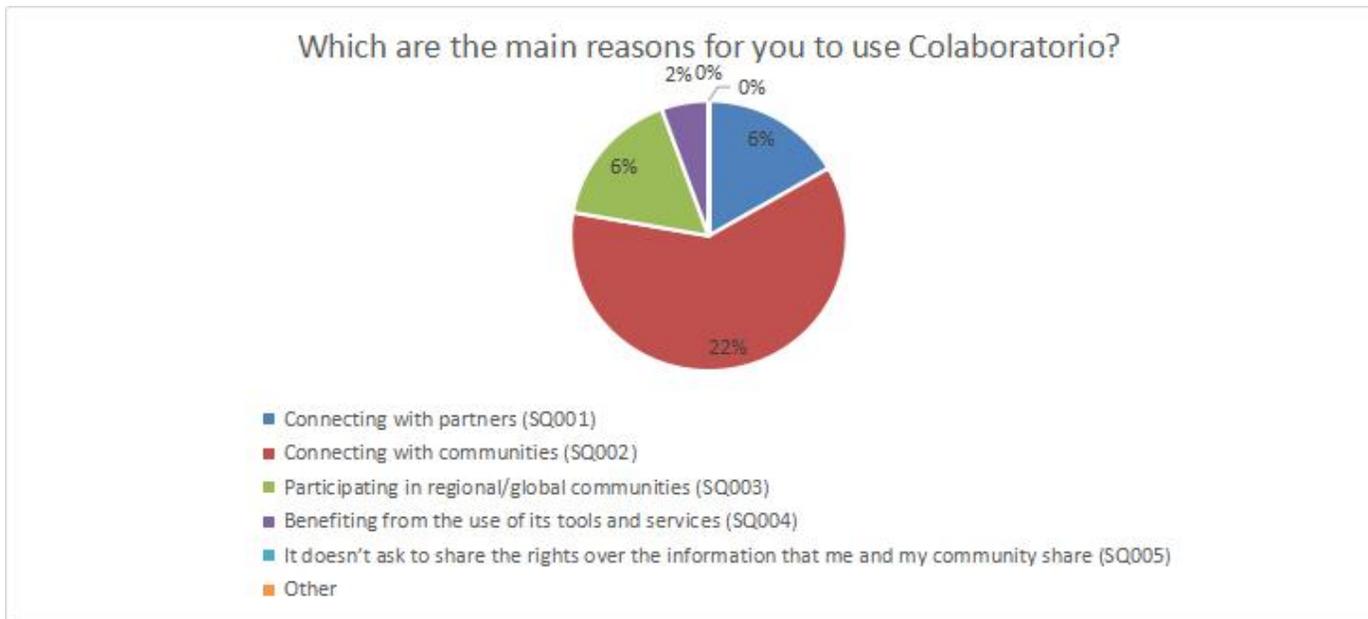
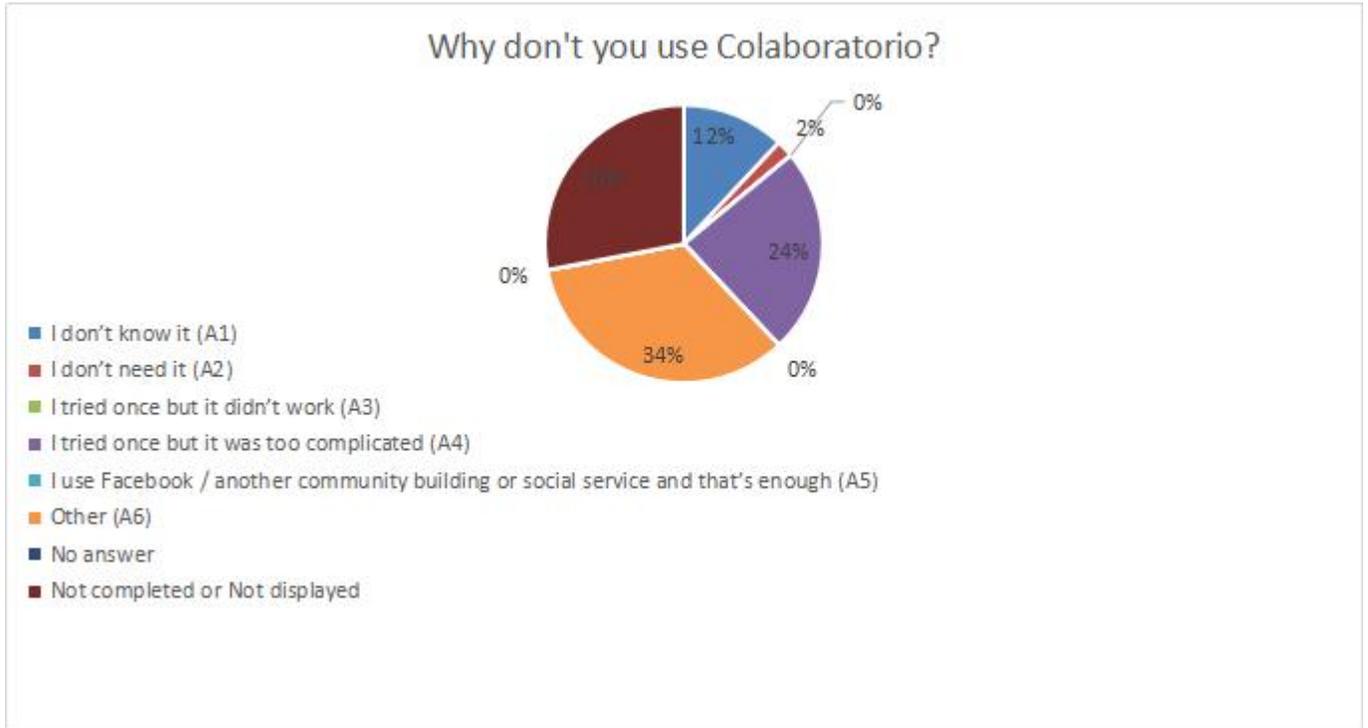
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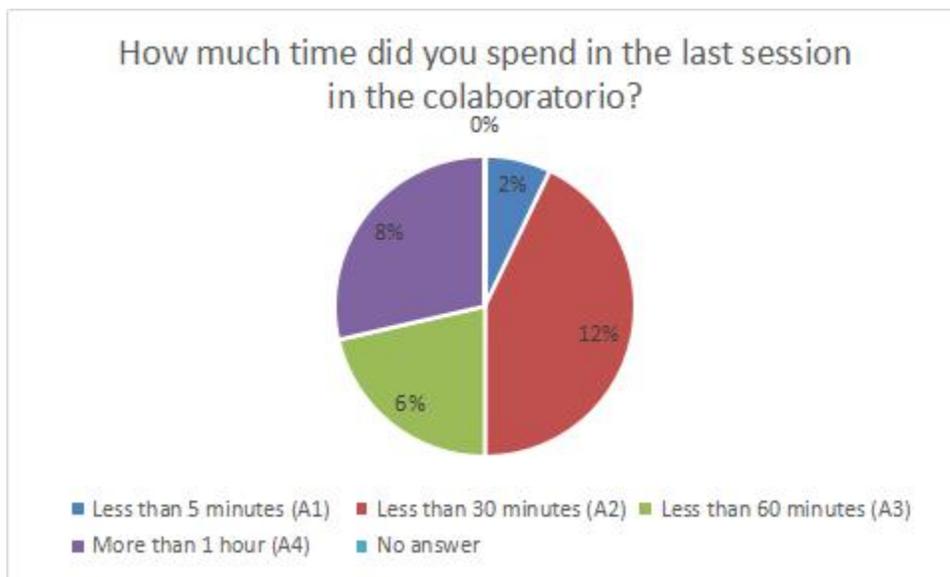
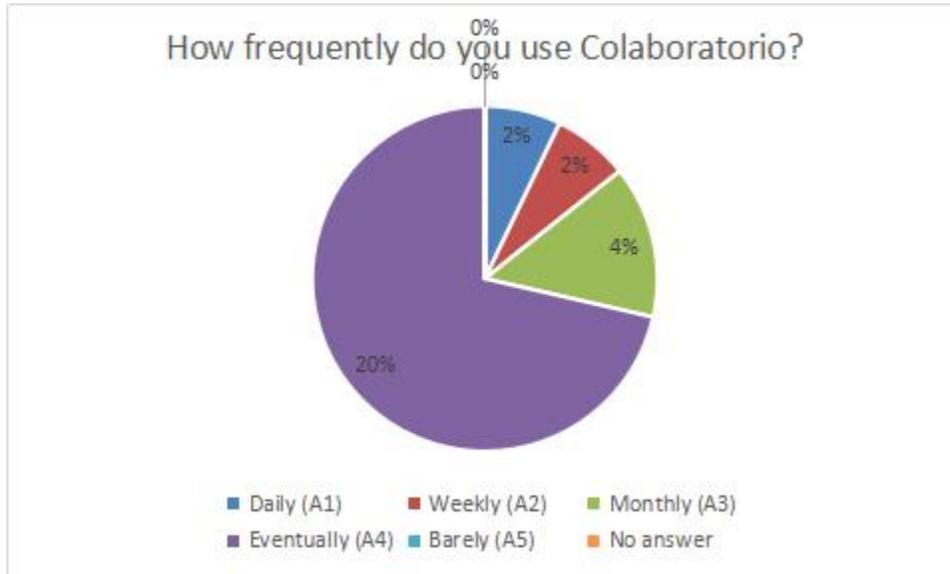
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The main identified reason for not using Colaboratorio was that it is too complicated (24%). It is recommended to work on usability and training. In contrast, the main argument for using Colaboratorio was for connecting with communities.



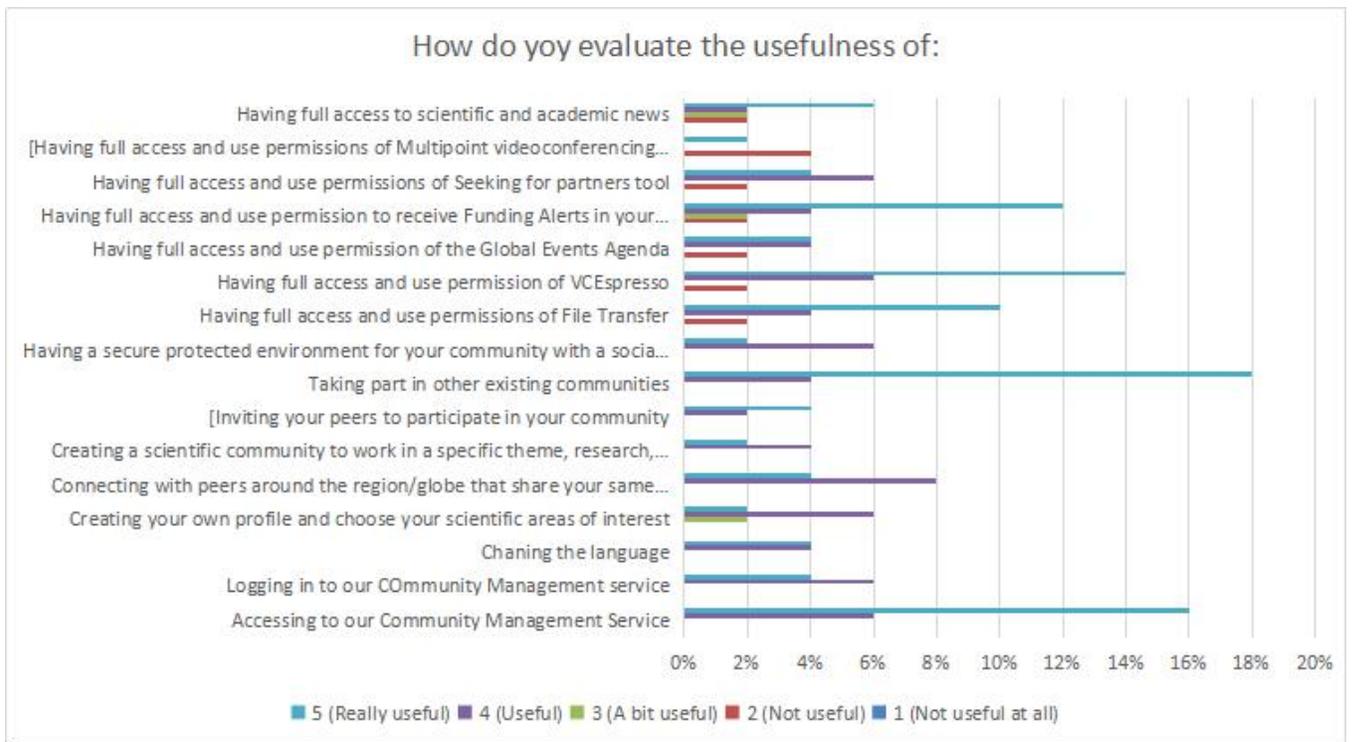
The frequency of using Colaboratorio is eventually. This could match the main use reason because connecting with communities is not a periodic activity. Furthermore, the connection time is mostly less than 30 minutes.



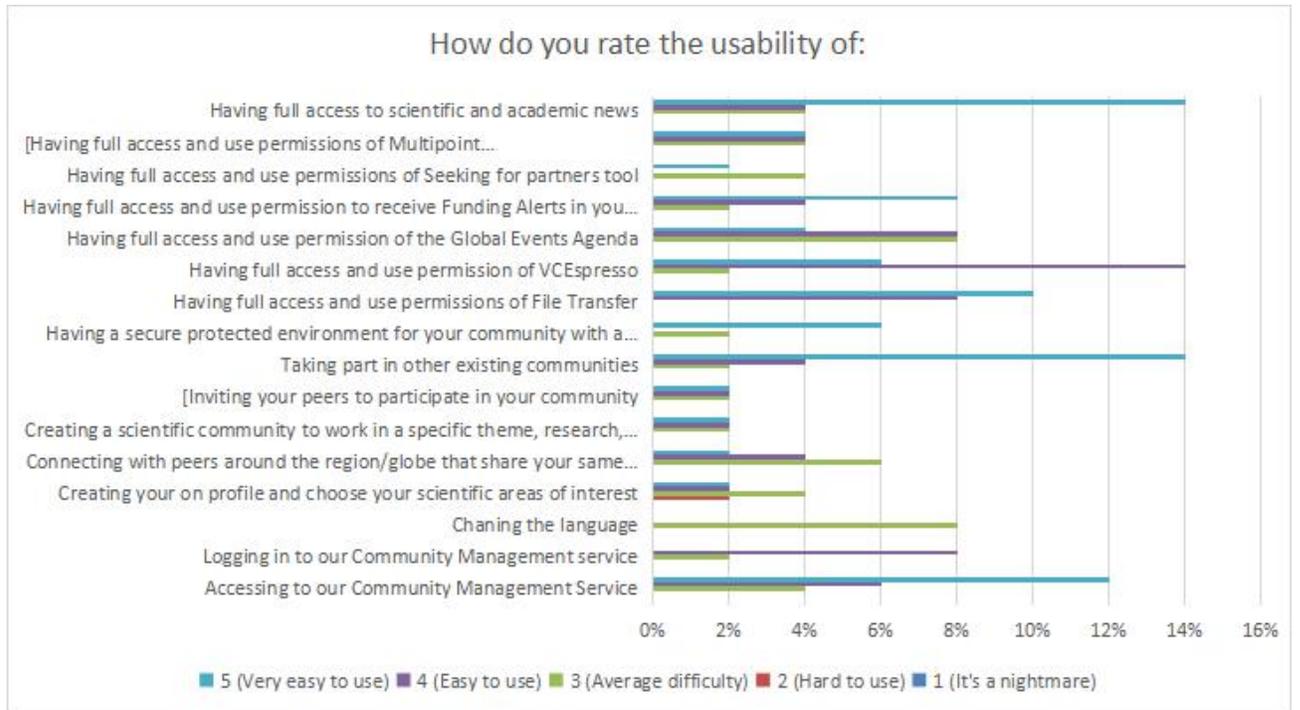


Regarding the usefulness of the Colaboratorio features, the most well rated characteristic was “Taking part on existing communities” with 22% of good evaluations (4 and 5). The above shows that end-users found joining communities as the most valuable asset in the system. The following item rated higher in usefulness was “Having full access and use permission for VCEspresso” with 20% of good qualifications. VCEspresso (the webconference) was seen as a very important service.

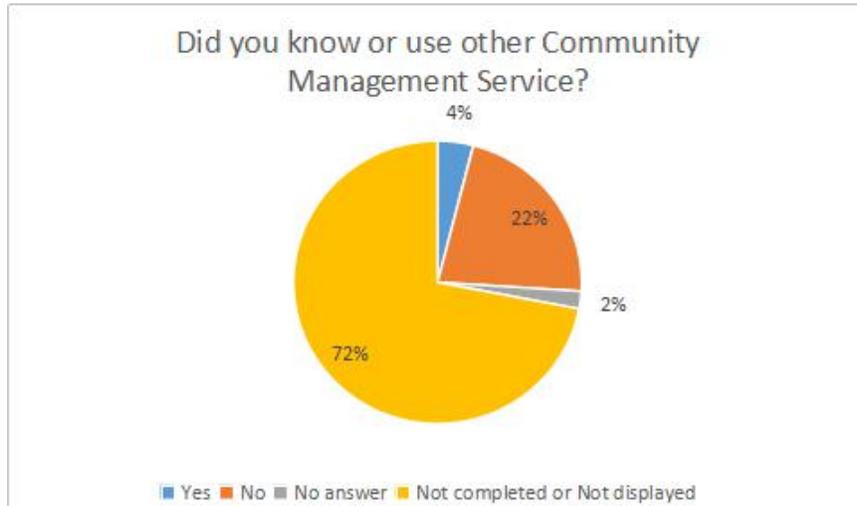
The usefulness of accessing Colaboratorio was rated between 4 and 5 among the 22% of the people. It is a High percentage due 28% of the people answered. In a very similar fashion, the 4 and 5 qualifications in the logging in to Colaboratorio feature were done by 10% of the people.



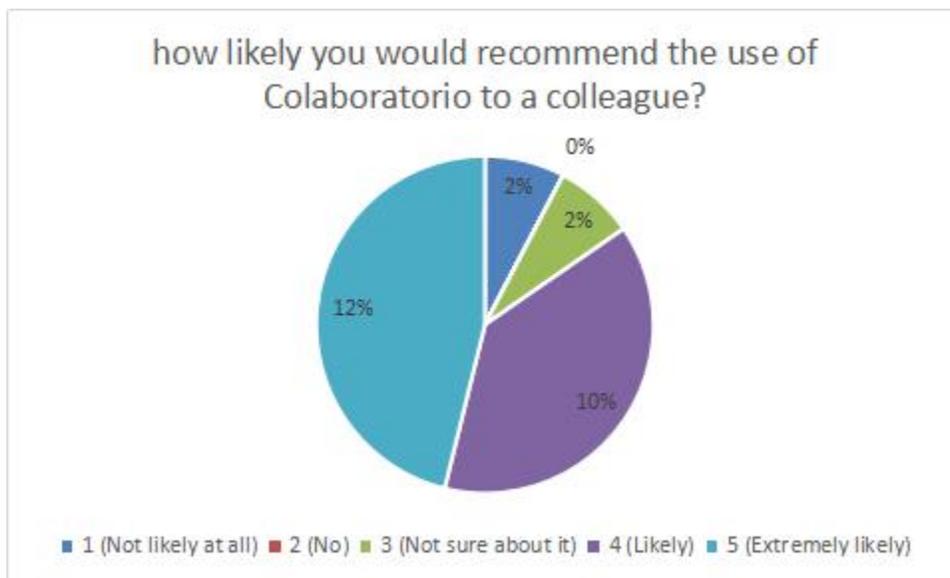
The usability of the system had a very good ratings, with only one exception, the “Creating your own profile and choose your scientific areas of interest” that obtained 6% between regular and bad usability scores. The above can be due to the profile is associated to the initial registration to Colaboratorio, and is not clear how to changed or administering it. It certainly have room for improvement.



Use of other Community Management services is not common at all. This shows the low service offer of this kind of services in academic communities and remarks the importance of this work..

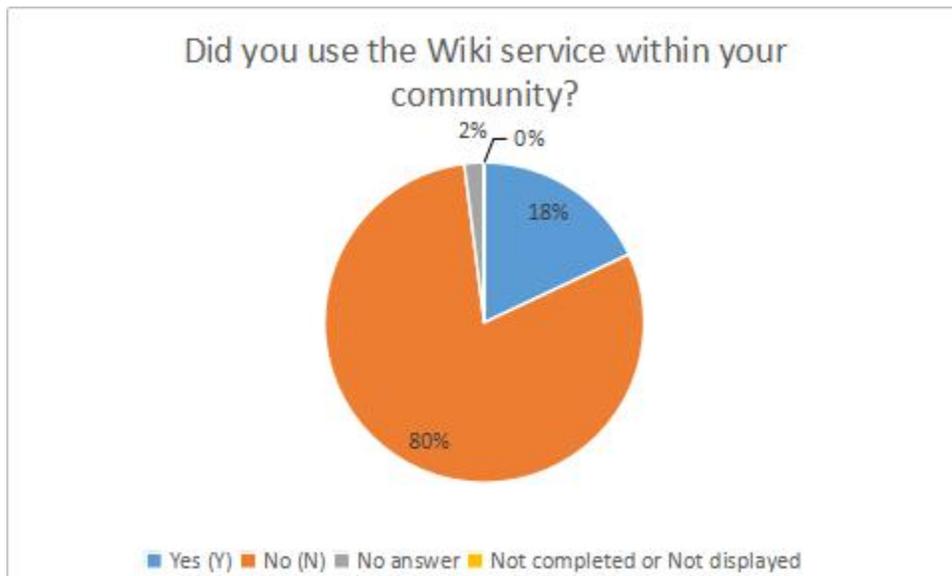


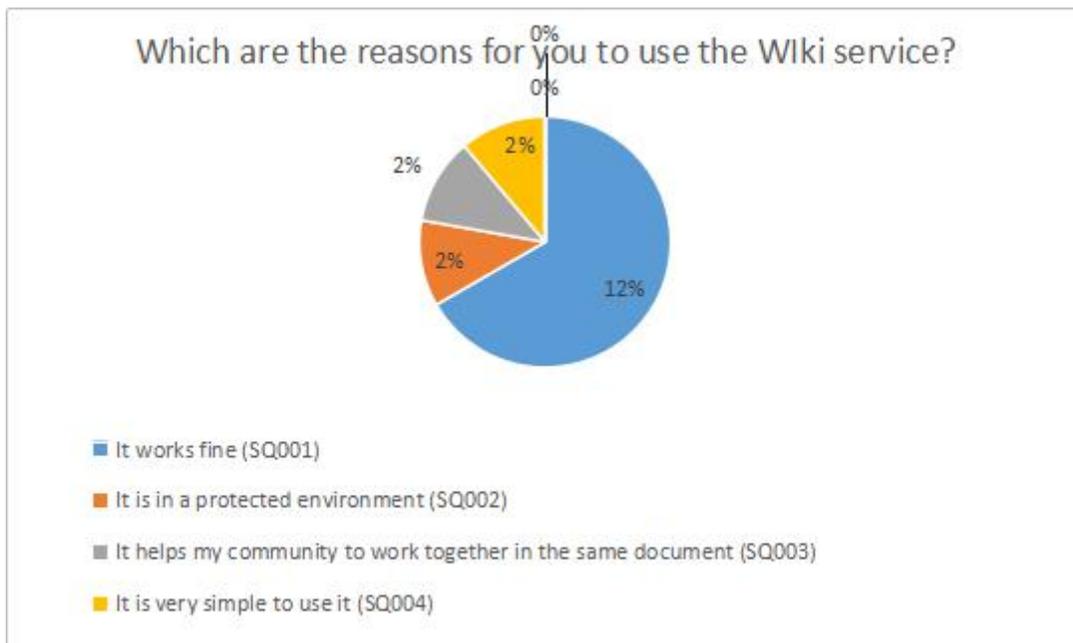
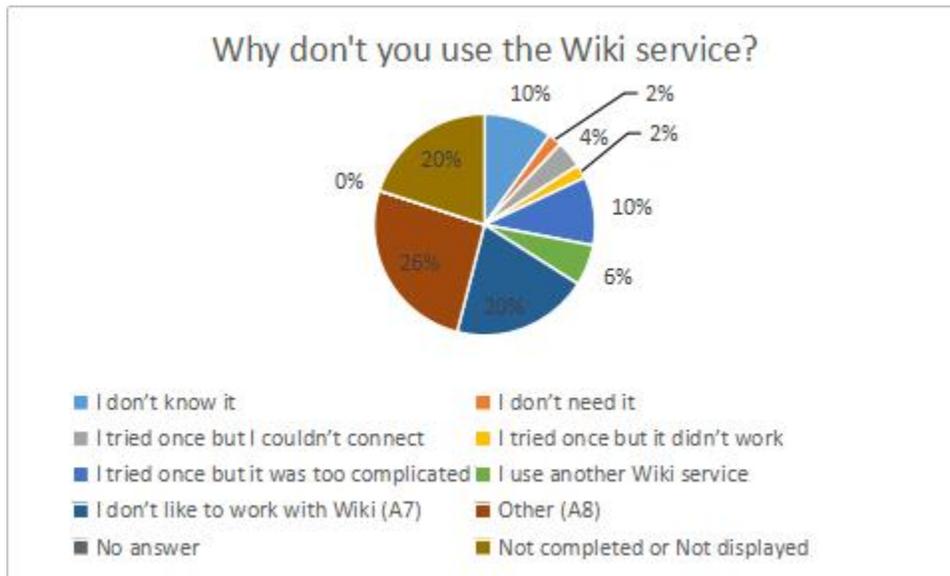
A very nice result is that 22% of the people will “likely” or “extremely likely” recommend Colaboratorio to a colleague.

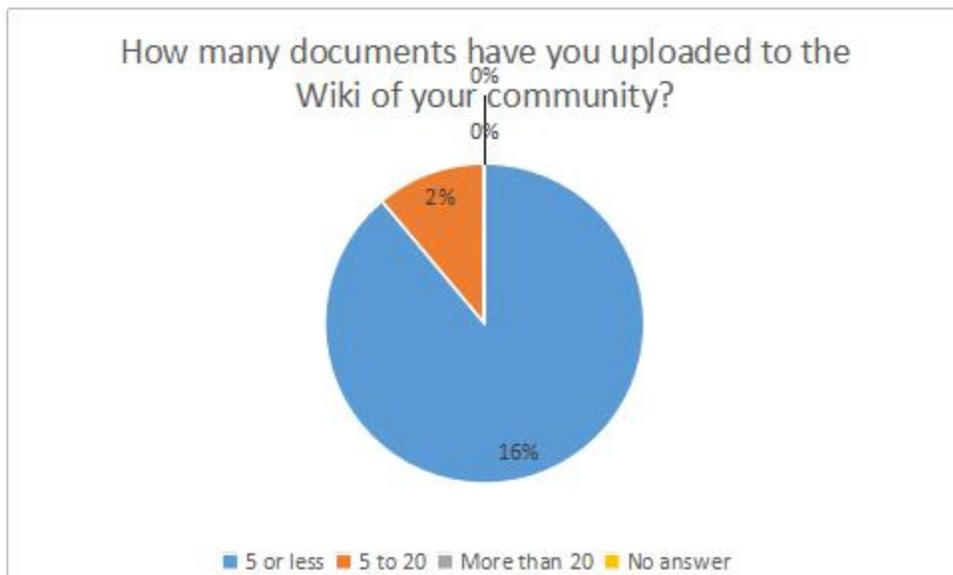
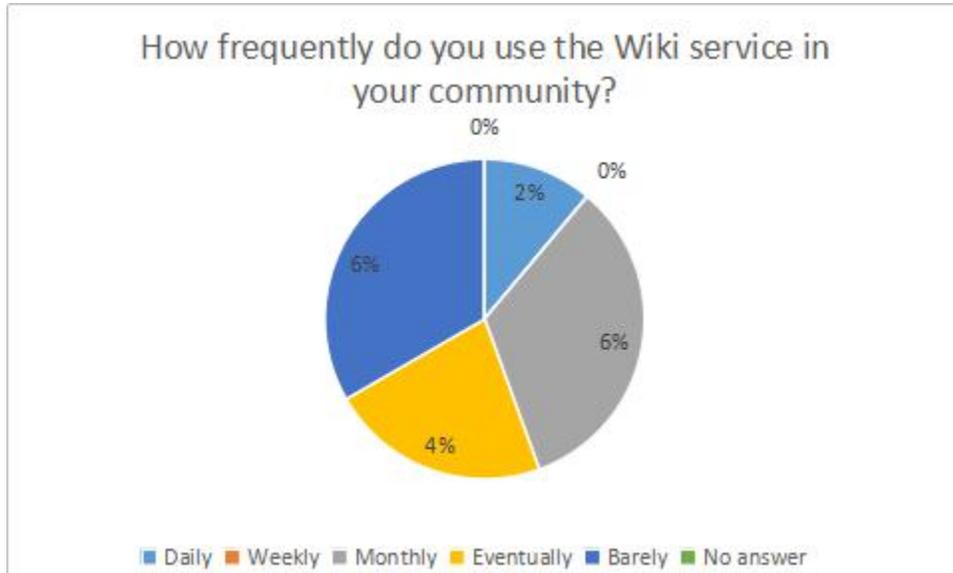


8. QUESTIONS ABOUT THE WIKI SERVICE

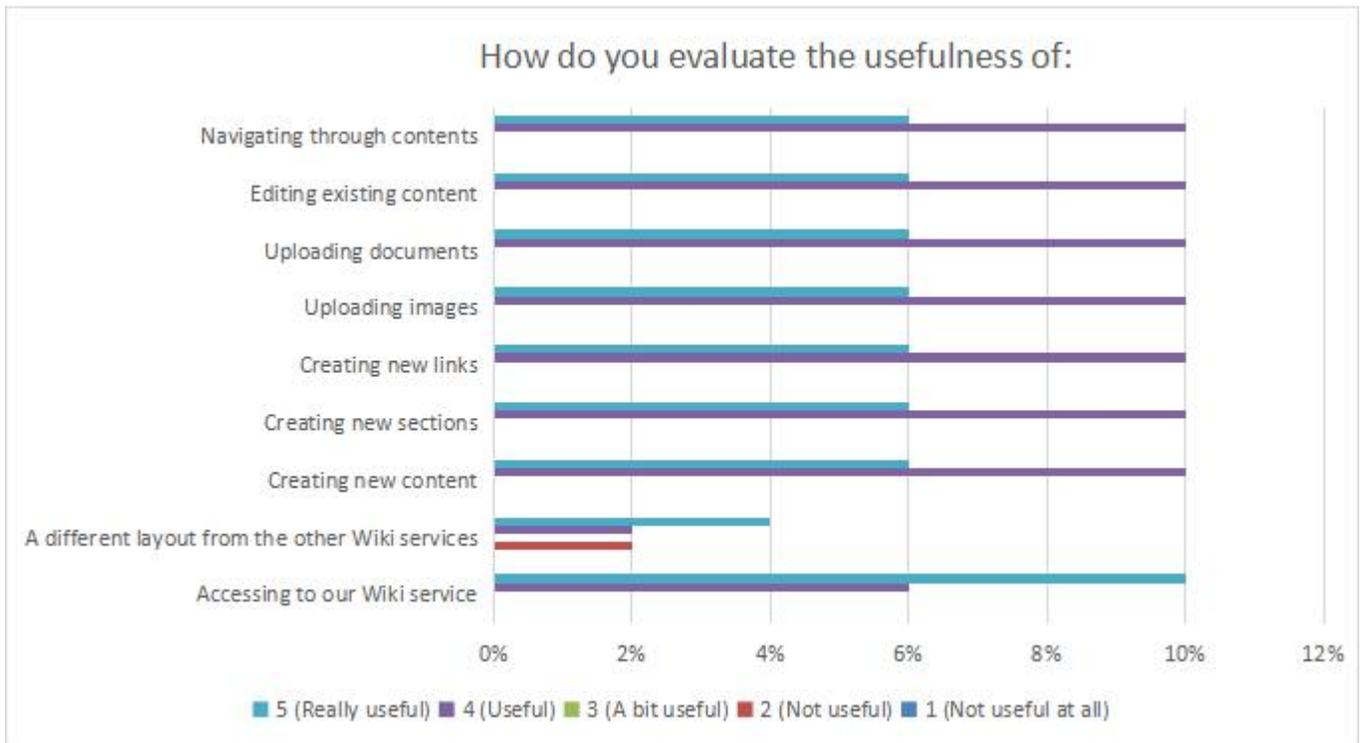
The Wiki service is the most low qualified service. The usage of the service itself is quite low compared to the other services. The low usage is justified with four main reasons: a) Do not like to work with wiki services (20%), b) Don't know it (10%), and c) Tried once but was too complicated (10%), d) Other reasons (26%). In contrast, the main reason for using the Wiki service was: "It works fine". The about can be seen as that, the service works nevertheless it is not attractive.



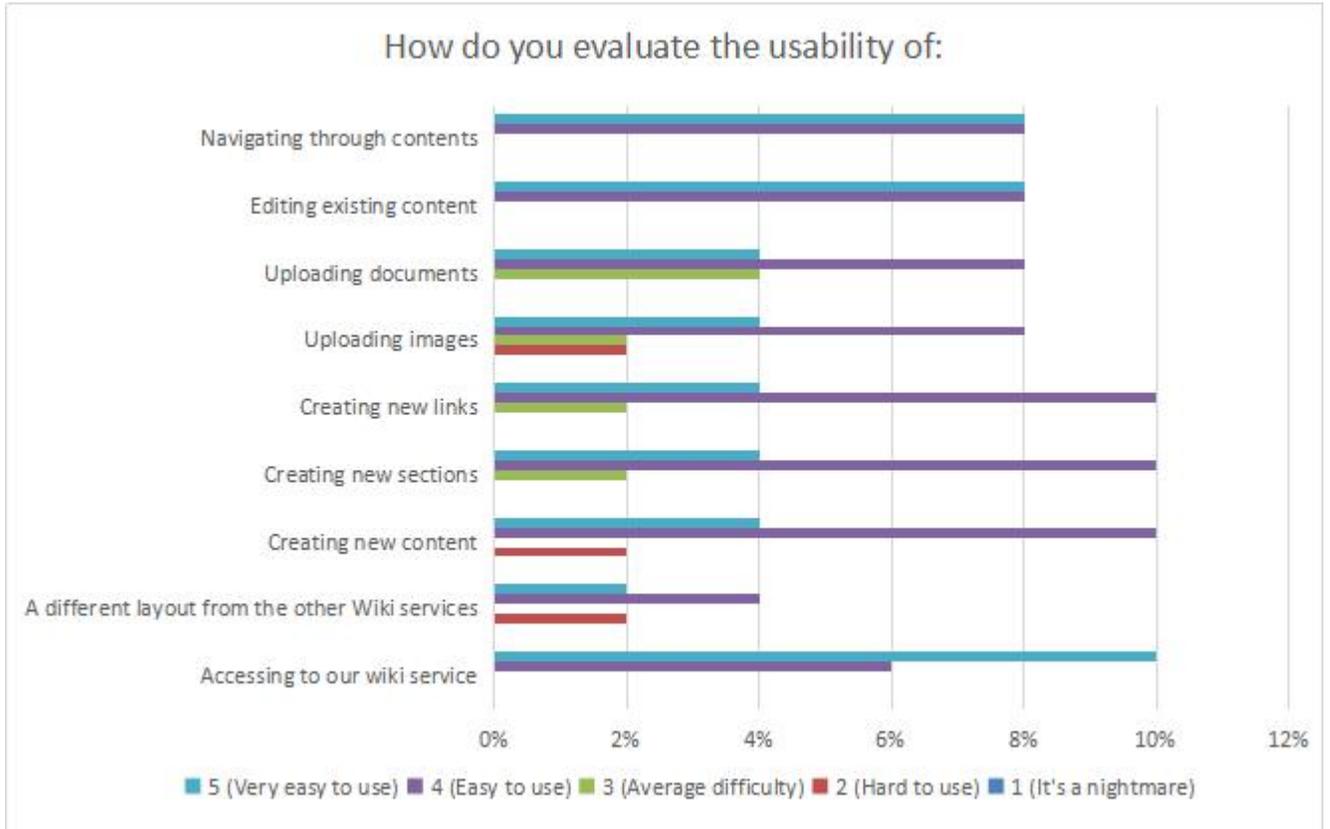




In the usefulness of the Wiki service, the lowest importance was gave to the “A different layout from other Wiki services”.



The usability have several low qualifications in items like “Creating new content”, “Uploading images” and “A different layout from other wiki services”. This result can indicate that users do not see the Wiki as “easy to work”, what can have relation with the amount of people that not use it.



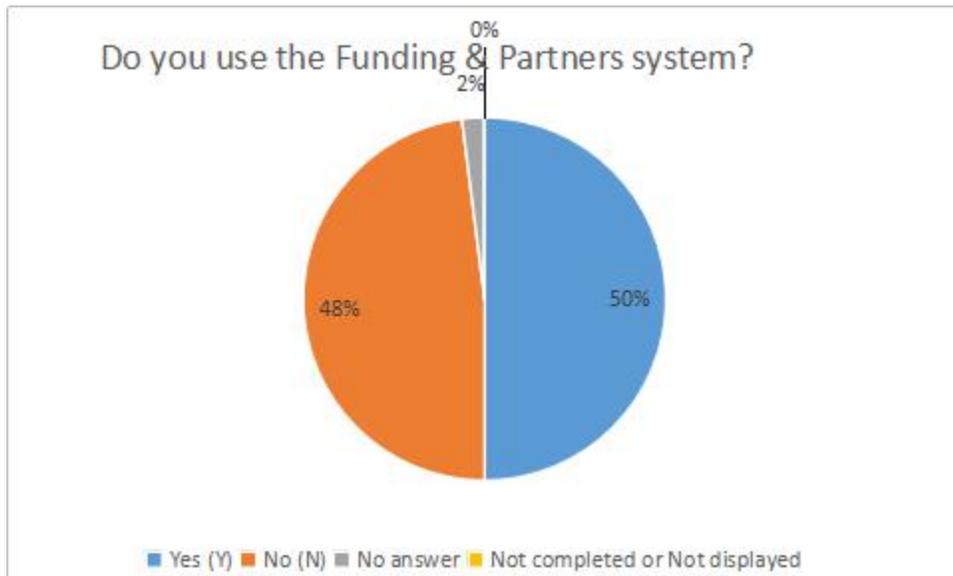
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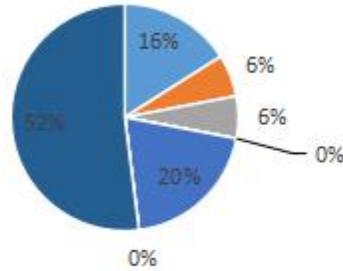
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9. QUESTIONS ABOUT FUNDING AND PARTNERS SYSTEM

The Funding and Partners service usage is divided almost in half with 50% of the that actually use the service. The main reason for not using it was “I don’t know it”, and “Other”. The above shows that service have a potential to be promoted and have more users on it. In the reason for using it, we found the “Receive information by email ...” with 36%, and “To discover funding opportunities” with 16%.

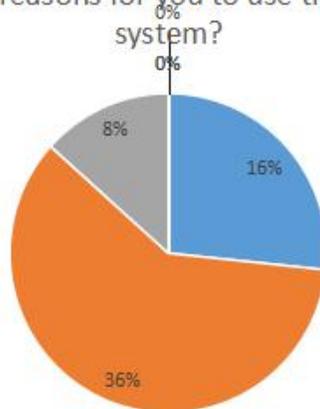


Why don't you use the Funding & Partners system?



- I don't know it
- I don't need it
- I'm not looking for funding opportunities and/or research partners
- I had it but I quit on it cause it didn't give me the specific information I asked to receive
- Other
- No answer
- Not completed or Not displayed

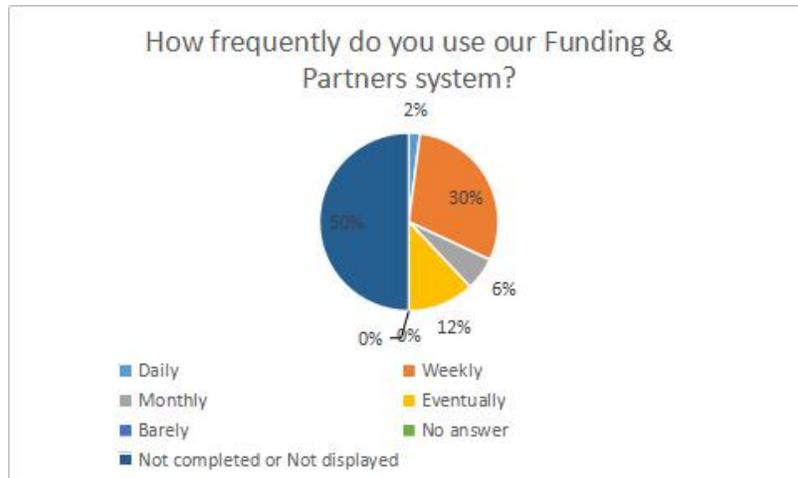
Which are the main reasons for you to use the Funding & Partners system?



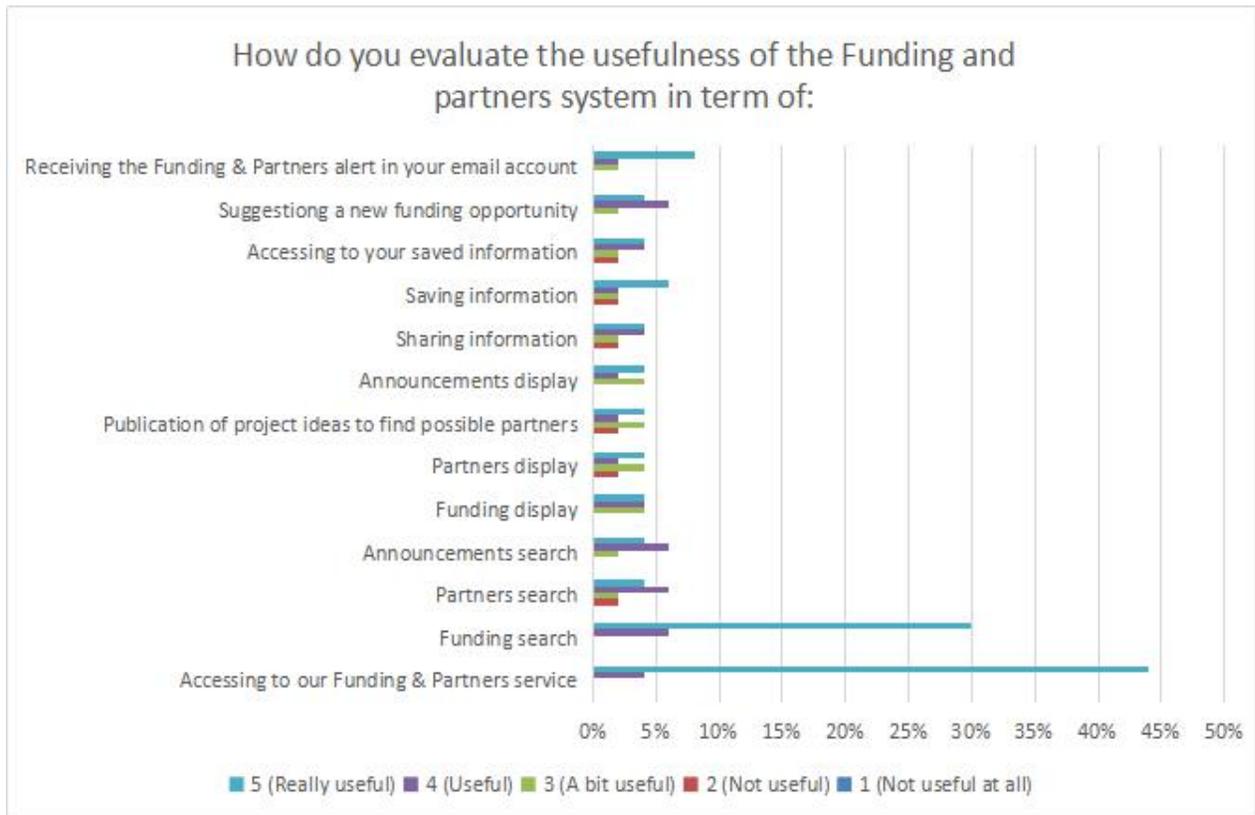
- To discover funding opportunities and seek for partners (SQ001)
- I receive the information in my email, I don't need to get inside the tool to find what I'm looking for (SQ002)
- It works fine (SQ003)
- It is in a protected environment (SQ004)



The frequency of use is an interesting result. 30% of the users stated that they use it “Weekly”, and it is the best result among all the services. The results speaks very well about the service, because very few services have this frequency of use, and it can be a nice tool for keep users coming back.



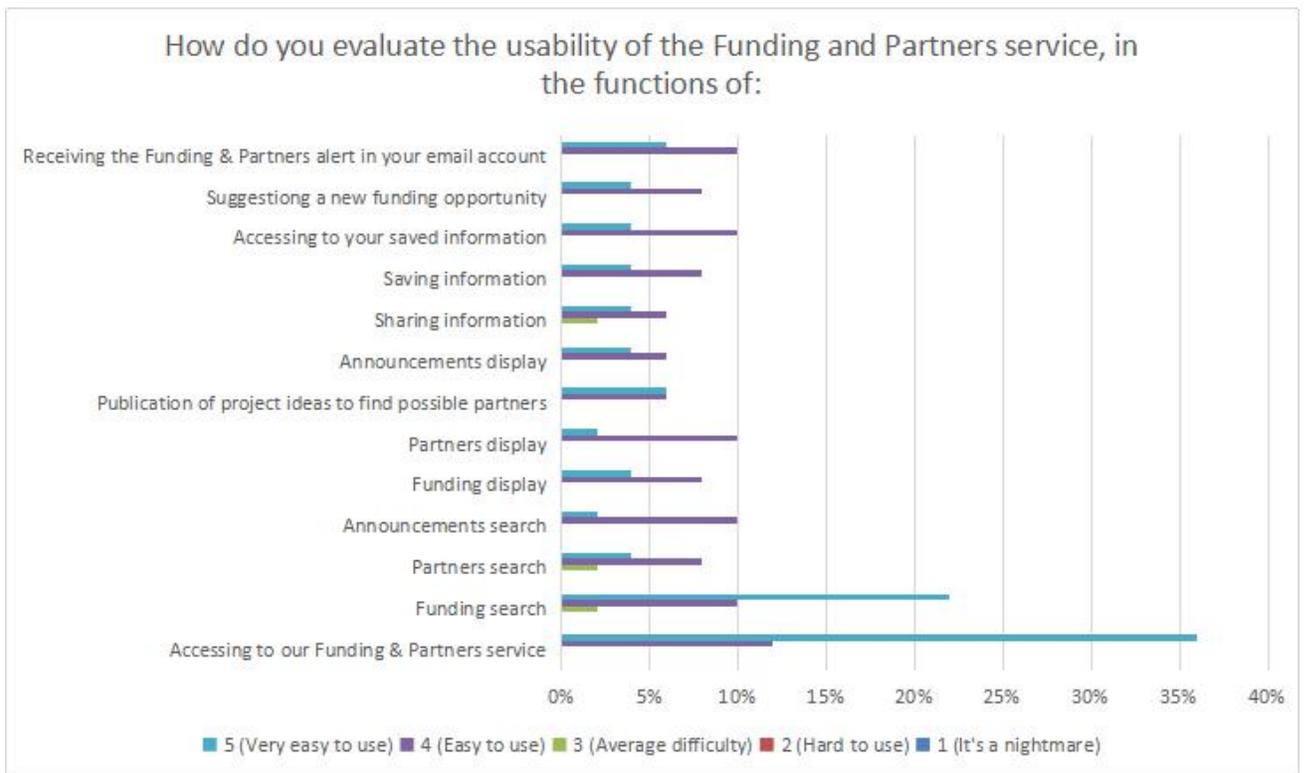
In the usefulness qualification, it is shown the interest of the users in the tool. The main point to highlight is the “Funding search”, what shows that people found it useful for the main purpose of the service.



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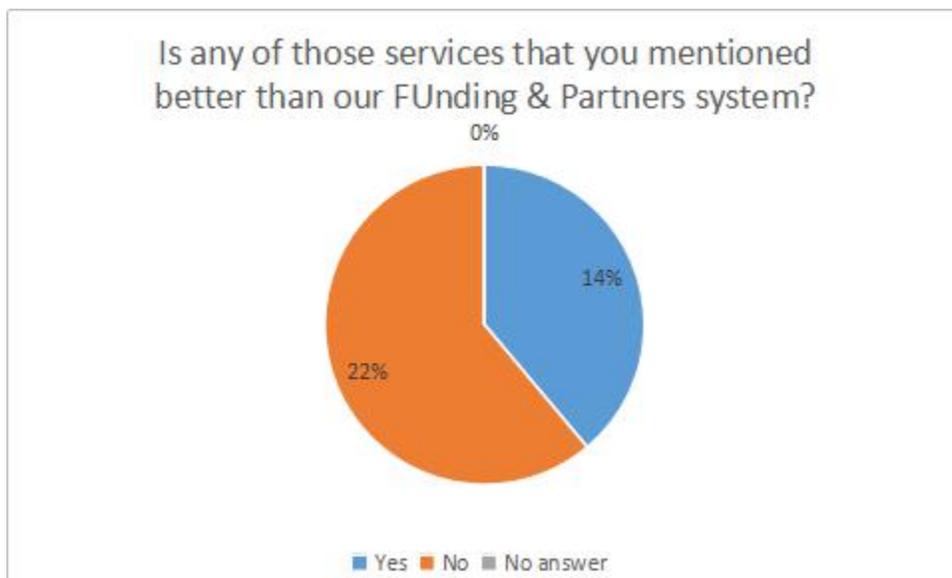
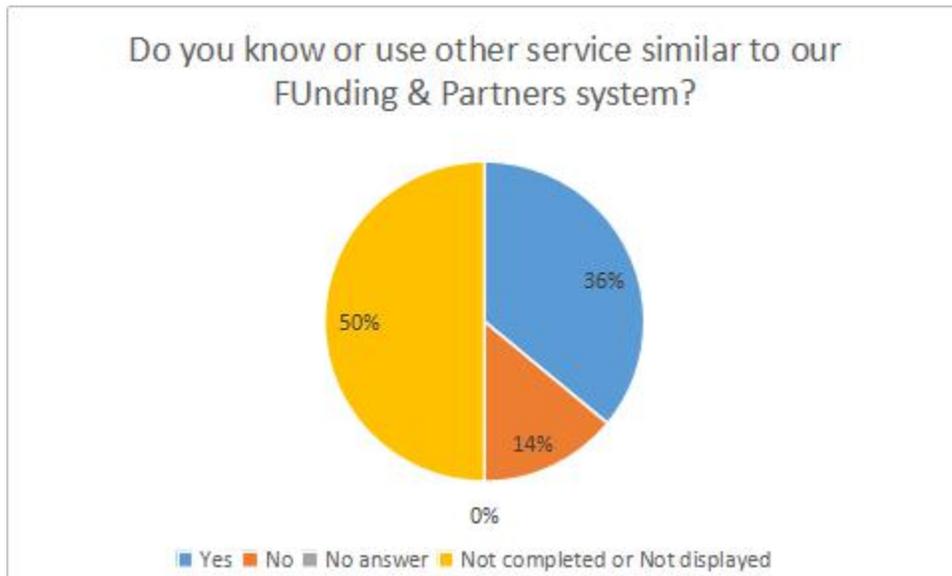
A good percentage (36%) mentioned to know other services like our Funding and Partners service. Nevertheless, only 14% considered the other services better.



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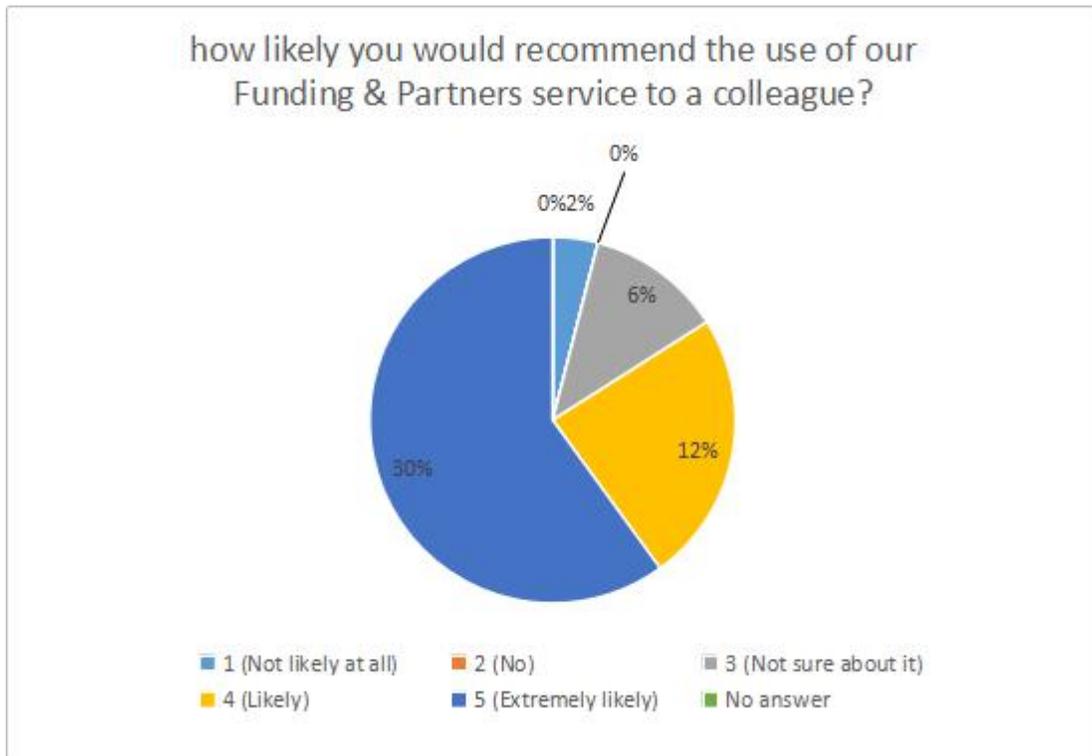


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One of the best results in recommendations likeliness with 40% that will “likely” or “really likely” recommend the service to a colleague.





10. CONCLUSIONS

There is a lot of good results in the service potential area, highlighting that the Funding&Partners service was the best. Its usage level (50%), likeliness of recommendation (42%), and frequency of use shows that this has a lot of value for the user communities. In the usability the results were good in most, highlighting that is required some work in simplicity and training in the Colaboratorio service. The wiki service shall be re-evaluated because it has the lowest qualifications, showing that users do not value this service at it should.

The File Transfer service needs to be promoted, because it has nice qualifications as service and usefulness, but the usage percentage is not as expected.



Progress Report

MAGIC Deliverable: D3.6 Recommendation on service requirements for cloud providers in academic cloud infrastructures.

Document Full Name	MAGIC WP3 D3.6 Recommendation on service requirements for cloud providers in academic cloud infrastructures.
Date	6-2-2017
Activity	Cloud Provisioning and Groupware Standards
Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document with recommendations regarding cloud service parameters is envisaged as a reference for organizations that are interested to provide cloud services in a global academic environment. The goal is that institutions can define their service parameters so as to provide services according to a set of common standards..



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo A. Garcia	Technical Manager	2017-2-15	RedCLARA
Contribution by	Fernando Aranda	CUDI	2017-2-27	CUDI
Contribution by	Michal Procházka	CESNET	2017-2-28	CESNET
Contribution by	Christos Kanellopoulos, Ognjen Prnjat	GRNET	2017-3-30	GRNET
Contribution by	Carlos A. González P.	Development Project Leader	2017-3-20	RedCLARA
Approved	Florencio I. Utreras	Project Coordinator	2017-04-05	RedCLARA



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1. INTRODUCTION

It is in the interest of National Research and Education Networks (NREN), R&E infrastructure providers and data centres, and institutions like universities, colleges and research centers to share services with each other for the benefit of their users and for economies of scale. The cloud technologies available provide multiple advantages like service sharing, stability, activation speed, and reliability among many others, due to the concept of concentrating services on dedicated providers and data-centers. With this rich environment of services and infrastructure, other challenges appear like evaluating and contracting the most capable providers, ensuring security and data privacy. This recommendation aims to provide a reference for the client institutions to assess service providers' capabilities, and request the service parameters that suit them. . This reference does not intend to be a contract, but to serve as a guideline for the relevant requirements. The providers can thus specify the relevant parameters of their service provisioning profile, while the consumer can define what requirements fulfill their needs. . A cloud provider could be an academic institution or commercial entity. In both cases, the contracting party / consumer will act as an intermediary to represent their organization and users interests, based on their own service standards.

As such, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this section are to be interpreted as described in RFC 2119¹.

2. GLOSSARY

AUP: Acceptable Use Policy
CSP: Cloud Service Provider
NREN: National Research and Education Network
REN: Research and Education Network
SAML: Security Assertion Mark-up Language
SLA: Service Level Agreement

¹ <http://tools.ietf.org/html/rfc2119>



3. SERVICES DESCRIPTION

This section describes the kind of services that are part of these requirements.

Infrastructure as a Service (IaaS): Services that provides resources to support end-user service deployment. In this area are included services like connectivity, cloud servers, authentication infrastructures, data storage, among others.

Software as a Service (SaaS)/Cloud Application Services: Software services for institutions or end users, which are offered by cloud providers for a specific purpose. Examples of these services include e-learning systems, email-severs, office365, among many others.

Platform as a Service (PaaS):

Services that are in the cloud and provide tools and resources to develop, test, manage and deploy applications and systems.

In this model end users can become providers or users of a service.

Examples are database management systems, design tools, operating systems, and many others.

Services catalogue: Service that list and describe the existing services, applications, infrastructures including its characteristics, policies, and attributes.

Federated access: Defined as the support for the federation protocols stack in order to allow the end-users to access services in other domains, by using its home institution credentials for authentication.

Service data/end-user data: Any information generated or stored in any format by the institutions, end-users, communities, or stakeholders. It also include all the information generated from their use, combination or modification.



4. THE RESEARCH AND EDUCATION ORGANIZATIONS AND SERVICE ROLES

National research and education networks are typically non-profit organizations, whose purpose is to provide connectivity for research and educational institutions and to support the educational, innovation and research activities by providing various value-added applications and services to its customers, on top of basic connectivity. Examples of such applications can be basic collaborative applications such as videoconferencing, file transfer, etc, through provisioning of IaaS services such as data storage, on-demand cloud Virtual Machines (VMs), supercomputing facilities, via digital libraries, all the way to discipline-specific applications in diverse fields such as climatology, astronomy, biomedicine, etc.

5. ACCESS TO THE NETWORK

NRENs and academic institutions rely on its academic networks for ensuring the quality, privacy, security and performance of its services. Due to this, it is required that the cloud providers are connected to the an NREN or REN in order to provide services to the community.

6. COMPLIANCE WITH IDENTITY FEDERATION STANDARDS

- a) The provider must support the SAML protocol in a recent version, and be capable to behave as a service provider according to the SAML specification.
- b) In order to support access for users from academic institutions around the globe, the provider should be part of the national identity federation which is connected to the inter-federation eduGAIN.
- c) It is desirable but not mandatory that the provider has the ability to implement an interface for group management in federations based on a standardized protocol like VOOT, SCIM or SAML2 Attribute Query. The group management functions aims to work for authorization or perform functions based on group members or membership which are not available from the user's home organization. Group membership is usually managed by the research projects and communities.



7. ORGANIZATION REQUIREMENTS

The provider must declare, and ensure its organization adheres to the following:

- a) Shall not be under investigation for any corruption or illegal activity, including money laundry.
- b) The organization must not be in bankruptcy protection laws
- c) The related services shall not be under dispute, or legal copyright processes. Furthermore, all the offered services must be of its property or have an agreement for commercial use.

8. PRIVACY AND USE OF DATA REQUIREMENTS

- a) IPR in respect of customer data

The provider shall not use any of the user's data for any purpose, not related to the service delivered.

The provider shall respect the original copyright of the customers' data. The above means that the use of any of the provider services will not transfer data ownership, even if this is notified, suggested or accepted by the end-user during the service use.

- b) Processing data

For any processing of the end-user data an agreement is required with the client institution, or owner of the data.

- c) Ownership of the data

All service data will be owned by the end-user and the institution she/he belongs too.

The end-user shall always have guaranteed access to this data. The provider shall guarantee that the user will have the possibility to access hers/his information, independent of the current service status. In case the end-user does not have the active services with the provider, she/he will have the right to request a backup copy of hers/his last information.



d) Data protection

The CSP should treat all User data as though it were confidential regardless of its classification by the User. It is anticipated that CSPs will be required to evidence that they will cascade this responsibility down its supply chain to all relevant 3rd parties. It is also anticipated that User will expect CSPs to make every effort to safeguard data access and the interests of the Users at all times. CSPs will be expected to ensure that all staff sign a confidentiality statement regarding confidential data.

e) Request data access from 3rd parties

Where a request for access to User data comes from a recognised government authority, the CSP will be expected to check what their actual legal obligation is before they comply with the request. Users do not expect the CSP to cooperate where no legal obligation exists and thus deny the request. Where a legitimate request is received, the CSP should only release a minimum data set and in all cases will be expected to inform the affected User as soon as possible.

f) Notification

The CSP should notify the User immediately if it becomes aware of a suspected or actual breach of confidentiality, loss of data, breach of the security measures, deterioration of the service, or downtime of the service. The CSP will take all necessary measures, at its own cost, to secure the data and to rectify the shortcomings in the security measures so as to prevent any further perusal, alteration, or provision, without prejudice to any right of the User to damages or other measures. Following such an incident, at the User's reasonable request, the CSP will cooperate with the provision of information about the incident and its resolution to concerned parties.

g) Data location

The CSP must provide, if requested by the institution, the location of their servers and its cloud infrastructure related to the offered services. The above includes the facilities where information is stored, processed or transit.



9. ACCEPTABLE USE POLICY (AUP)

The provider should have an acceptable use policy that describes what it considers an improper or outright illegal for the use of its service. This AUP must be properly communicated to end-users before they use the service.

10. DATA PRESERVATION AND ACCESABILITY

- a) The provider shall make all efforts and have strategies for keeping customers' data safe. The above means it shall have periodic backups, restore tests, disaster recovery plans, and high redundancy levels. The strategies for data preservation must be described.
- b) The provider shall guarantee the end-user is able to access her/his data in the presence of any event including, but not limited to: charging/credit disputes, service suspension, service cancellation, user migration to other provider or service. The provider must give the mechanism to download, backup, or carry out snapshots for the mentioned purpose.

11. SERVICE CHARGING AND USAGE

The provider must ensure the customer charging model be predictable and clear for the end-user. In order to do so, the provider must:

- a) To provide clear and accessible channels to request service changes, and cancellations, ensuring always customer agreement with their bills.
- b) Describe all fixed and variable rates applicable for the service
- c) Provide thresholds that avoid high rates that could impact customers budget
- d) When possible, provide projections of the estimated maximum expenses.
- e) The provider must provide a mechanism for the users to claim a credit reimbursement in case of outages



12. SERVICE LEVEL AGREEMENT AND QUALITY REQUIREMENTS

- a) The provider shall have a well defined Service Level Agreement (SLA) in where the provider specifies: I) The service availability, II) If there is any compensation for no compliance, III) The support scheme, IV) Metrics available and V) the escalation procedures.
- b) It is highly recommended, that the above SLA commitment includes a high service availability agreement. A high service availability can be considered above 99,5% monthly.
- c) The provider must specify the service desk structure, attention channels, languages supported, and service hours.
- d) The provider must have a change management process that guarantee users' notification of maintenance activities.
- e) The provider must have performance and usage monitoring capabilities, and the resulting information shall be available to the academic institutions.

13. MANAGEMENT ROLES

The service provider shall designate the following roles, and provide all its contact information:

- a) **Service manager:** In some cases, this role can be divided in a service delivery manager, and a service manager. The responsibilities of this/these roles include: i) Guarantee the delivery of services in time and quality, ii) Foster high quality and the compliance of service level agreements, iii) Be the customer representative inside the provider's organization.
- b) **Technical contact:** A person or area in command of attending any engineering, dimensioning or technical requests that may arise. This area is the first escalation contact for technical inquiries.



14. SERVICE REQUIREMENTS

- a) The infrastructure services provider must have a detailed service description of their technologies. Including:
 - i. Virtualization technology used
 - ii. Technical standards supported
 - iii. Compliance with international norms and standards
- b) The service provider must have the ability to provision resources quickly, easily and efficiently.
- c) The service provider must have a detailed service backups.
- d) The service provider shall guarantee that the end-user and the institutions will be able to transfer their services to other infrastructures. This process shall be done by using standard formats, in a practical and usable form.

15. SOFTWARE SERVICE REQUIREMENTS

- a) Is desirable that the offered solutions are open-source.
- b) The provider must guarantee that its service does not brake any intellectual property laws for the users' access or utilization. In case of using commercial software, the provider shall specify the licensing costs, and how are they related to service charges.

16. COLABORATORIO'S INTEGRATION REQUIREMENTS

In this project, we have enhanced a global platform intended to facilitate the integration of services and provide them to end user communities, this platform is called the Colaboratorio. Today Colaboratorio provides its integrated services to end-users and institutions in Latin-America, Europe, Africa, the Caribbean, Middle-east and Asia.

The Colaboratorio platform includes today applications developed by NRENs and RRENs in Europe and Latin America, such as: VCEXpresso for web-videoconferencing, FileSender for large files transfer, Docs for collaborative document construction, and several other. These applications make use of a



Single Sign-on service and adopt the user-group standards promoted by this project. In this section we develop a series of recommendations for other developers to ensure that their applications can be inserted in this platform. The applications can then be provided as stand alone or in the cloud by NRENs, RENs, or commercial providers taking into account the following requirements:

- a) Providers must comply with SAML identity federation standards declared in numeral 6.
- b) Colaboratorio has a mailing list management service in their suite. This service is usually based on mailman, and there is an integration with the Sympa server too. In case of deploying their own mailing-list management, the provider must implement an API that supports the following commands:
 - a) `createList(_list_name_, _list_owner_)` /*creates a new list*/
 - b) `listMembers(_@members_)` /*updates the members of a list*/
 - c) `getMessages(_date_)` /*returns the messages received from _date_*/
- c) Colaboratorio's communities management service is deployed through Iframes integration. In order to support it, the provider's application must allow to be embed in HTML Iframes.
- d) The provider shall allow to share meta-data with Shibboleth base identity providers. The above will allow to be integrated to the confederation service called eduGAIN.
- e) The service to be integrated must be encrypted through SSL. For it, the service must implement a valid SSL certificate.
- f) The provider must accept the Identity Providers' meta-data shared by RedCLARA's service. In other words, the providers shall allow service login from RedCLARA's partners, including the European confederation eduGAIN.
- g) The service should be capable of reading a language string via URL, for example `lang=pt, l=pt, /pt/` or similar.
- h) It is recommended that the service become adapted to the Colaboratorio's look and feel following these minimum guidelines:
 - a) Using bootstrap Stylesheets
 - b) Avoiding any menu to the left.
 - c) Avoiding any header.



- d) Avoiding any log out button.
- e) Using “Open Sans - 12px” as body text.
- f) Using “Open Sans - 22px” for Level 1 titles.
- g) Using “Open Sans - 18px” for Level 2 titles.

17. SECURITY REQUIREMENTS

The service provider shall be able to deliver the following information to the institutions, so they can assess the overall security status:

- a) The cloud service provider must have their infrastructure in a secure location, protected in physical access with a strict control procedure, network access through firewalls and intrusion detection systems, and policies that defines the minimum security standards adopted.
- b) The provider should have a framework for information security management - Example ISO27001 - 27002
- c) Provider must have periodic security audits that help to prevent security incidents. The minimum recommended period is 1 year.
- d) It is recommended that the provider has a Security area and/or Computer Security Incident Response Team (CSIRT), in command of attending security incidents and defining preventive measures. In addition, the provider must describe its procedures for managing security incidents,
- e) Provider should have a secure data deletion procedure
- f) Provider should have a disaster recovery plan to ensure continuity. The plan shall include infrastructure and application recovery.

18. REFERENCES

[1] Mandeep Saini (GÉANT), GN42-16-114E4 GÉANT IaaS Cookbook

[2] Cloud Standards Consumer Council (CSCC), April 2015, Practical Guide to Cloud Service Agreements Version 2.0



Progress Report

MAGIC Deliverable: D4.1 Online training on implementing the NRENum.net service for global video dialing

Document Full Name	Online training on implementing the NRENum.net service for global video dialing
Date	01-09-2015
Activity	Agreements for real-time communications
Lead Partner	RENATA (Colombian NREN)
Document status	DRAFT
Classification Attribute	Public
Document link	

Abstract: In this document we present the learning material developed to support the expansion of the NRENum.net standard. The course has been developed using the OpenEDX MOOC Platform and is available in English and Spanish. Future versions in other languages are under way.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Jader Castaño	RENATA / WP Leader	01-09-2015	RENATA
Revised by	Gustavo García	RedCLARA	02-09-2015	RedCLARA
Revised by	Florencio Utreras	RedCLARA/CEO	15-09-2015	RedCLARA
Revised by	Gustavo Garcia	RedCLARA Technical Manager	30-9-2016	RedCLARA
Revised by				
Revised by				
Approved by	Florencio Utreras	RedCLARA/CEO	14-10-2016	RedCLARA



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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

In order to expand the NRENum.net standard, the group shall extend the implementation knowledge to allow new NRENs to adopt it. Having an on-line course is a key element because it can reach a broad audience, in a global basis, at low costs. The on-line course will explain how to implement a DNS system for NRENum.net. All the material will be focused on facilitating the deployment for the NRENs, and set ready the elements for unified communications. The course has been done with visual and written materials to support the learning process, using a MOOC methodology.

This document provides information about the online training material to guide NRENs in the process of delegation of NRENum.net zone, and setup their DNS services to register NRENum.NET numbers..

1.2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the authors, including Gustavo García, WP4 – Technical Manager (RedCLARA), gustavo.garcia@redclara.net, and copied to the MAGIC WP4 working group magic-wp4@listas.redclara.net.

1.3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
DNS	Domain Name System
E.164	ITU Recommendation for international number
ENUM	E.164 Numbering Mapping
URI	Uniform Resource Identifier





2. EXECUTIVE SUMMARY

In order to expand the NRENum.net standard, the group shall extend the knowledge on practical issues of the implementation to allow new NRENs to adopt it. Having an on-line course is a key element because it can reach a broad audience, in a global basis, at low costs. The on-line course will explain how to implement a DNS system for NRENum.net. All the material will be focused on facilitating the deployment for the NRENs, and set ready the elements for unified communications.

The course is at present in English and Spanish, plans are underway to include a French version.

The course is intended to be a tool for self instruction and was developed in the OpenEDX MOOC Platform operational in RedCLARA. This platform allows to provide video support material as well as the self evaluation process allowing the student to evaluate his skills as he advances along the course.

This course is a new version and it comes in addition to the one developed in a Moodle platform that was previously reported which is already translated into French.

3. NRENUM.NET ON LINE TRAINING

3.1. COURSE INTRODUCTION AND GOALS

This course is part of the MAGIC WP4 scope of work, and its purpose is to provide to the NRENs communities the necessary elements to implement the NRENum.NET service in their institutions. The NRENum.NET service is a global dialling standard to translate telephone numbers in the E.164 standard format to uniform service identifiers (URI) that can be used by the video or voice infrastructures to reach the dialled location.

The course explains the main service concepts like the domain name system (DNS), the E.164 and ENUM standards, and shows how to configure and enable these tools. Furthermore, the course makes the indications on how to request the NRENum.NET prefix delegation from GÉANT, so the NRENs can become the root servers for their country.



General Goal:

At the end of the course, the participants will be capable of implementing the NRENum.NET service for their institutions. They will understand all the systems and services involved, and how to operate and request the country code delegation.

Target Audience.

The course is targeted at NREN technicians as well as University technicians who wish to implement NRENum. Basic knowledge in Linux System administration and networking is required.

3.2. THE ON LINE COURSE STRUCTURE

This training material has been developed as a tool for the NRENs that have not implemented the NRENum service for their organizations. The material shows the step by step instructions to enable NRENum in an NREN environment, how to configure it, how to register to the NRENum.net tree, and the general recommendations to configure the terminals, gatekeepers, or SBC to make use of it.

The Course is divided in three sections, documentation and self evaluation tests. In the end, a list of references for further study is provided.

The list of sections and subsections and their goals are as follows:

1. Service concepts and protocols

This section explains the concepts and general theory about the NRENum.NET service, its components, how they work, and the standards used. The unit also describes the typical NRENum.NET services work, and how they related each other, including service message and flows.

Goal: The unit goal is to have the participant to learn and understand the components and protocols to implement the service.



2. Implementing the NRENum.NET service

In this chapter, the course contains the process to install, configure and implement the NRENum.NET service. It contains also the description of the zone delegation request process. The participant will have the goal to implement a DNS service, define the zone files and test the number resolution. Furthermore, the process will explain the basics on how to configure an Asterisk, and GNUK servers to use the video and voice traffic with NRENum.NET dialling.

Goal: The unit goal is that the participant finish the course with the capacity to install and operate the NRENum.NET service.

3. Implementing a Secure Domain Name System (DNSsec)

The DNSsec implementation is one of the goals of the MAGIC WP4 project. The protocol allows to secure the DNS zones, and avoid service attacks like the cache poisoning where a hacker can feed fake DNS records that points users to other domains or phishing sites. In this section , the participant will have the DNSsec concepts and will learn how to implement it in their environment.

Goal: The participant will implement a DNSsec for its NRENum:NET domains.

3.3. ACCESS TO THIS COURSE

The online training is accessible to everyone on the following links:

Spanish version

http://clara.fun-campus.net/courses/course-v1:RedCLARA+NRUM01+2016_T4/about

English version

http://clara.fun-campus.net/courses/course-v1:MAGIC+NRENUMen+2016_T4/about





4. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
- [R2] Web Official NRENum.net <http://nrenum.net>
- [R3] Moodle Online course <http://cursos.redclara.net/course/view.php?id=47>
NRENum

5. CONCLUSIONS

Online training material is now available using MOOC technology to support the training on how to implement the NRENum.net service for global video dialing. This material will be of great use in the deployment of NRENum in the NRENs served by the MAGIC Project.



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Periodical Progress Report

MAGIC Deliverable: 4.3 Three (newly delegated countries or already members) participants that secured the country code prefix ENUM zone with DNSSec

Document Full Name	D4.3 Three (newly delegated countries or already members) participants that secured the country code prefix ENUM zone with DNSSec
Date	30-11-2016
Activity	Agreements for real time communications
Lead Partner	RENATA®
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This report explains the countries that implemented DNSsec for its NRENum.NET service. The DNSsec allows to secure the domain name system zone to avoid possible attacks.



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From	Gustavo García	RedCLARA	30-9-2016	RENATA
Revised by				
Approved by	Florencio Utreras	RedCLARA/CEO	12-12-2016	RENATA





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1. INTRODUCTION

One of the defined work package goals was that NRENs implement the DNSsec for its NRENum.NET servers. DNSsec is a technology that add security certificates so they can validate the authenticity of the name system information. DNSsec does not encrypt information, it just allow to sign the answers from the DNS server on domain A, so the receiving party in domain B can validate that the responding party is valid. This allows to avoid various DNS security attacks that allow hackers to poison DNS caches so they return incorrect IP addresses or still data from the end users. The DNSsec implementation was a well received strategy among the implementing NRENs, and this report shows how many of them implemented.

2. GLOSSARY

DNS	Domain Name System
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
E.164	ITU Recommendation for telephone numbering format
ENUM	E.164 number mapping using DNS service
NRENum.NET	ENUM service run by GÉANT
NREN	National Research and Education Network

3. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
- [R2] NRENum.net Website <https://nrenum.net>





4. DNSSEC IMPLEMENTATION PROCEDURE

The DNSsec implementation carried out by the organizations on this report, is compound of three main steps:

- a) Installation and setup of the secure DNS software
- b) Generation of the zone certificates
- c) Register the domain certificates on the domain registrar organization.

The installation of the secure DNS software is done using standard Linux tools, and it is documented on the NRENum.NET manual developed in the MAGIC project:

http://clara.fun-campus.net/courses/course-v1:MAGIC+NRENUMen+2016_T4/about

The generation of the zone certificates, also known as zone signing usually involves the creation of certificates (private and public keys) for the server. On the OpenDNSsec solution, the step will be something like:

```
softhsm --init-token --slot 0 --label "OpenDNSSEC"
```

The next step, will be to use the public key to sign the zone. The step will be something like:

```
ods-signer sign 7.5.redclara.net
```

Once the zone is signed, there is a hash string that must be send to the NRENum.NET tree managers in order to associate it with the specific zone. This is an administrative step, and can be included in the zone delegation form.

5. NRENS THAT IMPLEMENTED DNSSEC

The following NRENS implemented DNSsec within the MAGIC WP4 scope of work:

	Country	DNSsec implementation date
CESNET	Czech Republic (+420)	Dec 2, 2015
RAAP	Perú (+51)	Dec 12, 2015
RENATA	Colombia (+57)	January 21, 2016
RAICES	El Salvador (+503)	April 25, 2016
CEDIA	Ecuador (+593)	July 26, 2016





All implementations were validated and registered with the NRENum.NET service. Each of them received a confirmation email like the following:

----- Forwarded Message -----

Subject: [discussion] Welcome Czech Republic to NRENum.net (+420) + DNSSEC!!
Date: Wed, 2 Dec 2015 23:00:48 +0100
From: MÉSZÁROS Mihály <misi@niiif.hu>
To: discussion@nrenum.net
CC: delegations@nrenum.net <delegations@nrenum.net>, Jan Ruzicka <janru@cesnet.cz>, Peter Szegedi <peter.szegedi@geant.org>

Welcome CESNET, Czech Republic to NRENum.net!

@Jan Thank you very much for your cooperation!

Country code +420 is now officially delegated to CESNET!

Please add at least few NAPTR records to your new 0.2.4.nrenum.net zone (if it is not done already) to make it fully functional, and get on the crawler list <https://crawler.nrenum.net/>

I am very happy to announce that zone 0.2.4.nrenum.net is already using DNSSEC!

Nice job & Many thanks to Jan!

If You are not yet subscribed, then I strongly suggest to subscribe to discussion@nrenum.net list, to keep you up to date with nrenum.net, keep you informed about any further changes.

@Péter Please update the nrenum.net wiki, map etc. according the change.

Thanks in advance,
Misi

6. CONCLUSIONS

The working group can said that NRENum.NET sale is harder than DNSsec. In some of the cases, the NRENs just required the recommendation and the goal set, and they went into the implementation by them self. Advertising and proper communication the new entering countries could encourage and promote the adoption in others. The MAGIC project members will continue the effort to engage partners in the DNSsec implementation path.



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Periodical Progress Report

MAGIC Deliverable: 4.3 Three (newly delegated countries or already members) participants that secured the country code prefix ENUM zone with DNSSec

Document Full Name	D4.3 Three (newly delegated countries or already members) participants that secured the country code prefix ENUM zone with DNSSec
Date	30-11-2016
Activity	Agreements for real time communications
Lead Partner	RENATA®
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This report explains the countries that implemented DNSsec for its NRENum.NET service. The DNSsec allows to secure the domain name system zone to avoid possible attacks.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Gustavo García	RedCLARA	30-9-2016	RENATA
Revised by				
Approved by	Florencio Utreras	RedCLARA/CEO	12-12-2016	RENATA





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1. INTRODUCTION

One of the defined work package goals was that NRENs implement the DNSsec for its NRENum.NET servers. DNSsec is a technology that add security certificates so they can validate the authenticity of the name system information. DNSsec does not encrypt information, it just allow to sign the answers from the DNS server on domain A, so the receiving party in domain B can validate that the responding party is valid. This allows to avoid various DNS security attacks that allow hackers to poison DNS caches so they return incorrect IP addresses or still data from the end users. The DNSsec implementation was a well received strategy among the implementing NRENs, and this report shows how many of them implemented.

2. GLOSSARY

DNS	Domain Name System
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
E.164	ITU Recommendation for telephone numbering format
ENUM	E.164 number mapping using DNS service
NRENum.NET	ENUM service run by GÉANT
NREN	National Research and Education Network

3. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
[R2] NRENum.net Website <https://nrenum.net>





4. DNSSEC IMPLEMENTATION PROCEDURE

The DNSsec implementation carried out by the organizations on this report, is compound of three main steps:

- a) Installation and setup of the secure DNS software
- b) Generation of the zone certificates
- c) Register the domain certificates on the domain registrar organization.

The installation of the secure DNS software is done using standard Linux tools, and it is documented on the NRENum.NET manual developed in the MAGIC project:

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The generation of the zone certificates, also known as zone signing usually involves the creation of certificates (private and public keys) for the server. On the Opensssec solution, the step will be something like:

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The next step, will be to use the public key to sign the zone. The step will be something like:

```
ods-signer sign 7.5.redclara.net
```

Once the zone is signed, there is a hash string that must be send to the NRENum.NET tree managers in order to associate it with the specific zone. This is an administrative step, and can be included in the zone delegation form.

5. NRENS THAT IMPLEMENTED DNSSEC

The following NRENS implemented DNSsec within the MAGIC WP4 scope of work:

	Country	DNSsec implementation date
CESNET	Czech Republic (+420)	Dec 2, 2015
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RENATA	Colombia (+57)	January 21, 2016
RAICES	El Salvador (+503)	April 25, 2016
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All implementations were validated and registered with the NRENum.NET service. Each of them received a confirmation email like the following:

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Date: Wed, 2 Dec 2015 23:00:48 +0100
From: MÉSZÁROS Mihály <misi@niiif.hu>
To: discussion@nrenum.net
CC: delegations@nrenum.net <delegations@nrenum.net>, Jan Ruzicka <janru@cesnet.cz>, Peter Szegedi <peter.szegedi@geant.org>

Welcome CESNET, Czech Republic to NRENum.net!

@Jan Thank you very much for your cooperation!

Country code +420 is now officially delegated to CESNET!

Please add at least few NAPTR records to your new 0.2.4.nrenum.net zone (if it is not done already) to make it fully functional, and get on the crawler list <https://crawler.nrenum.net/>

I am very happy to announce that zone 0.2.4.nrenum.net is already using DNSSEC!

Nice job & Many thanks to Jan!

If You are not yet subscribed, then I strongly suggest to subscribe to discussion@nrenum.net list, to keep you up to date with nrenum.net, keep you informed about any further changes.

@Péter Please update the nrenum.net wiki, map etc. according the change.

Thanks in advance,
Misi

6. CONCLUSIONS

The working group can said that NRENum.NET sale is harder than DNSsec. In some of the cases, the NRENs just required the recommendation and the goal set, and they went into the implementation by them self. Advertising and proper communication the new entering countries could encourage and promote the adoption in others. The MAGIC project members will continue the effort to engage partners in the DNSsec implementation path.



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Progress Report

MAGIC Deliverable: D4.4. Pilot test of an integration between the legacy global video network with one open-source web-conference

Document Full Name	MAGIC WP4 D4.4. Pilot test of an integration between the legacy global video network with one open-source web-conference
Date	31-03-2017
Activity	Agreements for Real Time Collaboration
Lead Partner	CLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document describes the pilot implementation to allow connecting a videoconference hosted by a traditional SIP/H.323 MCU with VCEspresso, the open-source web conference system that has been deployed in several countries around the world by MAGIC.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Carlos Gonzalez	Software projects leader, RedCLARA	2017-03-31	CLARA
Contribution by	Gustavo A: Garcia	RedCLARA's Technical Manager	2017-04-01	CLARA
Contribution by				
Contribution by				
Approved by	Florencio I. Utreras	RedCLARA/CEO	2017-05-15	CLARA



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1. INTRODUCTION

Most of the times, when a conference is hold by a MCU using SIP or H.323 protocols stack, the users who don't have a SIP terminal won't be able to join it, as the open-source solutions that many of them use are not able to establish a link to this legacy video-network.

That's why a gateway that allows webconference platforms to get connected to the video-network through the SIP protocol can benefit those users that don't have the hardware and software to connect to a H.323 conference.

This document shows the results of a pilot of a gateway that allows this integration using the webconference system provided by the Magic's WP3 VC Espresso, which is based on MCONF software. The pilot has been tested on the following MCUs:

- A. Pexip Infinity Connect (a H.323/SIP system on the cloud)
- B. Codian MSE 8420

The test done to generate this document were made with the Pexip Inifinity Connect, provided by CUDI.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, Gustavo García, WP3-WP4 Leader. (RedCLARA – Technical manager), gustavo@redclara.net, and copied to the Management of the MAGIC project.

3. GLOSSARY

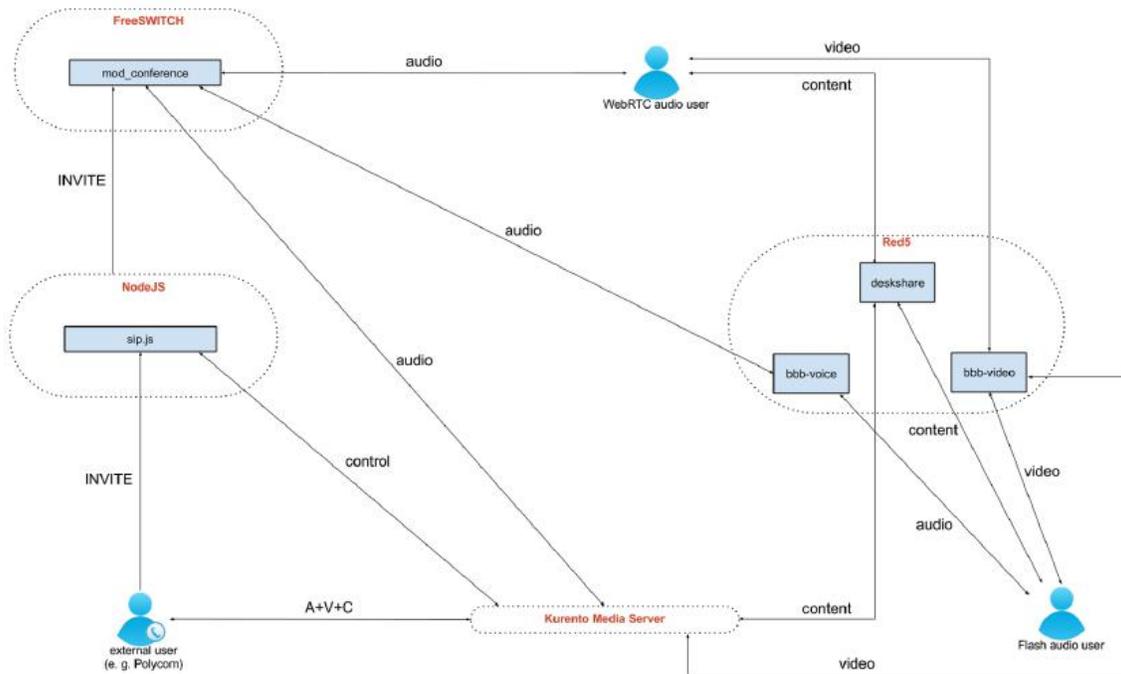
EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
CUDI	Corporación Universitaria por el Desarrollo de Internet, Mexican NREN
H.323	Recommendation from the ITU Telecommunication Standardization Sector (ITU-T) that defines the protocols to provide audio-visual communication sessions on any packet



	network.
MCU	Multipoint Conference Unit
SIP	Session Initiation Protocol
WP	Work Package

4. IMPLEMENTATION ARCHITECTURE

In order to do the integration between SIP end-points, and the web-conference system MCONF, several software components needs to be implemented, and interact. The architecture of these elements, and its communication is shown in the following figure:



The function of each the elements is:

- a) **FreeSwitch**: Responsible of the voice switching between conferences, even if the participant is in the SIP endpoint or the web-conference.





- b) **Red5:** Is the media server that transmit video for webconference users that are not in WebRTC.
- c) **Kurento media server:** Does the video switching between all participants. At future, it will replace completely the red5 functions.

5. DEVELOPED AND TESTED FUNCTIONS

The system integration done included the following features that were delivered and tested:

- a) Inbound calling: (From SIP-endpoint/MCU to webconference)
- b) Outbound calling: (From webconference to SIP-endpoint/MCU)
- c) Content sharing (In both directions)
- d) Integration with and NRENum based SIP proxy (PIT VOIP)

6. KNOWN LIMITATIONS

The system implemented has the following limitations:

- e) Only the presenter's video is shared from the web-conference to the SIP endpoint/MCU
- f) In order to share the content, the presenter must share its screen with the system. The content shared in PPT, PDF or formats uploaded as files is not shared.



7. PILOT TESTING

In this section is shown the process of testing the connectivity of a SIP MCU to the Web-conference system. The testing has been done with two different MCUs. Any person can reproduce this test at any moment, just replacing the step 'b' with his own SIP capable MCU or terminal.

The test that have been performed can be summarized as in the following picture:

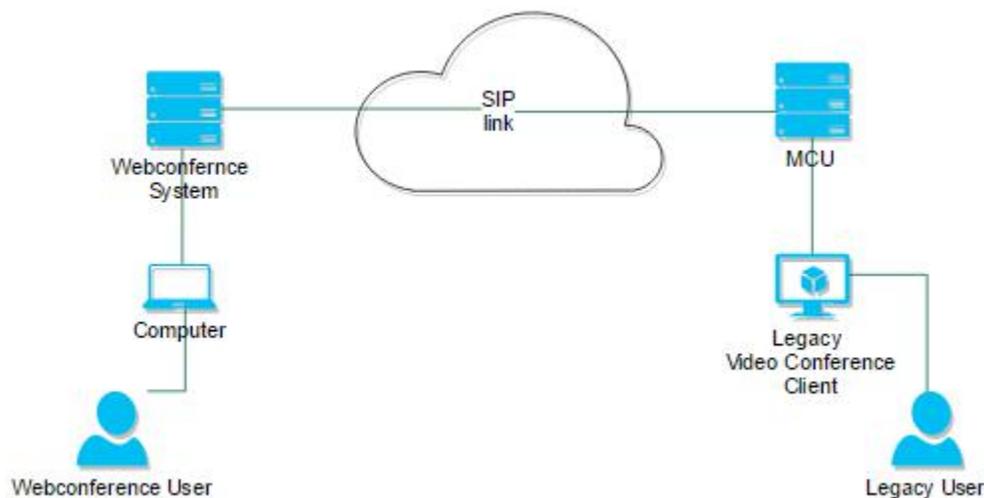


Figure 1. Schema of the pilot

In order to test the link between the webconference system and the legacy video network the following steps were follow:

a) Joining a webconference

In this example, a webconference was open in the Test room 1 using the following URL:

https://mconf-demo-sip-magic.redclara.net/demo/demo_mconf.jsp



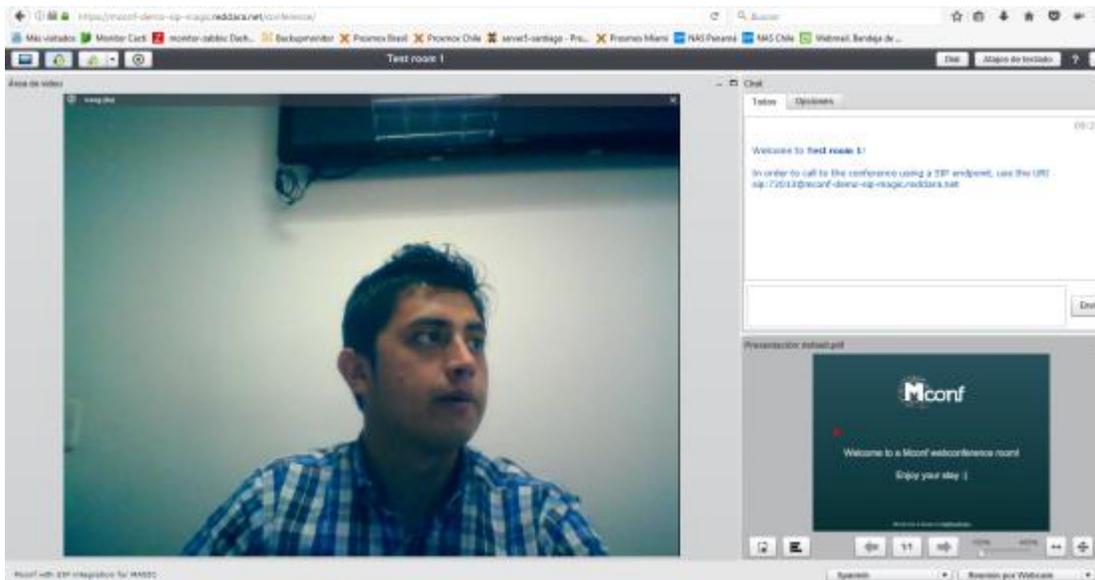


Figure 2. Joining a webconference

b) Open a MCU Room

Another user opened a conference room, but this time a MCU was used. In this case, using a system provided by the Magic partner CUDI:

<http://vc.cudi.edu.mx/>
alias: redclara



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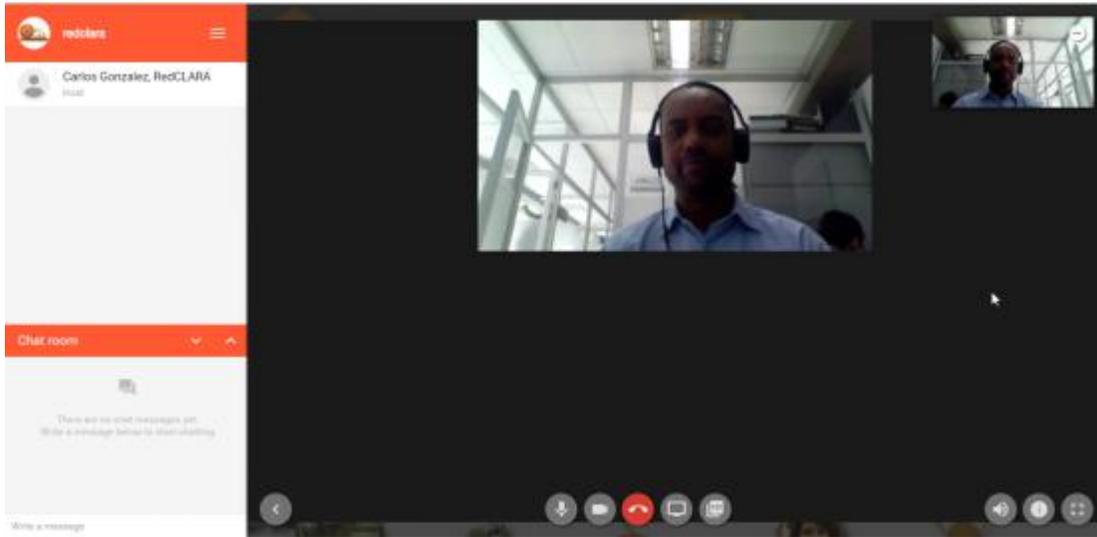


Figure 3. Joining a SIP enabled MCU

c) Linking the MCU and webconference rooms

Finally, a connection via SIP between the legacy video-network room and the webconference room was enabled.

In this example, the call was made from the MCU to the webconference Room using the SIP address

72013@mconf-demo-sip-magic.redclara.net

This is the same showed to the user in the chat window (see Figure 2).

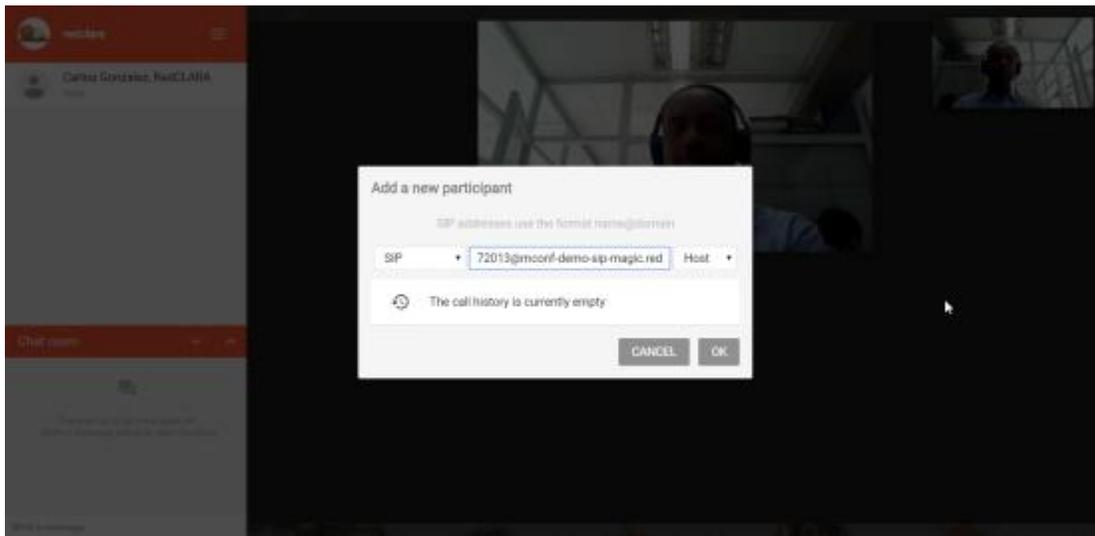


Figure 4. Linking the MCU Room and the webconference calling via SIP

Once this is done, the rooms are linked and the MCU and webconference room users are able to see and listen each other.

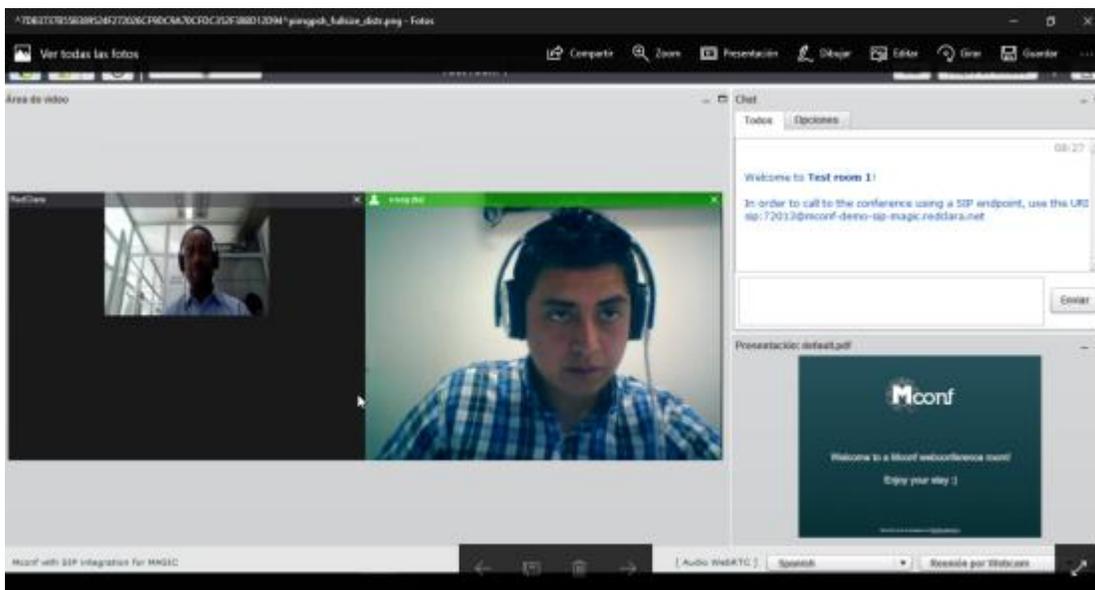


Figure 5. View from the webconference room



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Figure 6. view from the MCU room

8. CONCLUSIONS

The pilot implementation was carried out with success, and the expected functionalities were tested. The video-conferences can be established in both directions, and the content can be shared. This gateway is now available for the use of all MAGIC partners.



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Progress Report

MAGIC Deliverable: D4.5 Online course and video tutorial on how to deploy a unified communications network

Document Full Name	MAGIC WP4 D4.5 On line course and video tutorial on how to deploy a unified communications network
Date	10-05-2017
Activity	Agreements for Real Time Collaboration
Lead Partner	CLARA
Document status	Draft
Classification Attribute	Public
Document link	

Abstract: This document is the report of the deliverable of an on line course for the unified communications. The course is focused on the integration of the web-conference MCONF platform and the traditional SIP network.



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	Name	Member/Activity	Date	Responsible
From	Gustavo A. Garcia	Technical Manager RedCLARA	2017-03-20	CLARA
Contribution by				
Contribution by				
Contribution by				
Approved by	Florencio I. Utreras	CEO/Project Coordinator	2017-05-18	CLARA



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1. INTRODUCTION

The MAGIC deliverable 4.5 has the objective to provide a guide for institutions that want to implement a unified communications network, using the MCONF web-conference system. The MCONF web-conference system is branch of the Big Blue Button open-source that has been adapted and developed by the Brazilian NREN RNP, RedCLARA and the MAGIC project partners. With the mentioned implementation, the NRENs will be able to dial a conference in a legacy SIP terminal device or multi-conference unit (MCU).

The course is implemented in the OpenEDX platform, and uses video to describe the system architecture.

2. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, Gustavo García, WP4 - Agreements for Real Time Collaboration, Technical Manager (RedCLARA) gustavo.garcia@redclara.net, and copied to the Management of the MAGIC project.

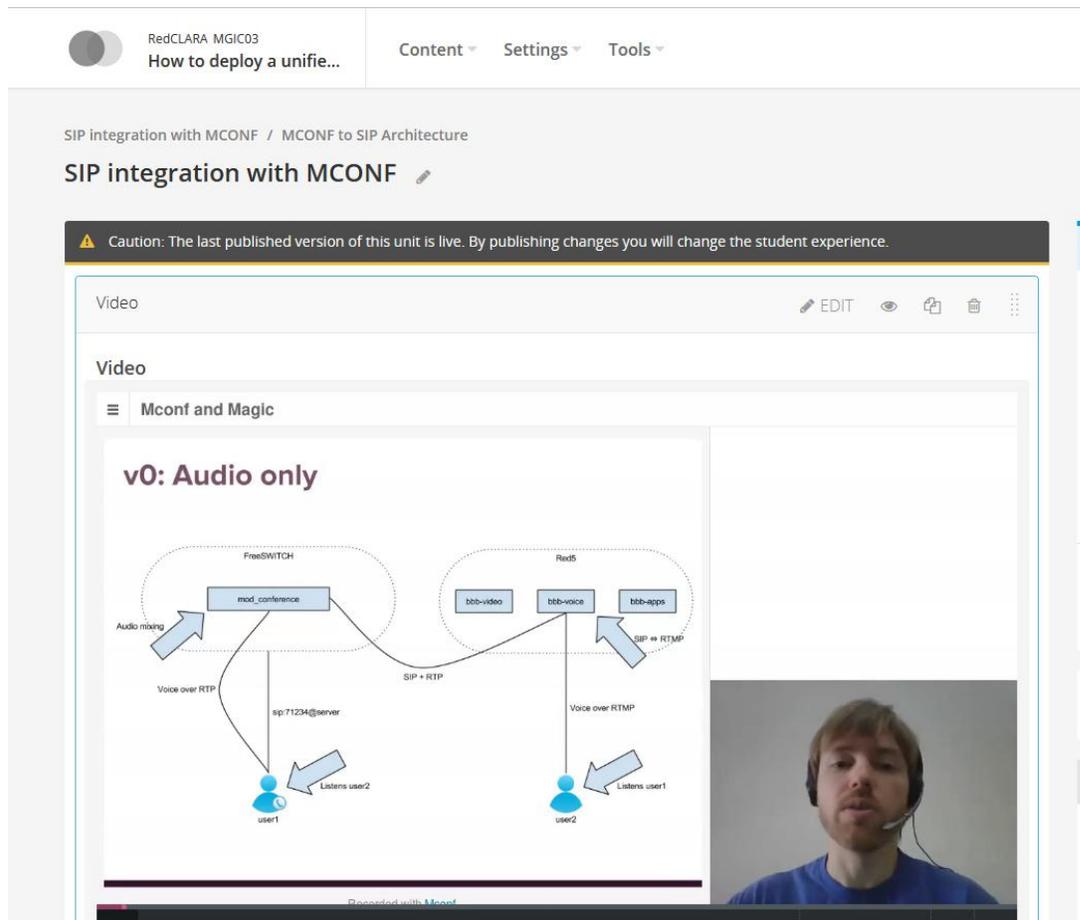
3. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
Sci-GaIA	Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa
TANDEM	TransAfrican Network Development
WP	Work Package



4. COURSE OVERVIEW

The course is developed in a Massive Open On line Course (MOOC) format. The video elements are as shown in the following figure:



The screenshot shows a MOOC interface for the course "How to deploy a unified communications network". The video player displays a diagram titled "v0: Audio only" illustrating the SIP integration architecture. The diagram shows two main components: "FreeSWITCH" and "Red5".

- FreeSWITCH:** Contains a "mod_conference" module. It receives "Voice over RTP" from "user1" and "user2". It also sends "Voice over RTP" to "user1" and "user2".
- Red5:** Contains "bbb-video", "bbb-voice", and "bbb-apps" modules. It receives "SIP + RTP" from "FreeSWITCH" and sends "SIP + RTP" to "FreeSWITCH". It also receives "Voice over RTMP" from "user1" and "user2".

The diagram also shows "Audio mixing" and "SIP + RTP" flows. A live video feed of a presenter is visible in the bottom right corner of the video player.

The course is structured with the following sections:

1. SIP integration with MCONF

This section contains the video and material to train the student in the elements that compound the integration architecture. The course have the communication between elements and how they relate. In addition, the inbound and outbound call flow descriptions are included.



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2. Statistics architecture with elastic search

The section of the statistics architecture is one of the big components in the solution. The student can find in the course how the logging information is stored, and the modules that display the information. Service requirements and Installation instructions are also part of the course.

5. RESOURCE LOCATION

Technical leaders can access the course in the RedCLARA's Open EDX platform through the following link:

<http://edx.redclara.net>



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MAGIC Deliverable: D5.1

Guidelines, objectives, directives and strategic work plan of the MAGIC Global Science Communities

Document Full Name	D5.1 Guidelines, objectives, directives, and strategic work plan of the MAGIC Global Science Communities
Date	30-09-2016 (Revised)
Activity	WP5 Global Science Communities
Lead Partner	UBUNTUNET AND NIIFI
Document status	Final
Classification Attribute	Public
Document link	

Abstract. This Deliverable aims at setting the basic principles and some key elements of the applicable practice of how to arrive at the desired Global Science Communities by exploiting experiences from earlier projects of similar intents but by a less ambitious geographical (regional) coverage at that earlier attempts.



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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	L.Balint	NIIFI / WP5	30-09-2015	UBUNTUNET
Revised by	T.Banda	UBUNTUNET / WP5	31-10-2015	UBUNTUNET
Revised by	T.Fryer	GÉANT / WP5	30-11-2015	UBUNTUNET
Revised by	Tania Altamirano	RedCLARA/WP5	25-01-2016	UBUNTUNET
Revised by	Chris Rohrer	UbuntuNet/WP5	26-01-2016	UBUNTUNET
Revised by	Tania Altamirano	RedCLARA/WP5	27-01-2016	UBUNTUNET
Revised by	Colleen Wint	CKLNA	27-01-2016	UBUNTUNET
Aproved by	Florencio Utreras	RedCLARA / CEO	28-01-2016	RedCLARA
Revised by	Tania Altamirano	RedCLARA / WP5	27-09-3016	UBUNTUNET
Revised by	Tiwonge Banda	UBUNTUNET / WP5	30-09-2016	UBUNTUNET
Revised by	Florencio Utreras	RedCLARA / CEO	30-09-2016	UBUNTUNET



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1. EXECUTIVE SUMMARY

WP5 of the MAGIC project is devoted to creating and coordinating relevant research communities (Global Science Communities) comprising representatives from all possible world regions. After selecting the attained small number of such communities, the project team will introduce/train them in the use of the collaboration applications, and help them find funding opportunities for their joint research activities. Emphasis will also be put on disseminating the collected information worldwide and specifically to the selected user communities.

This Deliverable D5.1 (as an output of Task 5.1) aims at setting the basic principles and some key elements of the applicable practice of how to arrive at the desired Global Science Communities by exploiting experiences from earlier projects of similar intents but by a less ambitious geographical (regional) coverage at that earlier attempts.

First a set of priority areas common to MAGIC regions upon which Global Science Communities is introduced by reviewing, on one hand, some available more general priority classifications and, on the other hand, by investigating regional research priority areas as described by regional scientific bodies.

Based on the agreed priority areas the guidelines and the objectives for establishing three Global Science Communities (as examples for similar future efforts) was developed by specifying how to select and invite research organizations to join. Recommendations on what communities (priority areas and regional institutions) to select and how to build/operate the related Global Science Communities will be listed. Sustainability of the communities will be based on jointly developed strategic workplans while encouraging wider exploitation of the experiences will be supported by monitoring and disseminating the achievements.



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GLOSSARY OF TERMS

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
H2020	Horizon 2020
NREN	National Research and Education Network
GSC	Global Science Community



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1. INTRODUCTION

1.1. Purpose of the Document

This document is Deliverable D5.1 of the MAGIC project. It provides a description of the introductory phase of the project in its efforts in establishing Global Science Communities, which are composed of research organisations and/or individuals from all possible global regions with common interests. The project identified and established four Global Science communities around the themes of: a) e-Health; b) Biodiversity; c) Environment; and d) Remote Instrumentation. A Champion, a leader, was also identified for each community to facilitate and sustain the need for collaboration. The document also contains guidelines, objectives, directives and strategic workplan for the management of the communities.

1.2. Structure of the Document

The document consists of eight major sections. The first one presents an introduction: information about the project and the deliverable, and an introductory outline of the content. The second one deals with the process of identifying the thematic priority areas while the second one is devoted to the activities carried out in developing and animating Global Science Communities. Guidelines, Objectives, Directives and Strategic WorkPlans of the Global Science Communities are included in sections 4 followed by Next Steps in section 5 and Recommendations in section 6. An Appendix lists the initial composition of the Global Science Communities.



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2. INVESTIGATING AND SELECTING PRIORITY AREAS

In investigating and selecting priority areas upon which to establish the Global Science Communities, WP5 followed the same MAGIC strategy (Described in D1.2.5) which makes use of regional representatives from the different world regions participating the project. Each partner has a specific contact who coordinates the activities of WP5 in their respective region. The regional representatives from all the 7 world regions participating in MAGIC are listed in Table 1, including the name of the contact person.

Table 1: Regional Representatives in MAGIC WP5

Region	Organisation	Responsible Person
Arab countries	ASREN	Yousef Torman
Eastern and Southern Africa	UbuntuNet Alliance	Tiwonge Banda
West and Central African countries	WACREN	Omo Oaiya
Asian countries	TEIN*CC	Patch Lee
Caribbean countries	CKLN	Colleen Wint
Latin American countries	CLARA	Tania Altamirano
European countries	GEANT	Roberto Sabatino / Tom Fryer

The work with the priority areas started with the definition of some basic criteria to be used when selecting those topics that could be of interest for the major part of the regions involved in the project. The diversity of activities as well as local problems were elements to be considered while identifying how to continue with this process.

The first step was the definition of a community in the context of this work package and this was agreed to be *a group of experts (researchers and/or academics) from different parts of the world with a common interest, working together on activities, sharing best practice, knowledge and experiences.*



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Initially, it had been decided that as a way of collecting information about common priority areas in the MAGIC regions, a questionnaire would be prepared and administered similar to the one that was used in the ELCIRA project. However, during the course of the planning it was felt that perhaps the approach was not going to work appropriately in a global context. Instead, after making several considerations, the project decided to adopt the priority areas that were identified by the ELCIRA project as described in Deliverable D6.9 Report on Key Research Communities¹.

The following is an excerpt from ELCIRA D6.9 regarding communities:

In the last five years, RedCLARA has developed experience in the promotion and support of academic communities, and the design and implementation of mechanisms for their development as Well. Along with collaborators working closely to research groups, it has identified three key elements in the conformation of innovative academic communities:

- a) *Innovative academic communities focus on regional issues that attract the interest of research groups disseminated along the Continent (i.e E-Health Latin American Community).*
- b) *These communities attract new talents and The Strength of new young researchers building science (i.e.CEVALE2 Community).*
- c) *Communities consolidate their scientific production focusing on the study of wealth and issues related to the natural elements of their region (i.e. Biodiversity Community of Latin America).*

The topics identified by ELCIRA are: e-Health, Biodiversity, Environment, and High Energy Physics

The project team then crosschecked these priority areas with the participating regional organisations to see if these were considered as really high priority topics in the respective regions. At the same time, the project team received a proposal from an active group in Mexico, which is part of the NREN, CUDI, working on

1

http://elcira.eu/docs/Deliverables/ELCIRA_D6.9_Report_on_Key_Research_Communities_v1.1.pdf



remote instrumentation on nanostructure materials, to establish a Global Science Community on the subject.

A WP5 Face to Face meeting was held in Maputo, Mozambique on 17 November 2015 ahead of the UbuntuNet-Connect 2015 conference and there the project team reviewed the four ELCIRA priority areas and decided to adopt them except for High Energy Physics because it is not a really preferable priority area in some of the involved regions and also because there is already a well organised multi-regional community around the subject. In addition, the project team agreed to include Remote Instrumentation as requested by the Mexican group simply because it was community initiated priority topic and because the group had shown interest, enthusiasm and willingness to enhance the work developed earlier by their members as well as to have the opportunity to learn and share knowledge with peers from around the world. Therefore, the selected priority areas are as follows:

- e-Health
- Biodiversity
- Environment
- Remote Instrumentation

3. ESTABLISHING GLOBAL SCIENCE COMMUNITIES

3.1. Procedure for Establishing the Communities

After selecting the priority areas at the face to face meeting of the Work Package that took place in Maputo, Mozambique, the next task was to make the Global Science Communities a reality. In this regard, the project team outlined a framework for the structure of the communities and for the steps of establishing them. Three elements were defined:

- a) **Call for Community participants:** A call for participants to join Global Science Communities around the 4 identified priority areas was sent out via the regional representatives, who in turn forwarded to their constituent National Research and Education Network (NRENs) and/or Communities of Practice. The result was lists of potential participants that had accepted to join the various



communities. The door has been left open for more members to join later, as work progresses.

- b) **Identification of Community Champions:** To ensure that the communities are properly anchored, community Champions were proposed from among renowned experts in the identified priority areas. Major aspects were: considerable community facilitation experience, activity and practice of working in international initiatives and co-operations, as well as availability and readiness to lead the community. Champions are supposed to not only accept this function and role of leadership but also to motivate his/her peers in the process of consolation and work of the group.
- c) **Community Space on Colaboratorio:** To ensure that the established Global Science Communities are able to easily communicate and collaborate, the Communities would have a space on Colaboratorio and will receive the necessary information on how to use the tools of the platform.
- d) **Opening Conferences for the Communities:** All the participants being formally invited to join a Global Science Community, will also receive an invitation to participate at an Opening Meeting and coordinate actions.

3.2. Animating the Global Science Communities

The four Global Science Communities were constituted at the end of January 2016 as described in section 5.1 and the opening conferences were held during the month of February 2016. Table 2 shows some information about the 4 GSCs as at the time of the opening conferences. The Community Champions have been key in animating the Communities and in maintaining the need to collaborate at global level. Using their experience and personal networks, they have also been inviting their colleagues from other networks to participate in the activities of the project.

As observed, all the Community Champions come from either Latin America or the Caribbean. This was not intentional, but as a result of availability and acceptability



of the individuals to take on the task. The project team tried its best to ensure a regional balance in championship, with one from Africa, but those that were approached turned down the offer citing reasons of availability. However, participation in the activities of the GSCs includes many members from Africa.

Table 2: Some information about the Global Science Communities

	<p>Global Science Community on E-Health</p> <p>Opening Conference: 2 February 2016</p> <p>Members: 58</p> <p>Community Champion: Prof Luiz Ary Messina, National Coordinator of RUTE (Rede Universitária de Telemedicina), Brazil.</p> <p>Webpage: http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity</p>
	<p>Global Science Community on Biodiversity</p> <p>Opening Conference: 11 February 2016</p> <p>Members: 31</p> <p>Community Champion: Prof José Ramón Martínez Professor and researcher of the Universidad Autónoma de Santo Domingo (UASD), Dominican Republic.</p> <p>Webpage: http://www.magic-project.eu/index.php/global-science-communities/gsc-biodiversity</p>
	<p>Global Science Community on Environment</p> <p>Opening Conference: 18 February 2016</p> <p>Members: 28</p> <p>Community Champion: Dr David C. Smith, Coordinator Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.</p> <p>Webpage: http://www.magic-project.eu/index.php/global-science-communities/gsc-environment</p>



 A close-up image of a human eye with a green iris, overlaid with a circular graphic and the word "MAGIC" in white text.	<p>Global Science Community on Remote Instrumentation</p> <p>Opening Conference: 25 February 2016</p> <p>Members: 16</p> <p>Community Champion: Prof Patricia Santiago, Associate Professor Physics Institute, Universidad Autònoma de Mèxico (UNAM), Mexico</p> <p>Webpage: http://www.magic-project.eu/index.php/global-science-communities/gsc-remote-instrumentation</p>
---	---

In animating the GSCs Colaboratorio is central as it is a portal that acts like a gateway to collaborative tools and community building. Each GSC has a Community space on Colaboratorio, which also comes with a mailing list, file sharing tool, web conferencing and other tools for collaboration. In addition, community members receive notifications about Funding and partners every week according to their interests. See Image 1, a screen capture of the e-Health Community space on Colaboratorio).



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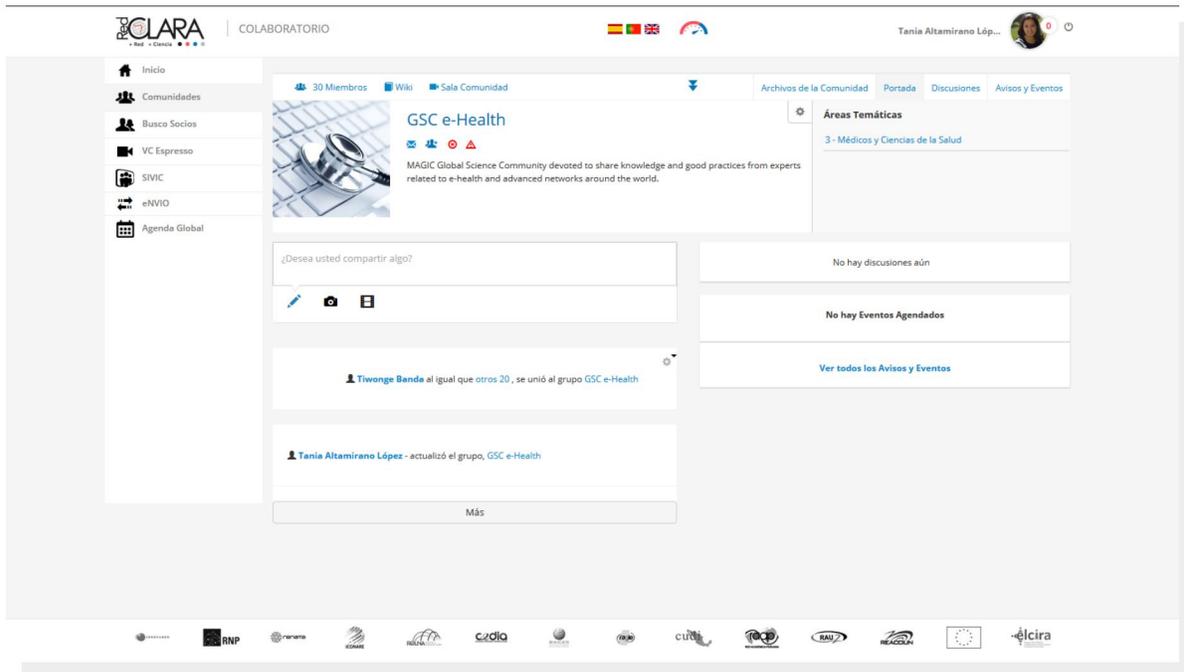


Image 1: Colaboratorio of the e-Health Global Science Community

4. GUIDELINES, OBJECTIVES, DIRECTIVES AND STRATEGIC WORKPLANS OF THE GLOBAL SCIENCE COMMUNITIES

From the onset of MAGIC's interaction with the GSCs it was made clear to the communities that the project did not have an idea in advance of the direction that the communities would take, hence it was up to the community to decide on the activities that they need to carry out. The reason being the members of the community themselves are the experts in the field and have an understanding of the emerging and trending issues in the field.

In all activities, the project team will support the champions by providing secretarial and logistical work. This will ensure that the Community Champions and members of the community are not over-burdened with GSC activities especially because they will not be paid for.



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Activities of the GSCs will mostly be virtual, however where necessary, community specific workshops may be organized collocated with major events of the Regional RENs, such as UbuntuNet-Connect conference, WACREN Conference, RedCLARA's TICAL conference, ASREN's e-AGE, etc.

A high level strategic workplan is presented in this section for the broader activities of the GSCs, where necessary, specific workplans and schedules will be developed with further details for the particular GSCs.

4.1. Purpose and Objective of the MAGIC Global Science Communities

The overall goal for the MAGIC Global Science Communities is to enable thematic experts and people with same interests from different parts of the world to interact and share experiences with each other with the aim of advancing knowledge and tackling global challenges. Specific objectives for the respective GSCs are presented below:

e-Health Community Objective

The Global Science Community on eHealth aims to increase engagement of practitioners, researchers, academics and students of eHealth from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Biodiversity Community Objective

The Biodiversity Community aims to increase engagement of practitioners, researchers, academics and students of biodiversity from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Environment Community Objective

The Environment community aims to increase engagement of practitioners, researchers, academics and students of the environment from various countries across the world, in identifying issues, concerns and sharing best





practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

Remote Instrumentation

The Remote Instrumentation community aims to increase engagement of practitioners, researchers, academics and students involved or interested in remote instrumentation from various countries across the world, in identifying issues, concerns and sharing best practices with a view to establishing global networking and collaboration, and greater use of the Colaboratorio platform.

4.2. Operating Principles

In their operations, the Global Science Communities will be guided by the following principles:

- Member focus – the GSCs are member focused and composed of members from different parts of the world. The activities of the communities will be guided by the needs of the members as they seek knowledge and share it.
- Sharing Knowledge – the GSCs primary aim is to collaborate and share experience in their bid to share knowledge.
- Communication – the GSCs communicate with each other using the advanced and efficient technologies that are enabled through the Internet and Research and Education Networks
- Collaborate – the GSCs are all about collaboration with like-minded peers from all over the world in tackling common and emerging challenges

4.3. Strategic Workplan

Below is a strategic workplan for the Global Science Communities.

Objective	Task/Activity	Output/Deliverable	Timeframe
1. Foster collaboration in the	1.1 Identify community champions	Community Champion identified	



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selected priority areas of the GSC on a global level to tackle common problems	1.2 Organise Opening conferences for each community	Virtual event	
	1.3 Conduct a survey on community needs or priority areas	Survey Results	
	1.4 Prepare a schedule of events/webinars based on community needs	Calendar of events	
	1.5 Identify presenters through either a Call for abstracts or by invitation of presenters	Presenters identified	
	1.6 Organise webinars on identified topics	Virtual events	
	1.7 Publish all session materials (presentations and video recordings)	Presentations and video recordings published	On-going
2. Build the capacity of community members in the use of virtual collaboration tools	2.1 Conduct training sessions on the use of Colaboratorio and the various collaborative tools	Virtual training sessions Colaboratorio User Guide How to toolkits	
	2.2 Conduct testing sessions in advance of all virtual events	-	On-going
3. Promote experience sharing on best practice in organizing and managing virtual communities	3.1 Invite presentation on experience and best practice in working with communities in virtual environments	Invitations	
	3.2 Organise virtual events on sharing experience and best practice or organizing and managing virtual communities	Virtual events	
4. Enhance information flow on funding	4.1 Share information or funding opportunities via email alerts to all members of the	Customised alerts based on user interests	



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opportunities under the EUs H2020 and other international calls	communities		
	4.2 Organise Virtual Infor Days on Horizon 2020 to promote participation of research communities in international calls	Virtual events	

5. NEXT STEPS

Building on from what has already been achieved in developing the Global Science Communities, especially for the e-Health Community, work is progressing in developing the other 3 Global Science Communities. Concerning the near future activities, the following next steps are foreseen:

1. Continue animating the Global Science Communities to keep them active with exciting activities and to appeal to other existing communities in related fields.
2. Extend the reach of the Global Science Communities. As is the case now, membership of the communities is dominated by people from Latin America, the Caribbean and Africa. The project will put extra effort to increase the participation of members from other parts of the world, e.g. the East.
3. Extend and explore areas of possible collaboration with communities in other H2020 projects such as Sci-GaIA and TANDEM
4. Start developing sustainability options for the Global Science Communities. The project team would like to ensure that the communities continue to be relevant after the MAGIC project finishes in April 2017-
5. Develop Workplans for the GSC is a next step being of key importance in order to keep the Community alive, active, and sustainable. Taking care of the development of preliminary versions for such Workplans should have been a preparatory element of arranging for the start of the GSCs. Involving such draft Workplans in this deliverable has also been suggested by the Description of Work. However, due to delays in establishing the GSCs, it has been decided that the GSCs themselves will begin discussions on next steps and start



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building materials for the Workplans upon launching the GSC activities at the Opening Conferences.

- Dedicated representatives of the WP5 will accompany and support the community leaders, and monitor the activities of the Communities. This will provide useful information about the evolution of the GSCs and will help identify key topics for the Informative Days of the task 5.3 (Development of a set of Worldwide Virtual Days to foster collaboration at a worldwide scale on the above selected topics).

6. CONCLUSION AND RECOMMENDATIONS

The project team has so far registered some level of success in this initiative to build Global Science Communities by identifying potential members and bringing them together. This has proved to be a tough exercise and as yet it is too early to determine how successful the approach will be. However, learning from other initiatives, it is much easier to work with already existing communities or to support initiatives that are driven by the communities themselves and give them the means to deepen their co-operation. If there is no inherent motivation to collaborate globally, any efforts to get such a collaboration started from the outside is doomed to fail. That is why the project team felt it necessary to adopt the GSC on Remote Instrumentation, since it was driven from the community itself. To motivate the members of the GSCs to perceive the project as a valuable endeavor and the GSCs as useful platforms, the project team will have to present relevant tools and services. Colaboratorio provides some very important, well applicable, friendly, and efficient such tools and services.

As the project proceeds, the project team will put emphasis on carefully follow the developments:

- observe the uptake of the project offerings in the GSCs, as well as



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- doing further research into the needs and requirements of the different GSCs, by investigating, among others, if they have identical needs or are they domain specific.

Depending on the experiences, an adaptive approach is applied in order to achieve as much impact on GSC collaboration as possible.

7. DOCUMENT AND AMENDMENT PROCEDURE

Requests for amendments to this document should be made to the authors, Tiwonge Banda, F&A Manager, UbuntuNet tiwonge.banda@ubuntunet.net and Lajos Balint, Director of International Relations, NIIFI lajos.balint@niif.hu (both WP5) and copied to the Management of the MAGIC project: magic-all@listas.redclara.net



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APPENDIX 1: MEMBERS OF THE GLOBAL SCIENCE COMMUNITY ON E-HEALTH

Name	Affiliation	Country
1. Dr Luiz Messina	RUTE	Brazil
2. Kra Ouffoe	University Alassane Ouattara - Bouaku	Cote d'Ivoire
3. Asse Kouadio Vincent	University Alassane Ouattara - Bouaku	Cote d'Ivoire
4. Melaku Girma	Addis Ababa University	Ethiopia
5. Elias Worku	Addis Ababa University	Ethiopia
6. Mesfin Fikre	Addis Ababa University	Ethiopia
7. Mohammedaman Mama	Arba Minch University	Ethiopia
8. Alemseged Kassahun	Arba Minch University	Ethiopia
9. Tadiwos Hailu	Arba Minch University	Ethiopia
10. Alazar	Arba Minch University	Ethiopia
11. Shimels Shiferaw	Jimma University	Ethiopia
12. Ruth Gashaw	Jimma University	Ethiopia
13. Salahadin Seid	Jimma University	Ethiopia
14. Kibebew Ababu	Jimma University	Ethiopia
15. Mr. Abdu Seid	Wollo University	Ethiopia
16. Mr. Yitbarek Wasihun	Wollo University	Ethiopia
17. Dr Mengistu Kifle	AAU, Gonder University & FMOH	Ethiopia
18. Dr. Pansy Hamilton	Hugh Wynter Fertility Management Unit	Jamaica
19. Dr. John DaCosta	Hugh Wynter Fertility Management Unit	Jamaica
20. Dr. Jeanette Bartley- Bryan	University of Technology	Jamaica
21. Dr. Christine Fray- Aitken	University of Technology	Jamaica
22. Dr Tiwonge Manda	Chancellor College, University of Malawi	Malawi
23. Dr. Miguel Tanimoto	National Institute of Medical Science and Nutrition "Salvador Zubirán" (INNSZ)	Mexico





24. Nancy Gertrudiz	CUDI Health Community Coordinator	Mexico
25. Hassan Sefrioui	Moroccan Foundation of Advanced Research Science and Innovation	Morocco
26. Dr Ousseini Adakal	University of Zinder	Niger
27. Prof. Christian T. Happi	Redeemer's University	Nigeria
28. Ronell Alberts	CSIR	South Africa
29. ADAMBOUNOU Kokou	Université de Lomé	Togo
30. Dr Juliane Sansa-Otim	Makerere University	Uganda
31. Mohammed EL HOUADFI	IAV HASSAN II - Rabat	Morocco
32. Aicha MAJDA	Faculté des Sciences et Techniques Fès-Sais	Morocco



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APPENDIX 2: MEMBERS OF THE GLOBAL SCIENCE COMMUNITY ON BIODIVERSITY

Name	Affiliation	Country
1. Ing. Fernando Riccitelli	INTA Argentina	Argentina
2. Prof François N. KOUAME	University Félix Houphouet Boigny	Cote d'Ivoire
3. Rolando Reyes	Chancellor, UAFAM	Dominican Republic
4. Tony Nuñez	Professor, UAFAM	Dominican Republic
5. Jose Ramón Martínez Battle	Professor, UASD	Dominican Republic
6. Prof. Dr. Dibungi Kalenda	University of Kinshasa	DR Congo
7. Ibrahim Fathy Moawad	Ain Shams University	Egypt
8. Ibrahim Fathy Moawad	Ain Shams University	Egypt
9. Emana Getu Degaga	Addis Ababa University	Ethiopia
10. Dr Emiru Birhane	Mekele University	Ethiopia
11. Dr Kidane Gidey	Mekele University	Ethiopia
12. Dr Meheretu Yonas	Mekele University	Ethiopia
13. Tizta Endale	Arba Minch University	Ethiopia
14. Tsegaynesh Pawlose	Arba Minch University	Ethiopia
15. Tizta Endale	Mekele University	Ethiopia
16. Dr Hussein Adal	Wollo University	Ethiopia
17. Dr Faris Hailu	Wollo University	Ethiopia
18. Dr Ayalew Birhanu	Wollo University	Ethiopia
19. Ms. Habtam Getaneh	Wollo University	Ethiopia
20. Dr. Francis Gbogbo	University of Ghana	Ghana
21. Dr Thera Edwards	University of West Indies at Mona	Jamaica
22. Rida Shibli	Mutah University	Jordan
23. Areej AbuHammad	University of Jordan	Jordan
24. Rida Shibli	Mutah University	Jordan
25. Areej AbuHammad	University of Jordan	Jordan



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26. Magda Bou Dagher Kharrat	Saint Joseph University	Lebanon
27. Magda Bou Dagher Kharrat	Saint Joseph University	Lebanon
28. Dr. C. Mhango	Chancellor College	Malawi
29. Dr Karim Saley	Dan Dicko Dankoulodo University of Maradi	Niger
30. Prof. Andrew J. Nok	Nigerian Academy of Science	Nigeria
31. Dr Sechaba Bareetseng	Centre for Scientific and Industrial Research (CSIR)	South Africa
32. Prof. BATAWILA Komlan	Université de Lomé	Togo
33. Prof. AKPAGANA Koffi	Université de Lomé	Togo
34. Dr. WALA Kperkouma	Université de Lomé	Togo
35. Najat HANDAJI	IAV Hassan II - Rabat	Morocco



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APPENDIX 3: MEMBERS OF THE GLOBAL SCIENCE COMMUNITY ON ENVIRONMENT

Name	Affiliation	Country
36. Dr. Ronald Twongyirwe	Makerere University	Uganda
37. Meya Kalindekafe	Chancellor College	Malawi
38. Dr Meheretu Yonas	Mekele University	Ethiopia
39. Dr. Abraha G/Kidan	Mekele University	Ethiopia
40. Ato Amanuel Hadera	Mekele University	Ethiopia
41. Mr Akalu Melketsadik	Wollo University	Ethiopia
42. Prof. Okanlawon M. Onagbesan	Federal University of Agriculture, Abeokuta	Nigeria
43. Dr Abdoulaye Oumani	Université Abdou Moumouni de Niamey	Niger
44. Dr. DOURMA Marra	University of Lome	Togo
45. Dr GUELLY Kudzo	University of Lome	Togo
46. Prof Fatogoma SORHO	University Félix Houphouet Boigny	Cote d'Ivoire
47. Prof. Adams Tidjani	UCAD	Senegal
48. Prof. Julius Fobil	University of Ghana	Ghana
49. Dr. Amos Laar	University of Ghana	Ghana
50. Ingo Allekotte	Pierre Auger Observatory	Argentina
51. Dra. Gloria Dubner	Institute of Astronomy and Space Physics	Argentina
52. Patricia Alvarez	National Commission of Space Activities	Argentina
53. Claudio Bolzi	National Commission of Atomic Energy	Argentina
54. Javier Garcia	National Commission of Atomic Energy	Argentina
55. Gabriela Duran	National Commission of Atomic Energy	Argentina
56.		
57. Rolando Reyes	Chancellor, UAFAM	Dominican



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		Republic
58. Tony Nuñez	Professor, UAFAM	Dominican Republic
59. Jose Ramón Martínez Battle	Professor, UASD	Dominican Republic
60. Dr. Garfield Young	Dean of the Faculty of Built Environment, University of Technology	Jamaica
61. Nicole Leotaud	Caribbean Natural Resources Institute	Trinidad & Tobago
62. Dr Harrison Pienaar	CSIR	South Africa
63. Dr Luthando Dziba	CSIR	South Africa
64. Hassan El Bari	Ibn Tofail University, Kenitra	Morocco
65. Khalid OUFDOU	Faculty of Sciences-Semlalia, University Cadi Ayyad, Marrakech	Morocco



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APPENDIX 4: MEMBERS OF THE GLOBAL SCIENCE COMMUNITY ON REMOTE INSTRUMENTATION

Name	Affiliation	Country
1. Ben-Manson TOUSSAIN	Directeur Général, Ecole Supérieure d'Infotronique d'Haïti (ESIH)	Haiti
2. Dr. Patricia Santiago	Physics Institute at UNAM	Mexico
3. Dr. Patricia Vergara	Faculty of Medicine at UNAM	Mexico
4. Dr. Guadalupe Valverde	CICATA-IPN (national polytechnic institute)	Mexico
5. Dr. Nicolas Cayetano	Nanoscience and Nanotechnology center IPN	Mexico
6. Dr. Raul Urby	Nanoscience and Nanotechnology center IPN	Mexico
7. Dr. Umapada Pal	Physics Institute alt BUAP	Mexico
8. Dr Mahamadou Hamidine	Dan Dicko Dankoulodo University of Maradi	Niger
9. Carel Kruger	CSIR	South Africa
10. Dr Dorothy Okello	Makerere University	Uganda
11. Dr Mitulo Silengo	Mulungushi University	Zambia
12. Dr C Chomba	Mulungushi University	Zambia
13. Prof. Jacob Mwitwa	Copperbelt University	Zambia



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European Union's Horizon 2020 Programme

European Commission

Directorate General for Communications Networks, Content and Technology

eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable N° D5.2

Annual report on Global Virtual Days in priority worldwide fields and on International Calls InfoDays transmitted



1



Periodical Progress Report

MAGIC Deliverable: D5.2

*Annual report on Global Virtual Days in priority worldwide fields and on
International Calls InfoDays transmitted*

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For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERY ROUTE

	Name	Member/Activity	Date	Responsible
From	Tania Altamirano	RedCLARA	20-04-2016	UBUNTUNET
Revised by	Colleen Wint	CKLNA	21-04-2016	UBUNTUNET
Revised by	Tiwonge Banda	UBUNTUNET	22-04-2016	UBUNTUNET
Revised by				
Revised by				
Aproved by	Florencio Utreras	RedCLARA/CEO	25-04-2016	RedCLARA



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GLOSSARY OF TERMS

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
NREN	National Research and Education Network
GSC	Global Science Community

EXECUTIVE SUMMARY

WP5 of the MAGIC project is devoted to creating and coordinating relevant research communities (Global Science Communities) comprising representatives from all possible world regions. The project has established communities in four thematic areas: e-Health; Biodiversity; Environment; and Remote Instrumentation. The project team is introducing and guiding participants of communities in the use of the collaborative applications, and helping them find funding opportunities for their joint research activities. Emphasis is also being placed on disseminating the collected information worldwide and specifically to the selected user communities.

This Deliverable D5.2 reports on the activities involved in the organisation of Global Virtual Days on Worldwide Priority Fields (Task 5.3) and Global InfoDays on H2020 Calls (Task 5.4) as carried out by Work Package 5 – Global Virtual Communities of the MAGIC project during the first year. An InfoDay was held in June 2015 focusing on Latin America and the Caribbean under the theme: “Segundo Ciclo Virtual para América Latina y el Caribe sobre Horizonte 2020” (Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020). A Global virtual Day was held in December 2015 under the title Politics and Models of Implementing Open Access in the World.

The deliverable gives more information about these events and concludes by outlining the next set of activities – events – to be carried in the coming months.

1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

This document, Deliverable D5.2, of the MAGIC project reports on the virtual activities developed during the first year around: a) global virtual days on worldwide priority fields related to the Global Science Communities (Task 5.3); and b) Info days to promote and offer information on the Horizon 2020 call for proposals (Task 5.4). Four Global Science Communities were established during the course of the reporting period around the themes of eHealth, Environment, Biodiversity and Remote Instrumentation. The establishment of the communities was reported in D5.1 - Guidelines, objective, directives and strategic work plan of the MAGIC Global Science Communities.

In both cases, the project team was devoted to strengthening the work of the members of the GSC, offering them a space to find opportunities, share knowledge and to identify experiences that could be applied in their own environment. Besides all the activities involved, the use of the tools available in the Collaborative platform, Colaboratorio, were integral in communication and sharing information, organizing the events and storing the material of the sessions.

1.2. STRUCTURE OF THE DOCUMENT

The document consists of eight major sections. This first section gives introductory information about the project and the deliverable, and an introductory outline of the content to the document. The second presents the status of the four Global Science Communities. The Third outlines the activities developed around Global virtual days on Horizon 2020 calls while the fourth is devoted to virtual days on priority fields related to the MAGIC Global Science Communities. Next steps are provided in section fifth and the Conclusion is summarized in section 6. The last section informs the reader about where to forward possible comments.

1.3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document should be made to the authors, Tiwonge Banda, F&A Manager, UbuntuNet tiwonge.banda@ubuntunet.net and Tania Altamirano, Community Coordinator,

RedCLARA tania.altamirano-lopez@redclara.net (both WP5) and copied to the Management of the MAGIC project: magic-all@listas.redclara.net

2. STATUS OF GLOBAL SCIENCE COMMUNITIES

Four Global Science Communities (GSC) were established as previously reported in D5.1 - Guidelines, objective, directives and strategic work plan of the MAGIC Global Science Communities. The communities are on the priority areas: e-Health; Biodiversity; Environment; and Remote Instrumentation. Each community has a Champion, who is a thematic leader, an expert in the field. The communities held their opening conference during the month of February 2016 and have since been active, planning the next steps.

Table 1: Global Science Communities

Community	Champion/Affiliation	Number of Members
e-Health	Prof Luis Ary Messina, Coordinator, Brazilian Telemedicine Network	58
Biodiversity	Prof José Ramón Martínez Batlle, Professor in the Autonomous University of Santo Domingo	31
Environment	Dr David Smith Coordinator, Institute for Sustainable Development, University of the West Indies	28
Remote Instrumentation	Prof Patricia Santiago, Physics Institute at Universidad Nacional Autónoma de México	15

As at the time of writing this deliverable, the project team is working with the community Champions to organise follow up activities. Surveys to determine the interests of the members of the community have been conducted for the e-Health and Environment communities. The results for the e-Health community have led to the identification of 4 sub priorities and 'ground rounds' are being planned to be held starting in May 2016. The survey for the Environment community is still open and the idea is

to match sub-priorities to determine the next topics for virtual events. A virtual event for the Biodiversity was initially set for 5 April, but had to be postponed to 5th May 2016 because some presenters had connectivity issues. The event description and agenda is available at <https://eventos.redclara.net/indico/event/661/overview>.

3. GLOBAL VIRTUAL DAYS ON HORIZON 2020 CALLS

During the reported period, a three day session dedicated to Latin America and the Caribbean titled: “Segundo Ciclo Virtual para América Latina y el Caribe sobre Horizonte 2020” (Second Virtual Cycle for Latin America and the Caribbean about Horizon 2020)¹ was developed. It took place on June 17-24, 2015 and was developed jointly with the Argentine Bureau for Enhancing Cooperation with the European Union (ABEST III), the Latin America, Caribbean and European Union Network on Research and Innovation (ALCUENET) and the Ministry of Education and Culture of Uruguay.

For the organization of the activity, a web page was created (See: <https://eventos.redclara.net/indico/event/495/overview>) on the event manager of the collaborative platform, Colaboratorio, that presented:

- Agenda
- Speakers
- Important dates
- How to participate
- Registration

Also, from the main page of the website, it is possible to access the material section where all the material from the sesión are available. These include slides and links to the recording of each day of the event. (See image 1)

Because this activity was mainly intended to Latin America and the Caribbean, the language chosen to present the information and to develop the activity was Spanish. Nevertheless it included presentations in English. The participants were informed that in the case they wanted information

¹ This was a second version of a previous activity developed; the information is available here: <https://eventos.redclara.net/indico/event/435/>



from the English speakers they could send their questions by email or request the help of the moderator to translate the message.

The three day agenda covered topics such as Nanosciences, Science with and for Society, Bioeconomy, Marie Skłodowska-Curie Actions, Environment, Biodiversity and Energy, besides the last day it included information on how to identify a specific call and how to apply. That last part was really interesting for participants because it offered key elements to a successful evaluation.



Image 1: Website of the event

The dissemination activities included news, a newsletter and invitation by email to potential participants from the region (See image 2). The event was developed by H323 videoconference, therefore those interested had to register their videoconference rooms through the form available on the website and to be part of the test session to guarantee the quality of the transmission during the event.



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Image 2: Material produced

The impact of the activity was shown in the elevated number of videoconference rooms registered to participate in the cycle: 56 in total (See registrants list 1). Additionally, the event was streamed live through Internet, with a peak of 120 users connected at the same time and a total of 290 participants by streaming on the three days (See image 3).



Image 3: Images of the event by streaming



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Registrant List 1:

	Name		Email	Institution	Country
1	ABARCA AGUILAR	MARIA LORENA	MABARCA@ADEXPERU.ORG.PE	ASOCIACIÓN DE EXPORTADORES	Peru
2	ACOSTA	Francisco	pakoaco@hotmail.com	Red Universidad-Empresa ALCUE	Mexico
3	AGUERO	Geanina	gagueroc@ice.go.cr	Instituto Costarricense de Electricidad	Costa Rica
4	AGUILAR	Ricardo	ricardo.aguilar@iseesac.com	Ingeniería de soluciones eléctricas y electrónicas S.A.C	Peru
5	AGUIRRE	Luis Fernando	laguirrer@uac.edu.co	UNIVERSIDAD AUTONOMA DEL CARIBE	Colombia
6	ALTAMIRANO LÓPEZ	Tania	tania.altamirano-lopez@redclara.net	RedCLARA	Chile
7	ANGELES CHERO	Pedro Pablo	pangeles@unprg.edu.pe	Universidad Nacional Pedro Ruiz Gallo	Peru
8	BALBI	Micaela	mbalbi@bolsamza.com.ar	Bolsa de Comercio de Mendoza	Argentina
9	BARARTTA	Pablo	pbaratta@redg9.cl	Red de Universidades Públicas no Estatales - G9	Chile
10	BEDOYA SOTO	Sonia Isabel	sbedoya@unicolombo.edu.co	Fundación Universitario Colombo Internacional UNICOLOMBO	Colombia
11	BELTRÁN CASTAÑA	César	cbeltran@pucp.pe	Pontificia Universidad Católica del Perú	Peru
12	BRITO	Risela	rbrito@ucbscz.edu.bo	Universidad Católica Boliviana San Pablo	Bolivia, Plurinational State of
13	CARCEDO	Juan Facundo	facundocarcedo@gmail.com	Universidad Nacional del Centro de la Provincia de Buenos Aires	Argentina
14	CARDONA FERREIRA	Adriana	adriana.cardona@cedia.org.ec	CEDIA	Ecuador
15	CARDOZO	Julio	julio.cardozo@seciu.edu.uy	RAU - Red Académica Uruguay	Uruguay
16	CHAVEZ CENTENO	JAVIER DAVID	javier.chavez@unsaac.edu.pe	UNIVERSIDAD NACIONAL DE SAN ANTONIO ABAD DEL CUSCO	Peru
17	CHICO RUIZ	Marco Antonio	marcos.chico@tecnar.edu.co	Fundación tecnológica antonio de arevalo - TECNAR	Colombia
18	CHOY	Rosana	rchoy@ulima.edu.pe	Universidad de Lima	Peru
19	COTO	Natalia	natalia.coto@micit.go.cr	MICITT	Costa Rica
20	CRAFF ZEVALLOS	Félix Ernesto	titocraff@hotmail.com	Columba Perú	Peru
21	CÓRDOVA PAZ SOLDÁN	Ofelia Magdalena	omacop@hotmail.com	Universidad Privada Antenor Orrego	Peru
22	DELLA ROSA	Enriqueta	rel.internacionales@presi.unlp.edu.ar	Universidad Nacional de La Plata	Argentina
23	FERNANDES MARCELINO	GILVAN	gilvan.marcelino@cnpq.br	CNPq	Brazil
24	FERREIRA	Gonzalo	ferreira@fmed.edu.uy	UdelaR Medicina	Uruguay
25	FÍGOLI	Ignacio	ignacio.figoli@dene.miem.gub.uy	Dirección Nacional de Energía MIEM	Uruguay
26	GALLARDO ESPINOLA	Axel Emmanuel	axel.gallardo.e@gmail.com	CONCYTEC	Peru



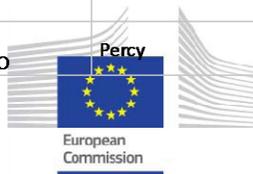
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27	GALLARDO ESPINOLA	Axel Emmanuel	agallardo@concytec.gob.pe	CONCYTEC	Peru
28	GARCIA CANO	Ana María	ana_garcia@javeriana.edu.co	Pontificia Universidad Javeriana	Colombia
29	GARCIA ESCALANTE	elizabeth	siiga2010@gmail.com	carrera informatica - UMSA	Bolivia, Plurinational State of
30	GONZALES CALIENES	Rossina	rgonzalesc1@unmsm.edu.pe	Universidad Nacional Mayor de San Marcos	Peru
31	HERNÁNDEZ	Dolores	dhernandez@pri.unc.edu.ar	Universidad Nacional de Córdoba	Argentina
32	HURTADO ROCA	LEDA YAMILEE	ledayamilee@yahoo.com	BOCA RATON CLINICAL RESEARCH GLOBAL PERU	Peru
33	IRVING	Kenneth	ken@fq.edu.uy	Facultad de Química, UdelaR	Uruguay
34	JUAREZ	JORGE	jorge.juarez@iie.org.mx	IIE-CUDI	Mexico
35	LON KAN PRADO	ELENA ELIZABETH	elena.lon-kan@ulcb.edu.pe	UNIVERSIDAD LE CORDON BLEU	Peru
36	LOPEZ RODRIGUEZ	CARLOS ENRIQUE	celopez@unsm.edu.pe	UNIVERSIDAD NACIONAL DE SAN MARTIN	Peru
37	MARINA	HOHL	marina.hohl@ird.fr	IRD	Brazil
38	MARTINEZ PALMERA	Olga	omartinez@cuc.edu.co	UNIVERSIDAD DE LA COSTA-CUC	Colombia
39	NANDAYAPA	Arturo	anandayapa@uv.mx	Universidad Veracruzana	Mexico
40	ORUDZHALIEVA	C.	infiqc.nanolab@yandex.com	UNC	Argentina
41	PEDROSO MORGANTTI	Michael	michael.pedroso@cnpq.br	CNPq	Brazil
42	PEREDO DÁVALOS	Erik Vladimir	peredo@ucbca.edu.bo	Universidad Católica Boliviana San Pablo	Bolivia, Plurinational State of
43	PEÑA TORRES	Haydee	hbpena@gmail.com	Universidad Nacional Experimental del Táchira	Venezuela, Bolivarian Republic of
44	PIRELLA	Liliana	lpierella@gmail.com	Univ. Tecnológica Nacional - Ctro de Investigación y Tecnología Qca	Argentina
45	PÉREZ	Juan Pablo	sistemas@presi.unlp.edu.ar	Universidad nacional de La Plata	Argentina
46	RABAL	Norma Liliana	norma.rabal@ypftecnologia.com	YPF TECNOLOGIA S.A.	Argentina
47	RODRIGUEZ HUAMANÁ	Arleen Stefania	arleenstefania@gmail.com	Universidad Nacional Federico Villarreal	Peru
48	ROSSETTO SILVA	Ana Paula	ana-paula.silva@ird.fr	Institut de Recherche pour le Développement (IRD) au Brésil	Brazil
49	SALDARRIAGA	Gisella	vg.saldarriaga.c@gmail.com	Instituto de la Pequeña Producción Sustentable - UNALM	Peru
50	SIGUENCIA	Josefina	josselin.siguencia@cedia.org.ec	CEDIA	Ecuador
51	SILVA	Juarez Bento	juarez.silva@ufsc.br	Universidade Federal de Santa Catarina	Brazil
52	TERAN	Jorge	jteran@umsa.bo	Universidad Mayor de San Andrés	Bolivia, Plurinational State of
53	VARGAS QUINTANA	Carmen Ana	carmen@technoparkidi.org	TECHNOPARK IDI	Peru
54	VEGA CEVALLOS	DIEGO FERNANDO	dvega@senescyt.gob.ec	SENESCYT	Ecuador
55	VELO	Agustina Bianca	avelo@mincyt.gob.ar	Ministerio de Ciencia Tecnología e Innovación Productiva	Argentina
56	VÁSQUEZ MACHICAO	Percy	pvasquez@concytec.gob.pe	CONCYTEC	Peru



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4. GLOBAL VIRTUAL DAYS ON WORLDWIDE PRIORITY FIELDS

Another activity planned with the communities is the development of global virtual days on worldwide priority fields. In this context, on December 15th, 2015 a virtual day on Politics and models of implementation of Open Access in the world took place

For the coordination of the event, a web page was created (see:
<https://eventos.redclara.net/indico/event/623/>) that includes the following sections:

- An Introduction text
- Registration Form
- Speakers short bio
- Agenda
- Important dates
- How to participate

The activity was mainly direct to the African region, thence all the presentations and the material generated (available for download from the home page of the web site) was in English. The agenda included the participation of representatives from Latin America, Africa and Europe who presented their respective experiences.



Image 4: Website of the event



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For the dissemination of the activity, an informative article was generated and published in the web pages of the RedCLARA, MAGIC and was also included in the informative material of the partners institutions (See image 8).



UPCOMING EVENTS

- [Politics and models of implementation of Open Access in the world](#) - Video Conference, Registration deadline 14th December 2015
- [The Workshop on Successful Governance of Universities](#) - the Key Relationship between University Council and Executive Leaders of the University, Accra, Ghana – 14-16 December 2015
- [International Workshop on Quality Assurance in Higher Education](#) - February 16-18, 2016 Dubai, UAE
- [Africa Internet Summit](#), Gaborone, Botswana, 29th May to 10th June 2016.
- Applications for the AfNOG [Workshop on Network Technology](#) are being accepted. Deadline – December 31, 2015

Image 5: Images of the material produced for the event





The event was developed using a H.323 videoconference system with a streaming transmission. The participation included 22 videoconference rooms registered and a peak of 20 participants by Internet. For those connected remotely, there was the option of sending their comments and questions using the Skype account: dias.virtuales to interact with the speakers.

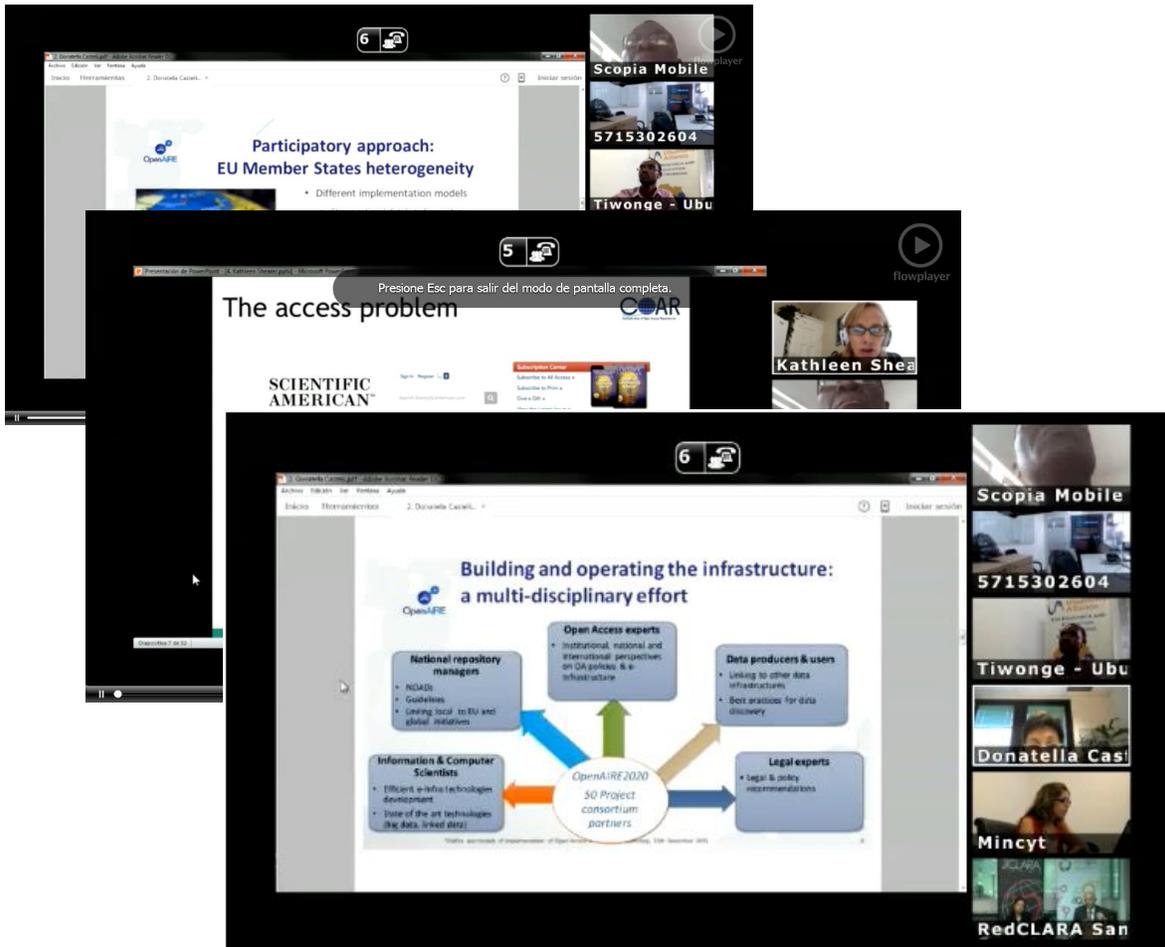


Image 6: Images of the event by streaming





Registrant List 2:

	Name		Email	Institution	Country
1	ACHAMPONG	Alice	aachampong@gimpa.edu.gh	Ghana Institute of Management and Public Administration (GIMPA)	Ghana
2	AHMED	Dr. Ahmedin Mohammed	a.m.1985@ieee.org	Wollo University	Ethiopia
3	ALEMAYEHU	Tewodros	le.teddy@gmail.com	Dire Dawa University	Ethiopia
4	BANDA	Tiwonge	tiwonge.banda@ubuntunet.net	UbutuNet Alliance	Malawi
5	BUENO DE LA FUENTE	Gema	gema.bueno@KB.nl	LIBER	Netherlands
6	LÓPEZ LÓPEZ	Víctor Hugo	vhlopezl@correo.uam.mx	Universidad Autónoma Metropolitana (RG)	Mexico
7	MARTINEZ	Olga	omartinez@cuc.edu.co	Corporacion Universidad de la Costa, CUC	Colombia
8	MARTINEZ	Paola	paola.martinez@urosario.edu.co	Universidad del Rosario	Colombia
9	MATEWOS	Natenael	natyexodus@gmail.com	KIoT	Ethiopia
10	MIRANDA	Azul	amiranda@innova-red.net	InnovaRed	Argentina
11	MÉNDEZ	Pedro Luis	plmendez@espol.edu.ec	ESPOL	Ecuador
12	QUITUISACA SAMANIEGO	Lilia Violeta	lilia.quituisaca.samaniego@gmail.com	CEDIA	Ecuador
13	RAZO	Antonio	antrazo@gmail.com	REMEDI- Red Mexicana de Repositorios Institucionales	Mexico
14	RIOS MENDIETA	Gioconda	gkrios@utpl.edu.ec	UTPL	Ecuador
15	RODRIGUEZ	Jose Luis	luisfca@unam.mx	UNIVERSIDAD NACIONAL AUTONOMA DE MÉXICO	Mexico
16	ROJAS	CARLOS JULIO	crojas@ean.edu.co	UNIVERSIDAD EAN	Colombia
17	SALIH	Sami	sami.salih@sudren.edu.sd	SudREN	Sudan
18	SIGUENCIA	Josefina	josselin.siguencia@cedia.org.ec	CEDIA	Ecuador
19	TEKLEHAIMANOT	Girmay	girmay4ever@gmail.com	Samara University	Ethiopia
20	TENA ESPINOZA DE LOS MONTEROS	Martin Adalberto	mtenaespinoza@udgvirtual.udg.mx	Universidad de Guadalajara	Mexico
21	TOBAR VILLEGAS	Carlos Andres	catobar@usbcali.edu.co	Universidad San Buenaventura Cali	Colombia
22	TOLEDO	Johanna	jocatole@espol.edu.ec	CEDIA	Ecuador



5. NEXT STEPS

For the coming months the following activities are planned and synchronised with the activities of the GSCs:

1. Participate in the next Info Day, Horizon 2020 - 'Health, demographic change and wellbeing' announced at: <http://ec.europa.eu/research/index.cfm?pg=events&eventcode=314FDE2A-B120-5C11-0BC24DEE2CA8115E> and scheduled for July 8th, 2016. This topic could be of interest of the MAGIC GSC on e-Health, therefore the idea is to identify with the champion possible opportunities and promote the event among the community members.
2. Organized a Info Day dedicated to the Africa region. This task would be developed in coordination with a National Contact Points in Africa, that is the target region for the mentioned activity. The estimated month for this session is June, 2016 and will focus on one of the priority areas covered in the Global Science Communities.
3. Create a calendar of events that includes all the virtual and face to face activities to be developed in the next period of the project. This would include the Horizon 2020 Info Days, session about priority areas topics and the sessions of the GSC. This calendar will be published on the website of the MAGIC project and will be updated periodically. This will be a tool for dissemination and also for the follow up of the activities of the communities.





6. CONCLUSION

Despite delays in establishing the GSCs, the project team has been able during the first year to organise planned virtual events in Task 5.3 and Task 5.4. The events drew together participants from different countries to share experiences (for the virtual days) and discuss opportunities (for InforDays). Now that the GSCs are in place, more events are planned and will be held during the second year of the project. Successful organisation of these online events continues to prove that such events are possible and emphasizes the need for the research and education networking community to continue investing in collaborative platforms such as Colaboratorio. This also underscores the need for improved communications infrastructure as virtual collaborative platforms, especially those for real time collaboration, require good connectivity.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	Tania Altamirano	RedCLARA	17-05-2017	UBUNTUNET
Revised by	Tiwonge M. Banda	UbuntuNet	29-05-2017	UBUNTUNET
Revised by				
Revised by				
Revised by				
Approved by	Florencio I. Utreras	RedCLARA/Coordinat or	30-05-2017	RedCLARA



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1. EXECUTIVE SUMMARY

WP5 of the MAGIC project is devoted to creating and coordinating relevant research communities (Global Science Communities) comprising representatives from partner world regions. The project is supporting communities in four thematic areas: e-Health; Biodiversity; Environment; and Remote Instrumentation, especially on the use of collaborative applications, and help them find funding opportunities for their joint research activities. Emphasis is also being placed on disseminating the collected information worldwide and specifically to the selected user communities.

This Deliverable D5.3 (as an output of Tasks 5.3 and 5.4) reports on the virtual days conducted during the second year of implementation of the MAGIC project. The virtual days covered H2020 funding opportunities and other priority areas as decided by the Global Science Communities.

The deliverable also reports on the results of the survey of MAGIC Virtual Sessions carried out during the course of the project. The results show that participants were enthusiastic on collaborating in virtual environment and went on to suggest ways of improving the experience.

2. GLOSSARY OF TERMS

EC	European Commission
EU	European Union
H2020	Horizon 2020
NREN	National Research and Education Network
GSC	Global Science Community

3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document should be made to the authors, Tiwonge Banda, F&A Manager, UbuntuNet Alliance tiwonge.banda@ubuntunet.net and Tania Altamirano, Community Coordinator, RedCLARA tania.altamirano-lopez@redclara.net (both WP5) and copied to the Management of the MAGIC project: magic-all@listas.redclara.net



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4. INTRODUCTION

4.1. Purpose of the Document

This deliverable reports on virtual events carried out with the Global Science Communities (e-Health, Environment, Biodiversity and Remote Instrumentation) during the second year (May 2016 – April 2017) of the MAGIC. The events were in two areas: a) Info days to promote and offer information on the Horizon 2020 calls for proposals and b) global virtual days on priority worldwide fields related to the Communities.

4.2. Structure of the Document

The document consists of eight major sections. The second one (preceded by the Executive Summary) provides a glossary of some key terms. The third section presents an introduction: information about the project and the deliverable, and an introductory outline of the content. The fourth section deals with the activities developed around Global virtual days on Horizon 2020 calls while the fifth is devoted to virtual days on priority fields related to the MAGIC Global Science Communities. The results of the survey on MAGIC Virtual Sessions are presented in section six and conclusions are summarized in section 7. The last section informs the reader about where to forward possible comments.

5. GLOBAL VIRTUAL DAYS ON HORIZON 2020 CALLS

H2020 framework programme presents a great funding opportunity for research and innovation. Task 5.4 of the MAGIC project was devoted to promoting these opportunities among Global Science Communities as well as the wider community. The events were aimed at raising awareness of upcoming H2020 calls and the process of preparing and submitting proposals. As a way of showcasing modern ways of collaborating in virtual environment, the events were held virtually using the web conferencing tool VC Espresso, which is one of the popular tools on Colaboratorio. Aside from virtual events, MAGIC used every opportunity during face to face events to promote H2020 opportunities.

5.1. INFO DAY, HORIZON 2020 - 'HEALTH, DEMOGRAPHIC CHANGE AND WELL-BEING

On July 8, 2016 an Info Day, Horizon 2020 - 'Health, demographic change and wellbeing' was held in Brussels. The event was organised by the EC in conjunction with EU-funded projects Health-NCP-Net 2.0 and Fit for Health 2.0 with the purpose of promoting upcoming 2017 Health calls. While the main event was held face to face, live streaming was available to those not able to attend in person.

MAGIC took the opportunity to point members of the Global Science Communities to an existing event organised by the EC so that they could hear first hand from EU staff. MAGIC project promoted the activity among the e-Health Global Science Community and through partner channels. Some





members of the community as well as the work package participated in the event, but since it was only one way live streaming it was not possible to tell with great details how many did so.

MAGIC made us of the event page and all information prepared by the organisers of the event. For further information regarding the H2020 Info Day. The event took the whole day and was subdivided into sessions that one would easily follow independently.

Follow this link: <http://ec.europa.eu/research/index.cfm?pg=events&eventcode=314FDE2A-B120-5C11-0BC24DEE2CA8115E>.

5.2. HORIZON 2020 INFOR DAY ON ICT-39 CALL

On December 14, 2016 MAGIC project organised the Horizon 2020 Info Day on ICT-39 Call. The event was focused on promoting the Horizon 2020 ICT-39 Call¹ which had just opened on the 8th of the same month. The event was targeted on Africa and was disseminated on all the four Global Science Communities for them to explore funding opportunities under the ICT-39 call.

The event had a dedicated website (See: <https://events.ubuntunet.net/indico/event/9/overview>) with the following structure:

- ✓ Event Overview
- ✓ Event Agenda
- ✓ Registration
- ✓ How to Participate

Being Africa-focused, the event was further disseminated through the three regional networks, Arab States Research and Education Network (ASREN), UbuntuNet Alliance and West and Central African Research and Education Network (WACREN). In addition, announcements about the event were made on the community spaces of the four Global Science Communities on Colaboratorio. Information was also made available on the MAGIC project website.

¹ <https://ec.europa.eu/research/participants/portal4/desktop/en/opportunities/h2020/topics/ict-39-2016-2017.html>



A screenshot of a web browser displaying a virtual event page. The browser's address bar shows "iCal export" and "More" options. The page title is "Horizon 2020 Infor Day on ICT-39 Call". Below the title, it states "14 December 2016" and "Virtual Event on Colaboratorio UTC timezone". A sidebar on the left contains navigation links: "Event Overview", "Event Agenda", "Registration", "Registration Form", "How to Participate", and "Contact". The main content area includes a "Contact" section with an email icon and the address "tiwonge.banda@ub". The main text describes the event as an opportunity for innovators and partners to discuss requirements for end-user communities in developing countries. It mentions that the European Commission (EC) has published a call under its Horizon 2020 ICT-39 Call. The event is a virtual H2020 Infor Day on the ICT-39 Call, published by the European Commission and open from 8 December 2016 to 25 April 2017. The event targets proposals for specific technological targets such as co-design, adaptation, demonstration and validation (e.g. pilots) of ICT related research and innovation in relevant thematic areas addressed by Horizon 2020 including Content Technologies and Societal Challenges. Proposals are expected to address take up and scalability of the proposed solutions. A link to participate is provided: <http://vcespresso.redclara.net/vc/environment>. The event starts on 14 Dec 2016 at 12:30 UTC and ends at 15:02 UTC. The location is "Virtual Event on Colaboratorio VC Espresso" with the URL <http://vcespresso.redclara.net/vc/environment>. The event is organized by Ms. Altamirano-Lopez, Tania and Mr. Banda, Tiwonge. There are also icons for "Slides" and "Video". At the bottom left, it says "Powered by Indico".

The activity involved the participation and contributions of the following:

- Mónica Silenzi: General Coordinator of the National Directorate for Institutional Cooperation and Integration. Ministry of Science, Technology and Productive Innovation. Argentina, who gave a general perspective of the Horizon 2020 Programme.
- Omo Oaia, Chief Technology Officer, WACREN and member of the TANDEM project, who presented the ICT-39 Call.
- Simon Taylor, from the Department of Computer Science and the Health Economics Research Group, Brunel University London, representative of the Sci-Gala Project, who addressed "Looking for Partners and Preparing H2020 Proposals" and
- Dr. Chipso Kanjo from the University of Malawi, (representing the mHealth4Afrika project) who shared her experience in the preparation of proposal for previous calls.



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The recording is available on line from the event website. The event was one activity where MAGIC collaborated with other EU funded H2020 projects Sci-GaIA² and mHealth4Afrika³. The two projects shared their experience with the communities.

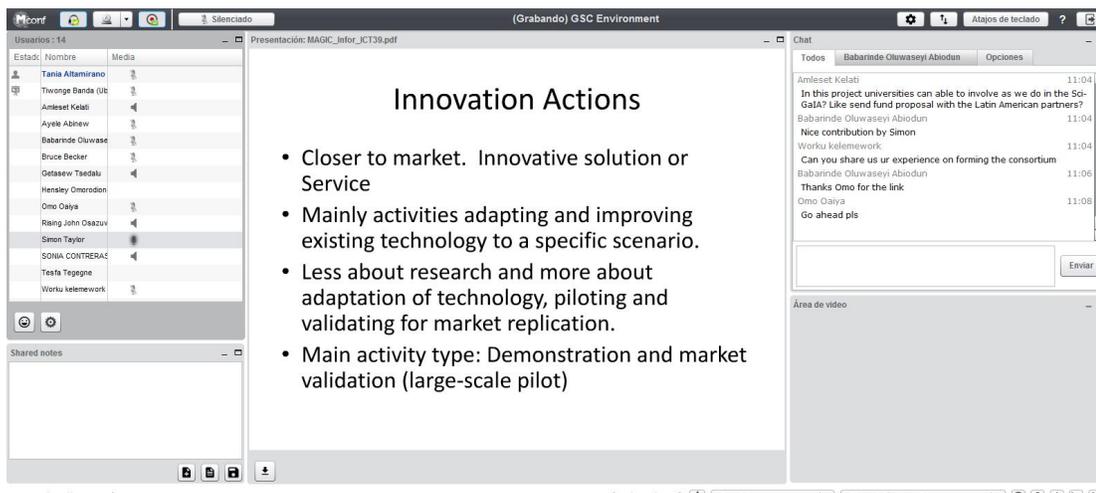
Full details about the event, including presentations and a link to the video recording are available at the event page: <https://events.ubuntunet.net/indico/event/9/overview>.

The screen capture below shows the session in place and a presentation being given.

² <http://www.sci-gaia.eu>

³ <http://www.mhealth4afrika.eu/home>





Participants were requested to register in advance for the event. Below is a list of the registered participants..

Name	Email	Institution	Country
Mr. ABDELRAHIM, Youssouf	abdarahim_youssouf@yahoo.fr	Istifaq net Sarl	Chad
Mr. ADDIS, Bantegize	bantegize_abu@jju.edu.et	Jigjiga University	Ethiopia
Mr. AGEGNEHU, aleegn	aleegn38@gmail.com	Bahir Dar University	Ethiopia
Mr. AKANLE, Matthew Boladele	bola.akanle@covenantuniversity.edu.ng	Covenant University	Nigeria
Dr. AMARE SEWNET, Minale	amare1974@gmail.com	Bahir Dar University	Ethiopia
Mr. ANDRÉ LE DOUX, Wamba	andre_ledouxcm@yahoo.fr	Association AFVMC	Cameroon
Mr. AYELE, Abinew	abinewaliayele@gmail.com	ICT4D Research Center, Bahir Dar Institute of Technology, Bahir Dar University, Ethiopia	Ethiopia
Mr. BABARINDE, Oluwaseyi	babarindeos@funaab.edu.ng	Federal University of Agriculture Abeokuta	Nigeria
Mr. BANDA, Tiwonge	tiwonge.banda@ubuntunet.net	UbuntuNet Alliance	Malawi
Dr. BECKER, Bruce	bbecker@csir.co.za	CSIR	South Africa
BELAY, Elefelious	elefelious@yahoo.com	Addis Ababa University/Bahir Dar University	Ethiopia
Mr. BOGALE, Tadegew	tadegew.b@gmail.com	Kombolcha Institute of Technology, Wollo University	Ethiopia
Dr. DENNIS, BAMIDELE SUNDAY	dennisearl2002@yahoo.co.uk	NATIONAL CENTER FOR YOUTH DEVELOPMENT	Nigeria
Mr. DINDI, Solomon	sdindi@cc.ac.mw	University of Malawi - Chancellor	Malawi



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		College	
Mrs. GEBREEGZIABIHER, Fireweini	fireweinige@gmail.com	Education Strategy Center	Ethiopia
Mr. GEMEDE, Bogale Gebeyehu	bgboge@gmail.com	Wolaita Sodo University	Ethiopia
Mr. IKOPI MOLEKO, gabriel marcel	gamolik@yahoo.fr	NGO CONSTRUISONS ENSEMBLE LE MONDE	Congo, The Democratic Republic of the
Mrs. KELATI, Amleset	smleset@kth.se	KTH	Sweden
Mr. KELEMEWORK, Worku	workukelem@gmail.com	Bahir Dar University-Bahir Dar Institute of Technology	Ethiopia
Mr. OGUNDIPE, Emmanuel	abiolaemma2014@gmail.com	University of Ibadan	Nigeria
Mr. OKEWOLE, John	dbeloved@gmail.com	Yaba College of Technology, Lagos Nigeria	Nigeria
Mr. OMORODION, Hensley	hensley@uniben.edu	Special Interest Group on High Performance Computing in Resource Constrained Environments (SIGHPC-RCE), University of Benin	Nigeria
Mr. OSAZUWA, Rising John	risingosazuwa@gmail.com	University of Ibadan, Ibadan, Nigeria	Nigeria
Mr. ROHRER, Chris	chris.rohrer@ubuntunet.net	UbuntuNet Alliance	Malawi
Mr. SHIFERAW, Tilahun	shiferaw.tilahun@gmail.com	Haramaya University	Ethiopia
Dr. TAYLOR, Simon	Simon.taylor@brunel.ac.uk	Brunel University London	United Kingdom
Mr. TSEDALU, Getasew	getchtsed@gmail.com	ICT for development Research center at Bahir Dar University	Ethiopia

6. GLOBAL VIRTUAL DAYS ON PRIORITY WORLDWIDE FIELDS

MAGIC organised virtual days on worldwide priority areas with the global science communities. The events were aimed at providing a forum where members of the communities would share experience and best practice on emerging and trending topics of interest to all participating regions.

6.1. WEBINAR ON REMOTE INSTRUMENTATION FOR MEDICAL APPLICATIONS

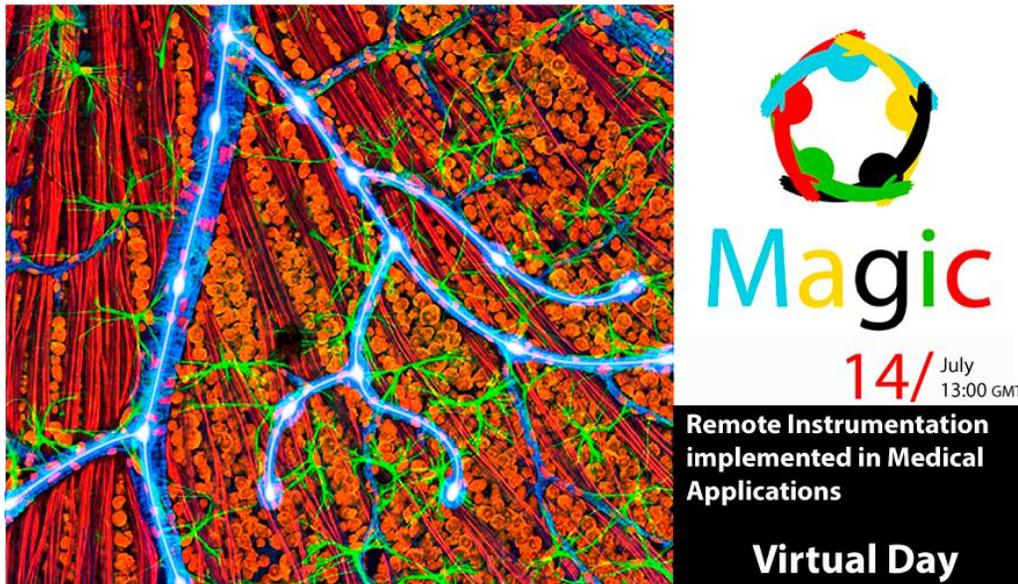
On 14th July 2016, MAGIC organised a webinar titled “Remote Instrumentation for Medical Applications”. The webinar aimed to share the work and experience of practitioners from around the world who conduct aspects of their medical or healthcare practice using remote instruments. The event was held on Colaboratorio, using the webconferencing tool, VC Espresso.



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Through the presentation of three experts participants had a better understanding of what is possible in their own institutions and countries in order to improve healthcare delivery by sharing instruments remotely. The session was moderated by the community leader, Dr. Patricia Santiago, Titular Researcher C, Member of National Researcher SNI level II, CUDI, Mexico. It involved the participation of:

- Dr. Shuji Shimizu, M.D. Ph.D. Kyushu University Hospital, TEMDEC, Director. Japan
- Ing. Nancy Gertrudiz, Coordinator of the Health Community in the National Research and Education Network of Mexico, CUDI and
- Prof Winston G. Mendes Davidson (Jamaica) & Dr Michel J.F. Walravens (Belgium) who represented a joint Jamaica-EU collaborative applied research ICT project.

A website was created for the event and published on line with all the necessary information about the event. The website included information on:

- ✓ Speakers
- ✓ Agenda
- ✓ How to participate
- ✓ Streaming

Since the session cut across e-Health and Remote Instrumentation Global Science Communities, invitations were sent to both of them. Announcements were made on the MAGIC website and those of partners channels.





The screenshot shows a webinar page with a navigation menu on the left (Home, Speakers, Agenda, How to participate, Streaming) and a main content area. The main content includes the title, date (14 July 2016), a description of the webinar's purpose, and a list of objectives. A 'REGISTER HERE' link is provided. On the right, there are details about the start and end times, speakers (Mrs. Santiago, Patricia; Mr. Banda, Tiwonge; Mrs. Altamirano López, Tania), and a link to the slides and video recording.

Further information regarding the event, including links to presentations and video recordings are available at <https://eventos.redclara.net/indico/event/711>.

The screenshot shows a news article on the RedCLARA website. The article is titled '14 de de julio de, 2016, 13:00 GMT: Únase al webinar sobre Instrumentación Remota para aplicaciones médicas'. It includes a photo of a hand holding a tablet displaying the MAGIC logo. The text describes the webinar's purpose, lists the speakers (Dra. Patricia Santiago, Dra. Valverde, Dr. Shuji Shimizu, Prof. Winston G. Mendes Davidson, and Dr. Michel J.F. Walravens), and provides information on who should participate and the objectives of the webinar. A 'Más información >>' link is also visible.



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6.2. MAGIC'S WEBINAR ON SCIENCE COMMUNICATION

The MAGIC project organised a 2 hour webinar on Science Communication targeting all the 4 communities and those interested from around the world on 30th June 2016. The event was a result of calls from participants during the opening conferences that researchers often realise that their outputs do not get very far.

The webinar was conducted by Michelle Wilmers, from the University of Cape Town. She is also the Curation and Dissemination Manager of the Global South Research on Open Educational Resources for Development (ROER4D) project.

In this two hour session Ms Wilmers presented a five-step model that can be applied by individual researchers or projects who wish to improve their international footprint and make the outputs of their work more visible and available for use.

Webinar on Science Communication

A five-step model that can be applied to improve your interna-
tional footprint and make the outputs of your work more visible
and available for use.

How to participate?

- Complete registration form in event website (see below)
- Save the date: June 30th at 13:00 UTC
- Join the session through VC Espresso
<http://vcespresso.redclara.net/vc/rinstrumentation>

 For more information please go to:
http://eventos.redclara.net/e/science_communication



An specific image was created for the event and the material produced (invitation and news) were distributed among the community members and also through the contact list of the partners institutions of the project.

The event was attended by 33 people from around the world. Further details of the event, including presentations and video recording are available for consultation in the event website:
<https://eventos.redclara.net/indico/event/719/>



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The collage consists of three overlapping screenshots:

- Top Left:** Screenshot of the CUDI website. The header includes 'CUDI Corporación Mexicana para el Desarrollo de Internet A.C. Internet 2 - México'. A navigation menu lists 'Inicio', '¿Qué es CUDI?', 'Acerca de', 'Proyectos', 'Miembros', 'Conexión a la Red', 'NOC CUDI', 'Comunidades', 'Grupos Técnicos', and 'Servicios CUDI'. The main content area features a banner for a 'Webinar on Science Communication' on June 30, 08:00 - 10:00, with a 'Technical requirements' section listing: 'Internet connection', 'A headset and a web camera to interact', 'Use Firefox, Chrome, Edge or Safari to access the videoconference room', and 'Activate Flash and Java'.
- Top Right:** Screenshot of the RedCLARA website. The header includes 'RedCLARA + Red + Ciencia'. A navigation menu lists 'ABOUT', 'NETWORK', 'PROJECTS & COLLABORATION', 'SERVICES', and 'NEWS & EVENTS'. The main content area features a post titled 'June 30: Join MAGIC's webinar on Science Communication' with a date of 'Tuesday, 21 June 2016 09:00'. The text of the post describes a 2-hour webinar presenting a five-step model for international researchers to improve their footprint. It lists technical requirements and participation instructions, including the link 'http://vcspresso.redclara.net/vc/instrumentation'.
- Bottom:** Screenshot of a social media post (likely Facebook) for the webinar. The post title is 'June 30: Join MAGIC's webinar on Science Communication' and is attributed to 'Luis Alberto Raswell'. It includes the same text as the RedCLARA post, along with a 'MAGIC a go' logo and a 'Articles Most Read' sidebar.



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7. SURVEY ON MAGIC VIRTUAL SESSIONS

A screenshot of a web-based survey form titled "SURVEY on MAGIC Virtual Sessions". The form includes a header with the MAGIC logo and text explaining the purpose of the survey. It contains several sections with radio button and checkbox options for respondents to select. The visible questions include: "Which of the thematic areas were you involved in?", "How did you hear about this session?", and "Country you participated from".

In order to evaluate the impact and challenges of working collaboratively, an on line survey was developed by Work Package 5. The survey included 12 sections intended to collect information about the perception of the participants to the virtual sessions on the content, speakers, the tool used, the interest on the work with the communities and to collect suggestions for future sessions.

The survey was open to all the members of the Global Science Communities and all people that had participated in virtual events of the communities. The survey was announced in all the four communities through their community spaces in Colaboratorio and also to all the registered participants to virtual events of the Global Science Communities.

Work Package 5 decided that the survey would be open and anonymous to encourage the participants to feel open about their comments and suggestions.

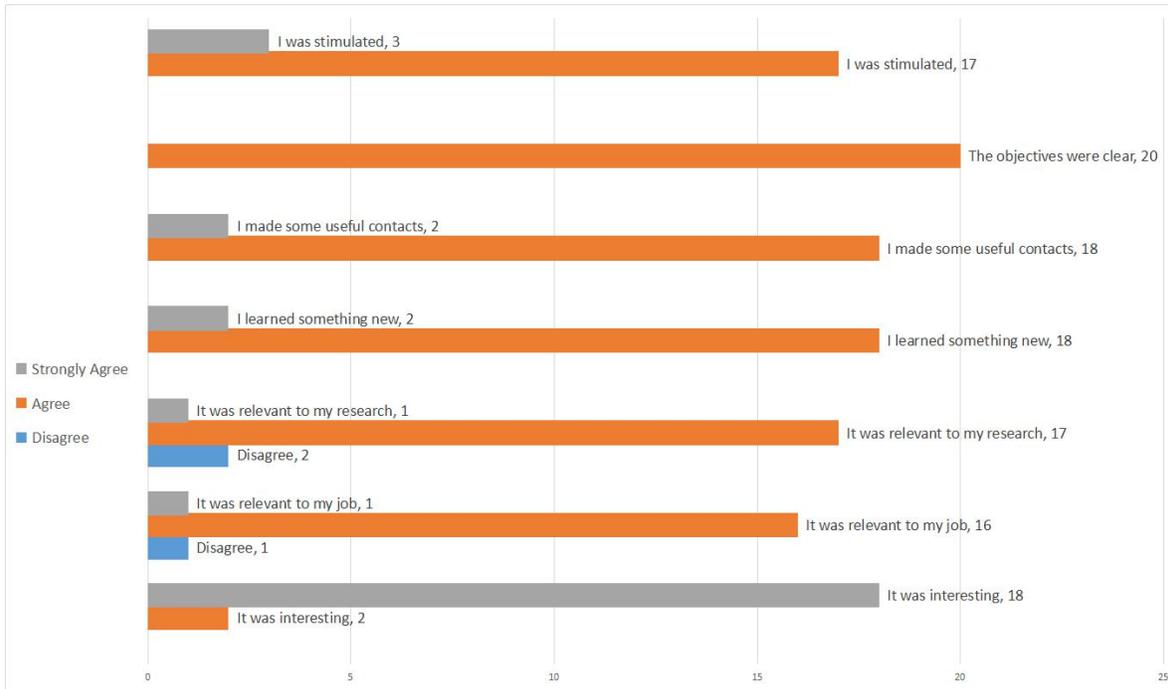
A total of 28 respondents submitted the survey, and from those 20 were complete and included valuable information about the virtual sessions.

In the following pages, some of the mains results obtained are presented.



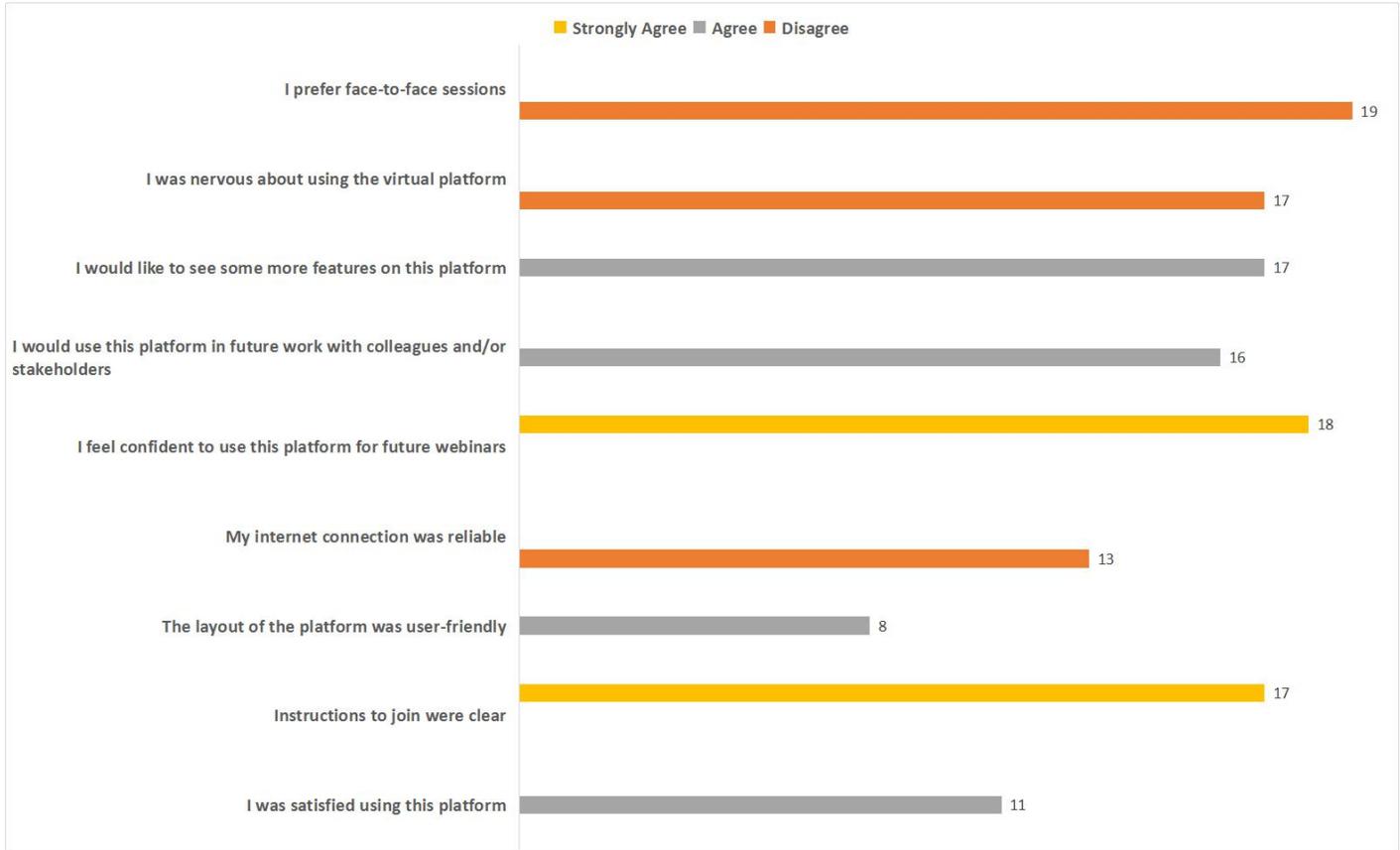
How would you rate the seminar(s) and content?

This question aimed to identify the benefit for the participants when participating in virtual session. As it can be seen from the chart below, the majority of the respondents expressed that the objectives were clear, it gave an opportunity to establish useful contacts and it allowed learning something new.



How would you rate the Colaboratorio interface used?

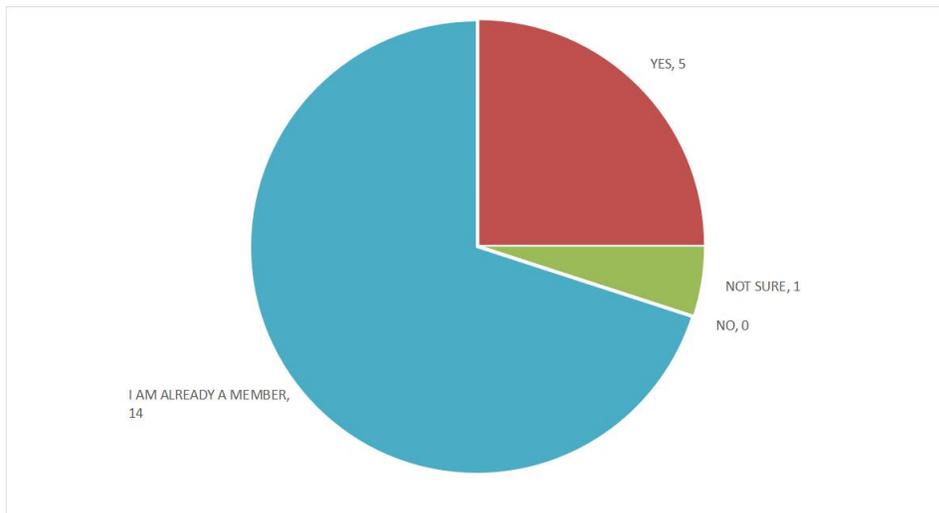
In the questions related to the Collaborative platform, the participants expressed that they felt confident using the tool, they would like to see more features on it and they would use it in their own activities with colleagues.





Would you consider joining the Global Science Community?

This questions was included as a way of capturing those that were not yet members of any Global Science Community. Fourteen of the respondents indicated that they were already members of a Community, 5 answered they would consider joining one of the communities and only 1 person said was not sure on joining one.



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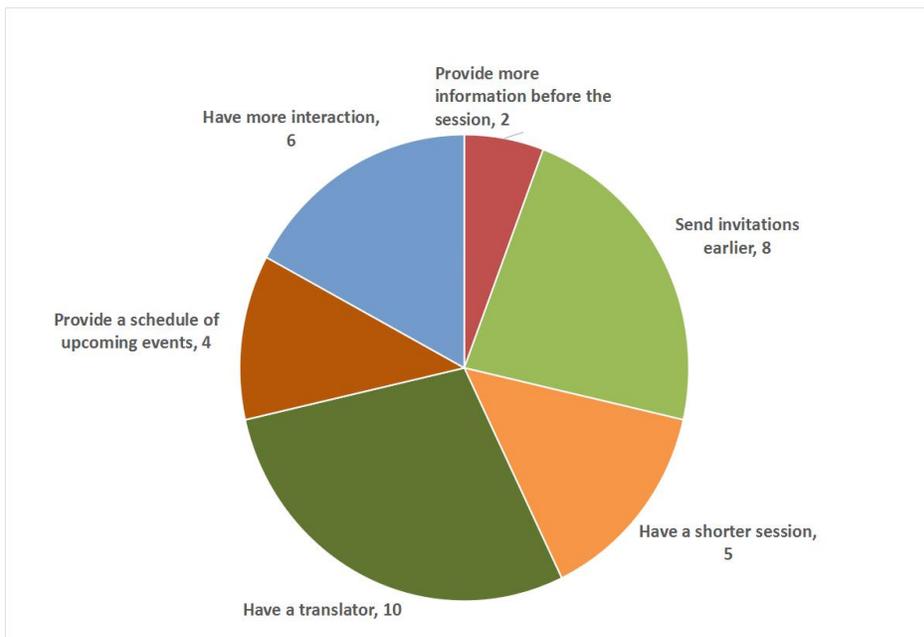


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How could the virtual sessions be improved?

In order to obtain information on how to improve the virtual sessions, respondents were asked to make suggest on possible areas of improvement. The majority were related to the language, also a comment made during the final sessions with the champions where they mentioned that one of the challenges of the collaborative work is the languages changes from region to region.

The other respondents pointed on the importance on having more time to interact and to have a schedule of upcoming activities.





8. CONCLUSIONS

Building on from the work carried out during the first year of the MAGIC project, where much activity was focused on establishing the four Global Science Communities, year 2 focused on animating the communities. In addition to community specific events that were reported in D5.4, the communities participated in virtual days focused on H2020 opportunities and priority areas.

Feedback received from the participants of the various virtual events shows that the activities were worthwhile and that they presented fora for community interaction and sharing of useful information on funding opportunities and experience sharing on priority areas.

As the project close, regional and national research and education networks will pay an important role in ensuring that communities working at the global context are properly supported with infrastructure that enables their collaboration.

Future work may focus on specific communities and their needs, for example, work could focus on supporting telemedicine initiatives starting from national levels and moving to regional and global levels. This way will ensure that the efforts are properly anchored at national level.



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GLOSSARY OF TERMS

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
NREN	National Research and Education Network
GSC	Global Science Community



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EXECUTIVE SUMMARY

WP5 of the MAGIC project is devoted to creating and coordinating relevant research communities (Global Science Communities) comprising representatives from all possible world regions. The project is supporting communities in four thematic areas: e-Health; Biodiversity; Environment; and Remote Instrumentation, especially on the use of collaborative applications, and help them find funding opportunities for their joint research activities. Emphasis is also being placed on disseminating the collected information worldwide and specifically to the selected user communities.

This Deliverable D5.4 reports on virtual meetings and seminars of the Global User Communities. It directly relates to the activities carried out as part of Task 5.6, which is involved with animation of the communities. The communities held their opening conferences during the month of February 2016 and thereafter a series of events were held with the communities. The activities were both held virtually and face to face.

DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document should be made to the authors, Tiwonge Banda, F&A Manager, UbuntuNet tiwonge.banda@ubuntunet.net and Tania Altamirano, Community Coordinator, RedCLARA tania.altamirano-lopez@redclara.net (both WP5) and copied to the Management of the MAGIC project: magic-all@listas.redclara.net



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1. INTRODUCTION

1.1. Purpose of the Document

This document, Deliverable D5.4, of the MAGIC project reports on the activities of the 4 Global Science Communities that are being supported by the MAGIC project. Four Global Science Communities were established towards the end of 2015 around the themes of e-Health, Environment, Biodiversity and Remote Instrumentation. The establishment of the communities was reported in D5.1 - Guidelines, objective, directives and strategic work plan of the MAGIC Global Science Communities. Some of the events of the communities, especially on Global Virtual Days on Priority Areas and on International Calls have been reported in D5.2 and 5.3.

1.2. Structure of the Document

The document consists of four major sections. This first section gives introductory information about the project and the deliverable, and an introductory outline of the content to the document. The second provides information about the opening conferences that were held for the four Global Science Communities. The Third presents the events of the communities focused on best practice and experience sharing. The fourth section provides information about the closing sessions that the project had with community champions. The Conclusion is summarised in section 5. The last section informs the reader about where to forward possible comments.

2. OPENING CONFERENCES FOR THE GLOBAL SCIENCE COMMUNITIES

As previously reported in D5.1 - Guidelines, objective, directives and strategic work plan of the MAGIC Global Science Communities, four Global Science Communities were established towards the end of 2015 around the themes of Environment, Biodiversity, e-Health and Remote Instrumentation. The first three priority areas were adopted from the ELCIRA project. The fourth one was a special request from a community in Mexico working on remote instrumentation (shared laboratories, who were interested in scaling to a global level).

After establishment and identification of community Champions, opening conferences were organised for the communities. The opening conferences were held during the month of February 2016, each facilitated by the Community Champion. The events were promoted through the MAGIC website, the community spaces on Colaboratorio, partner websites and news channels. The purpose of the opening conferences was to provide a platform for the members of the community to interact, share experience and map the next steps with the work of their community.



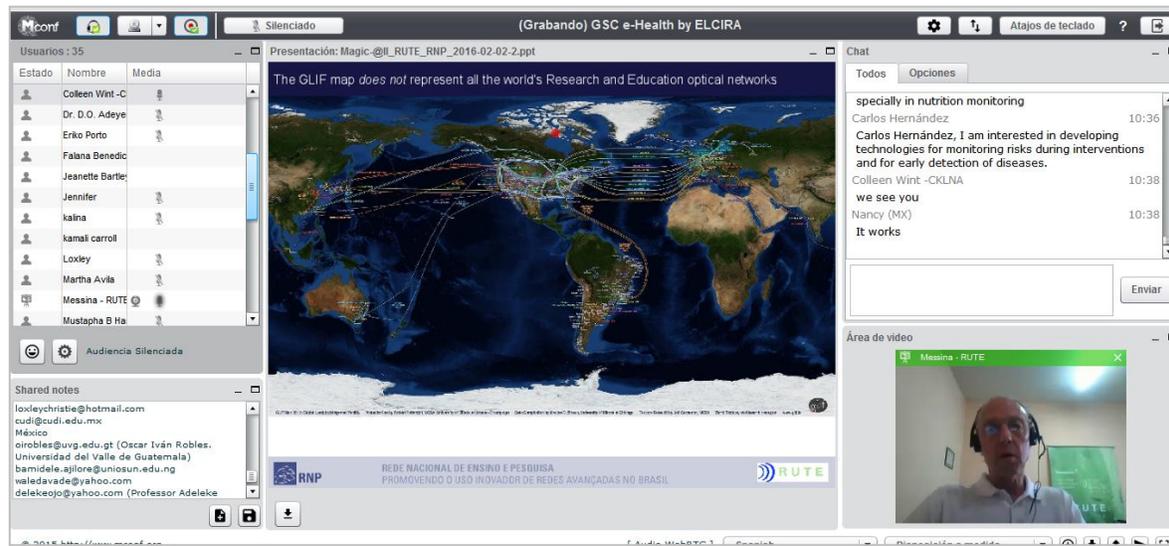
2.1. OPENING CONFERENCE FOR THE GLOBAL SCIENCE COMMUNITY ON E-HEALTH, 2 FEBRUARY 2016



The Opening Conference for the Global Science Community on e-Health was held on 2 February 2016, 2-4pm GMT via the community web conferencing room on Colaboratorio. The event programme featured a key presentation by Professor Luiz Messina, the community champion, titled: The State of Telemedicine in Brazil using NREN Network. The presentation focused on telemedicine activities that he has been working on in Brazil using the national research and education network (NREN) infrastructure. This was followed by a question and answer session, where participants discussed next steps of strengthening e-Health collaboration at global level. A presentation on Colaboratorio, the virtual platform was also given in order to give the members of the community a start on the platform.

The event was attended by 45 participants from across the world. The majority of participants came from the Osun State University, Nigeria where a room filled with faculty and students in the College of Health Sciences participated. The participants agreed as a way forward to launch a survey to determine common interests based upon which the next steps would be formulated. The survey was launched and the outcome was a proposal to develop Grand Rounds on the topics (this is covered later in the report).

Further information, including presentations and link to a video recording of the event is available at the event page, reachable at: <https://eventos.redclara.net/indico/event/634/>

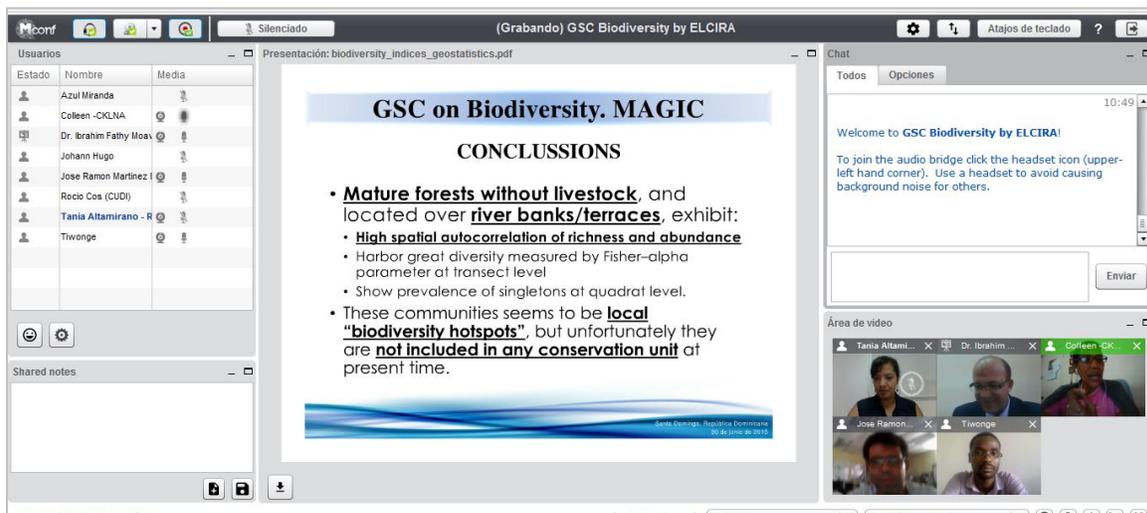


2.2. OPENING CONFERENCE FOR THE GLOBAL SCIENCE COMMUNITY ON BIODIVERSITY, 11 FEBRUARY 2016



The Global Science Community on Biodiversity held its Opening Conference on 11 February 2016 via the community web conferencing room on Colaboratorio. The event schedule included a presentation on MAGIC and Colaboratorio and a feature presentation on the Global Science Community on Biodiversity given by the community Champion, Professor Jose Ramon Martinez B, from the Martínez B., Universidad Autónoma de Santo Domingo, República Dominicana. His presentation focused on Biodiversity activities in his country and towards the end highlighted areas of potential global collaboration and the need to hear what others were doing in their countries, which sparked a lot of interest. A follow up event was proposed where Dr Ibrahim Fathy Moawad of Ain Shams University in Cairo, Egypt was requested to share his experience.

Further information, including presentations and link to a video recording of the event is available at the event page, reachable at: <https://eventos.redclara.net/indico/event/639>.



The screenshot shows a web conferencing interface with a central presentation slide. The slide title is "GSC on Biodiversity. MAGIC" and the section is "CONCLUSIONS". The slide content includes:

- **Mature forests without livestock**, and located over **river banks/terraces**, exhibit:
- **High spatial autocorrelation of richness and abundance**
- Harbor great diversity measured by Fisher-alpha parameter at transect level
- Show prevalence of singletons at quadrat level.
- These communities seems to be **local "biodiversity hotspots"**, but unfortunately they are **not included in any conservation unit** at present time.

The interface also shows a list of users on the left, a chat window on the right with a welcome message, and a video area at the bottom right showing several participants.

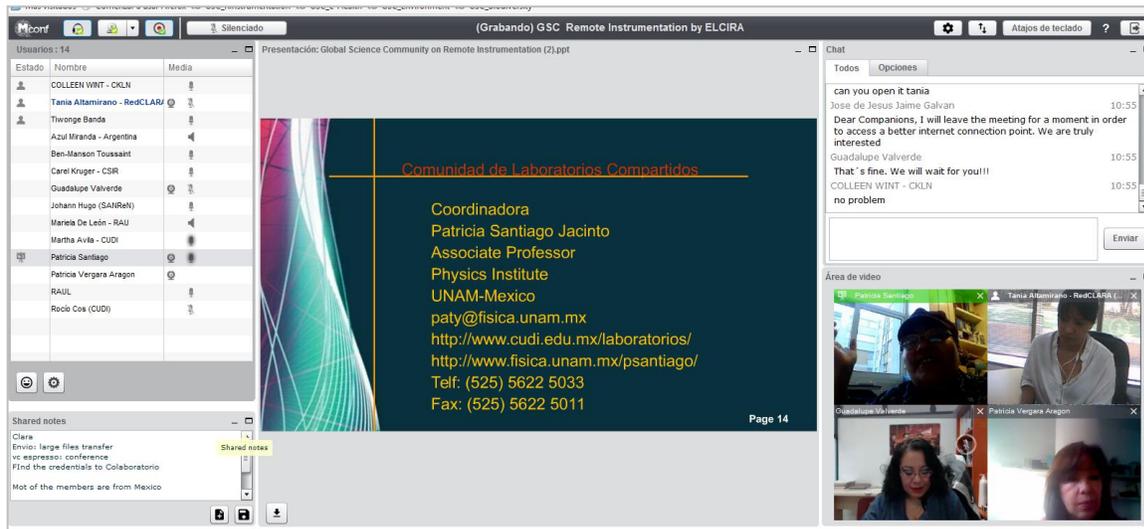


2.3. OPENING CONFERENCE FOR THE GLOBAL SCIENCE COMMUNITY ON ENVIRONMENT, 18 FEBRUARY 2016



The Global Science Community on Environment held its opening conference on 18th February 2016 between 1-3pm GMT. The event programme started with a round of introductions from the participants followed by a presentation on MAGIC and Colaboratorio. Then Dr David Smith, the Community Champion gave a key note presentation titled, Aspects of Caribbean Sustainable Development, which in the event stimulated discussion on next steps. The event was attended by participants from various parts of the world and included some participants that had not yet expressed interest in joining the global community.

Further information, including presentations and link to a video recording of the event is available at the event page, reachable at: <https://eventos.redclara.net/indico/event/640/>.



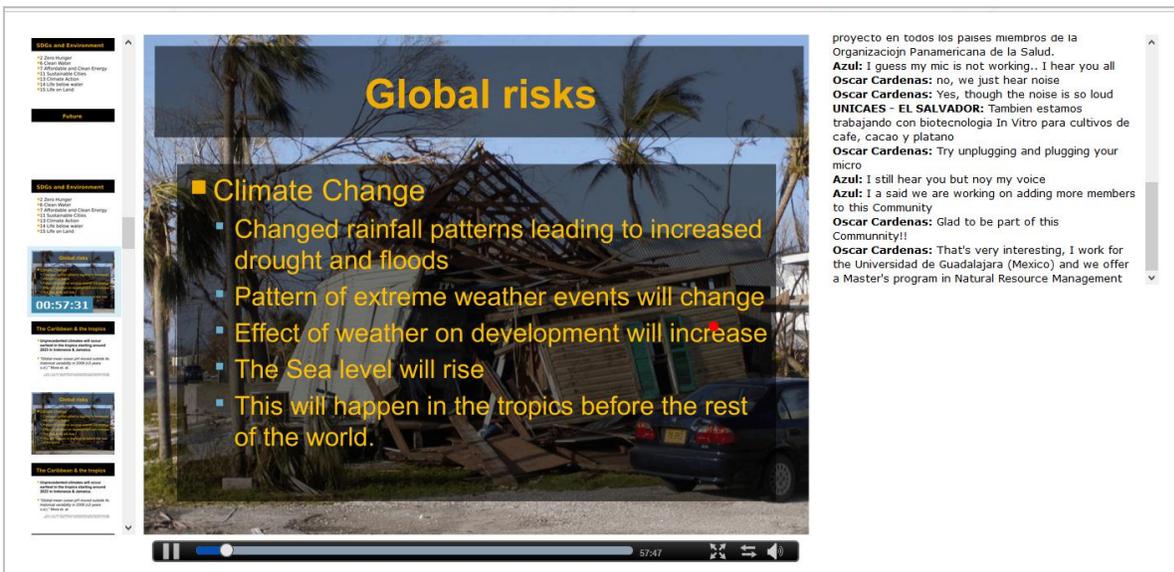
2.4. OPENING CONFERENCE FOR THE GLOBAL SCIENCE COMMUNITY ON REMOTE INSTRUMENTATION, 25 FEBRUARY 2016



The Opening Conference for the Global Science Community on Remote Instrumentation was held on 25th February 2016 via the web conferencing room for the community on Colaboratorio. The event generated a lot of enthusiasm among participants as many wanted to find out what it was all about. Some participants were drawn from the other Global Science Communities. Professor Patricia Santiago, the community champion gave a key note presentation for the community where she shared her experience and work carried out in the field of synthesis and Structural characterization

of advanced and nanostructured materials. The session also included presentations on MAGIC project and Colaboratorio it give the participants a general context. At the end of the session participants agreed to organise another session focused remote instrumentation as applied in health. The follow up event was held on 30th July 2016.

Further information, including presentations and link to a video recording of the event is available at the event page, reachable at: <https://eventos.redclara.net/indico/event/641/>



The screenshot shows a video player interface. The main video area displays a slide titled "Global risks" with a background image of a damaged building. The slide content is as follows:

- Climate Change
 - Changed rainfall patterns leading to increased drought and floods
 - Pattern of extreme weather events will change
 - Effect of weather on development will increase
 - The Sea level will rise
 - This will happen in the tropics before the rest of the world.

On the right side of the video player, there is a chat window with the following text:

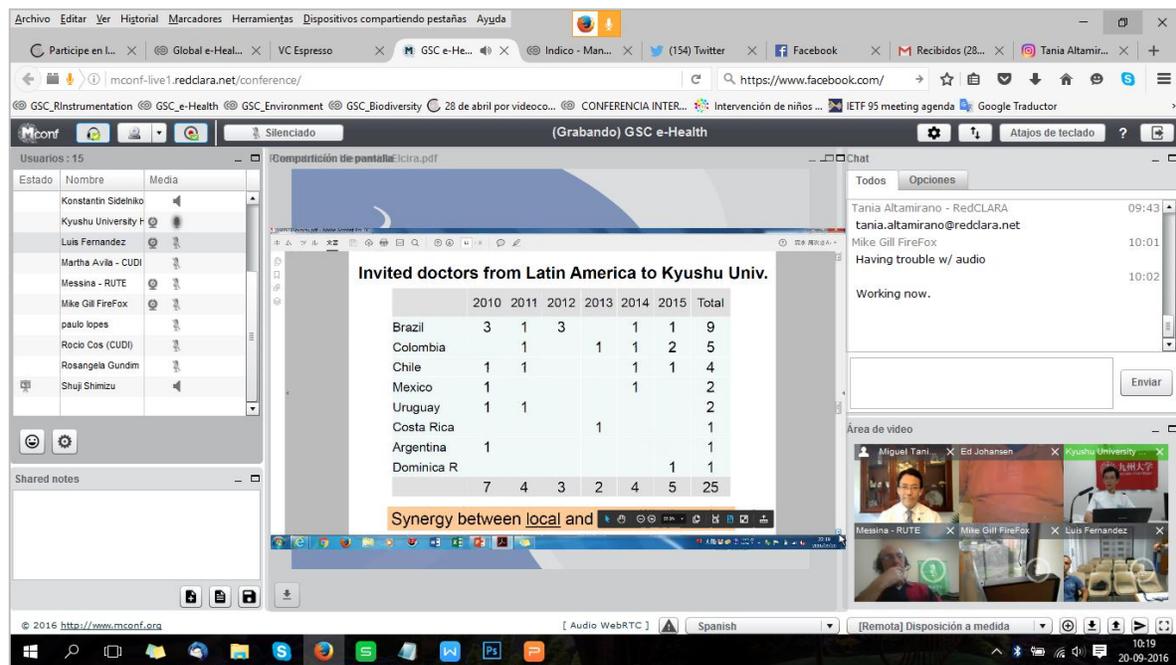
proyecto en todos los países miembros de la Organizaci3n Panamericana de la Salud.
Azul: I guess my mic is not working.. I hear you all
Oscar Cardenas: no, we just hear noise
Oscar Cardenas: Yes, though the noise is so loud
UNICAES - EL SALVADOR: Tambien estamos trabajando con biotecnologia In Vitro para cultivos de cafe, cacao y platano
Oscar Cardenas: Try unplugging and plugging your micro
Azul: I still hear you but noy my voice
Azul: I a said we are working on adding more members to this Community
Oscar Cardenas: Glad to be part of this Community!!
Oscar Cardenas: That's very interesting, I work for the Universidad de Guadalajara (Mexico) and we offer a Master's program in Natural Resource Management



3. BEST PRACTICE AND EXPERIENCE SHARING EVENTS

With the four Global Science Communities launched, the project then moved on to animate the communities with activities. Initially, these events were planned to all be held virtually, but it was quickly learnt that for proper focus, anchorage and sustainability there needed to be community face to face meetings held back to back with major partner events. Therefore, best practice and experience sharing events were held in both virtual and face to face approaches.

3.1. GLOBAL E-HEALTH GRAND ROUNDS, 6 SEPTEMBER – 11 OCTOBER 2016



The screenshot shows a virtual meeting interface with a presentation slide titled "Invited doctors from Latin America to Kyushu Univ." The slide contains a table with the following data:

	2010	2011	2012	2013	2014	2015	Total
Brazil	3	1	3		1	1	9
Colombia		1		1	1	2	5
Chile	1	1			1	1	4
Mexico	1				1		2
Uruguay	1	1					2
Costa Rica				1			1
Argentina	1						1
Dominica R						1	1
	7	4	3	2	4	5	25

Below the table, the text "Synergy between local and" is visible. The interface also shows a list of participants on the left, a chat window on the right, and a video area at the bottom.

Within the health fraternity, grand rounds are held regularly as a platform for experience sharing, teaching and patient care. In collaboration with the e-Health Community Champion, Prof Luiz Messina, a call for presentation for the e-Health Grand Rounds was prepared and published in June 2016 where potential presenters were requested to submit proposals for presentations on the following topics (that were collected through a survey after the Opening Conference): eHealth (Health informatics, Telemedicine and Telehealth); Cardiology; Standards for Telemedicine and Health



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Informatics; and Child and Adolescent Health. Twenty-two abstracts were submitted and all of them were of high

The Grand Rounds were held during the months of September and October, each running for 2 hours. A total of 22 papers were presented. The presenters were from Brazil, Canada, Czech Republic, Egypt, India, Japan, Mexico, Moldova, Russia and USA. The Grand Rounds were held as follows:

- eHealth I (Health informatics, Telemedicine and Telehealth), 6th September 2016
- Cardiology I, 13 September 2016
- eHealth II (Health informatics, Telemedicine and Telehealth), 20th September 2016
- Child and Adolescent Health, 27th September 2016
- eHealth III (Health informatics, Telemedicine and Telehealth), 4th October 2016
- Cardiology II, 11 October 2016



Global e-Health Grand Rounds

This series of virtual Grand Rounds is an opportunity to learn about the different experiences related to e-Health from around the world, contributing and sharing knowledge and exploring the possibility of collaboration.

Mark your calendar

- September 6, 2016 - eHealth I
- September 13, 2016 - Cardiology I
- September 20, 2016 - eHealth II
- September 27, 2016 - Child and Adolescent Health
- October 04, 2016 - eHealth III
- October 11, 2016 - Cardiology II

Join the session through VC Espresso
<http://vc.espresso.redclara.net/vc/ehealth>

 **For more information and REGISTRATION please go to:**
http://eventos.redclara.net/e/eHealth_Grand_Rounds


MAGIC is a Horizon 2020 project supported by the European Commission

The Grand rounds generated global interest at both presenter and participant level and created a rare platform where specialists presented their work. After each session, participants were called to complete a survey, results of which were all positive.

Further details about the Global e-Health Grand Rounds, including full presentations and links to video recordings are available at the event series web page, which is reachable at: <https://eventos.redclara.net/indico/event/713/>.



3.2. FACE TO FACE COMMUNITY MEETINGS

The project organized five face to face community interactions aimed at fostering global collaborations with a local perspective. The events were held back to back with major regional events of partners as follows:

3.2.1. Global Science Communities, that 's MAGIC! IST-Africa 2016, Durban South Africa, 12th May 2016



MAGIC held a generic session at IST-Africa 2016 in Durban, South Africa, with the aim of promoting the four Global Science Communities. The 90 minute session was held back to back with the AfricaConnect2 session organised by UbuntuNet Alliance, GEANT, WACREN and ASREN (all partners in MAGIC). The session was attended by 40 participants, most of them from academia within Africa.

The session was facilitated by Colleen Wint-Bond of CKLN and featured two main presentations followed by a moderated discussion on Global Science Communities. The first presentation introduced the MAGIC Global Science Communities, whereas the second one was concentrated on Colaboratorio as a virtual platform enabling global collaboration of the communities. The project received positive feedback from participants and one thing that kept resonating was the challenge of connectivity in most African countries, something NRENs in the region and the AfricaConnect2 project are sorting out.



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3.2.2. Pre-Conference Workshop on End User Engagement, UbuntuNet-Connect 2016, Entebbe, Uganda, 2nd November 2016



The second face to face event was held as a pre-conference event for UbuntuNet-Connect 2016 in Entebbe, Uganda. UbuntuNet-Connect is the annual conference of UbuntuNet Alliance, the regional network for Eastern and Southern Africa. The workshop was held against the background that there was a disconnect between most African NRENs and end user communities as the NRENs were not engaging the communities. This was impacting on the trickling down of the MAGIC project. To address this, the project engaged with NREN managers from Eastern and Southern Africa and some members from end user communities to try to identify the problem come up with possible solutions. It was realised that the NRENs were focused on building networks and did not have dedicated staff committed to engaging communities as was the case with their European peers. As a way forward, the NREN managers were encouraged to put in place deliberate effort in identifying and supporting communities.

Experience sharing at the workshop included lessons from RedCLARA, GEANT and NORDUnet all talking on how they interact with their communities of practice. Maximus Byamukama, a PhD student from Makerere University working in the field of environmental monitoring gave a presentation on a NORAD funded project, WIMEA-ICT, (Improving Weather Information. Management in East Africa for effective service provision through the application of suitable ICTs). The agenda also included presentations from sister H2020 projects Sci-GalA and TANDEM on how they were each interacting with their communities.



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3.2.3. Global Science Communities, the Biodiversity Case, e-AGE 2016, Beirut, Lebanon, 1st December 2016



The third face to face event was held at the American University of Beirut in Beirut, Lebanon on 1st December 2016 as part of e-AGE 2016, the annual conference for the Arab States Research and Education Network (ASREN). The event, which run for 90 minutes had a special focus on Biodiversity and was an extension of the Global Science Community on Biodiversity in the Arab States. The aim of the event was to grow the Global Science Community on Biodiversity in the Arab region and to share experience.

The session included seven presentations, three of which were feature presentations on various topics in Biodiversity. A prominent member of the Global Science Community, Dr Ibrahim Fathy Moawad from Ain Shams University in Cairo, Egypt participated in the event and shared his experience. Besides, the MAGIC and Colaboratorio presentations, the core thematic presentations were:

- The flora of Lebanon at your fingerprints by Rhea Kahale, Project Manager, Saint Joseph University, Lebanon
- Biodiversity Informatics: Scientific Data Management by Ibrahim Fathy Moawad, Associate Professor, Faculty of Computer and Information Sciences, Ain Shams University, Egypt
- Mapping Potential Responsible Hunting Areas in Lebanon by Manal R. Nader, Director, Institute of the Environment, University of Balamand, Lebanon

Presentations and a video recording of the full session are available on the e-AGE 2016 website at: <http://asrenorg.net/eage2016/?q=content/program>.



3.2.4. Supporting Campus Libraries to embed NREN Services and e-Infrastructure, Abidjan, Ivory Coast, 27-28 March 2017

WACREN, as part of the TANDEM project found that one of the best approaches of engaging communities of practice was through National Focal Points who work closely with the NREN on one hand and the communities on the other. WACREN quickly realised that the initiative would be more rewarding and effective if each institution had a Focal Point and the best persons suited for this purpose are librarians. WACREN therefore organized a workshop for campus librarians in West and Central Africa and invited MAGIC to share experience.

The workshop was held on 27-28 March 2017 as a pre-conference event at WACREN 2017, the annual research and education networking conference in West and Central Africa. MAGIC contributed to the workshop with presentations on Colaboratorio and an introduction to Global Science Communities, encouraging the librarians to disseminate. As a result, a short training session on Colaboratorio was held with some librarians that wanted to use the platform for organising their own communities.

Further details of the event, including links to presentations are available on the event website at: <https://indico.wacren.net/event/50/>.



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3.2.5. e-Infrastructures for Worldwide Collaboration: assessing the present and road mapping the future, Abidjan, Ivory Coast, 28-29 March 2017



Work Package 5 also coordinated the planning and organisation of a Joint Workshop with sister projects TANDEM and Sci-GaIA again as a pre-conference event at WACREN 2017. The event was held under theme: e-Infrastructures for Worldwide Collaboration: assessing the present and road mapping the future, on 28-29 March 2017. The aim of the workshop was to share community engagement experience and map the way forward in terms of sustainability of the efforts.

The joint workshop was held in form of both panel discussions and presentations. Each of the three projects gave an overview of how it carried out its interaction with communities, then on the second day a moderated discussion ensued on how best to sustain the engagement with communities as the projects were drawing to the end. As a way forward the joint workshop concluded that Regional Research and Education Networks were best placed to continue the work of coordinating end user communities at global and regional levels, while the effort at national level would be sustained by NRENs supported by focal points where they exist (both national and/or institutional).

Further details of the event, including links to presentations are available on the event website at: <https://indico.wacren.net/event/51/>.



3.2.6. Caribbean MAGIC: Enhancing Collaboration in Research and Education, Bridgetown, Barbados, 10-12 April 2017



Work Packages 5 and 2 joined hands and organised a 2-day technical and 1 day community event focused on the Caribbean region on 10-12 April 2017. The event combined the Global Science Communities of Environment and e-Health and discussed issues that border on the two subjects. The event was held at Cave Hill Campus of the University of the West Indies, with local coordination by the Centre for Resource Management and Environmental Studies (CERMES). The objectives of the Enviro-Health session were:

- introduce the collaborative tools and platform, Colaboratorio
- share potential funding opportunities for collaborative initiatives
- present and share research findings, project initiatives on relevant climate change, water and resultant healthcare issues in the Caribbean
- stimulate greater collaboration of these communities of interest and practice through global contacts and the technological platforms and tools provided by the MAGIC project
- develop collaborative project and/or research ideas based on concerns or gaps and tailored to potential funding



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Collaborating to globally connect researchers and academics

Building on the success of the ELCIRA project, RedCLARA –with partners from Africa, Arab States, Asia, Europe, Latin America and The Caribbean- is leading MAGIC, a cooperation project which aims to significantly improve the ability of researchers and academics around the world to collaborate together.

General Objective

To establish a set of agreements for participating world regions to consolidate/complete middleware for a marketplace of services and real-time applications to benefit global science communities.

Specific Objectives

- To enable mobility and seamless access to services by:
 - promoting the establishment of Identity Federations connected to eduGAIN,
 - creating awareness of privacy and security issues,
 - increasing uptake of education.
- To enable the provision of collaboration tools and services among NRENs based on NREN-run applications made available via a worldwide-application market.
- To seek consensus on interoperability of real-time applications and work towards the adoption of standards such as those proposed by the Global CEO Forum.
- To foster the collaborative work of Global Science Communities by actively promoting the participation researchers in European Commission Calls, etc.

Granted by the EC Horizon 2020

EU Contribution: 1,388,972€
START: May 1st 2015
END: 2017

Members

- RedCLARA (Latin America - Coordinator)
- GEANT (Europe)
- RENATA (Colombia)
- RNP (Brazil)
- SURFnet (Netherlands)
- RELINA (Chile)
- CEDIA (Ecuador)
- CUDI (Mexico)
- RENATER (France)
- GRNET (Greece)
- CESNET (Czech Republic)
- UbuntuNet Alliance (S&E Africa)
- WACREN (W&C Africa)
- ASREN (Arab States)
- TEINPCC (Asia-Pacific)
- CAREN NOC - NITC (Central Asia)
- NIFI (Hungary)
- CSR (South Africa)

What is a Global Science Community - GSC?

A group of experts (researchers and/or academics) from different parts of the world with a common interest, working together on activities, sharing best practices, knowledge and experiences.

Their activities provide opportunities to learn and share knowledge and experiences related to their thematic area of interest, and explore collaboration possibilities. Each MAGIC GSC thematic area is led by a champion - an expert advisor in that field.

GSC are currently...

- Benefiting from MAGIC, providing information on global funding opportunities for endusers and communities.
- Developing of a set of Worldwide Virtual days to foster collaboration at a worldwide scale on the GSC topics.
- Running H2020 Virtual information days to promote participation in International Calls.
- Getting training material for the use of MAGIC's provided applications for collaboration.
- Convening virtual meetings and seminars.

How to participate in a GSC?

To be part of the activities you need to be registered in the Collaboratorio platform and join the Community you are interested in.

Collaboratorio is a platform developed by RedCLARA to support and promote the collaboration of scientists and academic groups initially intended for users in Latin America.

For more information please write to the GSC Team leads, Thwenge@andis.ubuntu.net, at thwenge@andis.ubuntu.net.

MAGIC Project: <http://magic-project.eu/>

MAGIC GSC + champions

e-Health
Thematic Leader: Lutz Ary Messina, National Coordinator of RUTE (Rede Universitaria de Telemedicina), Brazil.

Biodiversity
Thematic Leader: José Ramón Martínez, Professor and researcher of the Universidad Autónoma de Santo Domingo (IASD), Dominican Republic.

Environment
Thematic Leader: David C. Smith, Coordinator, Institute for Sustainable Development, The UWI, University of the West Indies, Jamaica.

Remote Instrumentation
Thematic Leader: Patricia Santiago, Associate Professor Physics Institute, Universidad Autónoma de México (UNAM), Mexico.



With effort, collaboration and commitment, a community becomes a strong tree that bears good fruit

The first 2 days of the event were technical and concentrated on eduoam and eduGAIN with the idea of ensuring that IT staff were able to support the needs of their research and academic staff. The participants were drawn from the Caribbean region. The training was facilitated by Brook Schofield of GEANT. At the end 2 days the participants highlighted the need for an organisation to play the role of coordination at regional level in the roll out of services. This is the gap that was left with the discontinuation of the Caribbean Knowledge and Learning Network (CKLN).

The last day, which was dubbed Environ-Health brought the two communities of Environment and e-Health to discuss common subjects. The session was officially opened by Dr Janice Cumberbatch, the Assistant Director of CERMES, and Mr. Marc Thill, Head of Cooperation at the European Union in Barbados brought greetings, and highlighted the Horizon 2020 framework programme as a collaborative funding opportunity that is open to participation from across the world.

The presenters were, Dr. David Smith, from the Institute for Sustainable Development, UWI, Mona, Ms. Crystal Drakes, Research Associate, CERMES; Dr. John Charley, Coordinator of Computer Science, Department of Computer Science, Mathematics and Physics, UWI and Climate Studies



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Group; and Dr Heather Harewood, Clinical Public Health Specialist, Faculty of Medical Science, UWI, Cave Hill.

Further details about the event including presentations with their recommendations can be found at the event website: <https://eventos.redclara.net/indico/event/794>.

4. CLOSING SESSIONS

In the final week of the MAGIC project, closing sessions were held with Community Champions with the aim of obtaining lessons learnt and challenges faced. While the champions praised the global Science Communities as a global unifying force and platform for experience sharing, they were able to quickly point out the following as challenges of working in a virtual global environment:

- a) Language – it is not easy to collaborate globally in one particular language as many find themselves disadvantaged and not able to properly express themselves. A way needs to be found to overcome this.
- b) Connectivity – to better collaborate virtually good connectivity is a necessity. However, it is clear that many countries, especially in Africa still face connectivity challenges and as a result cannot effectively participate. There is hope that this will be overcome soon with projects like AfricaConnect2.
- c) Lack of e-collaboration culture – to many the culture of collaborating electronically is not there. People are still glued to traditional means of working and few are willing to collaborate. This needs to change.

On a positive side, there is a general consensus that the Global Science Communities helped bring people from various parts of the world to share experience and learn from each other.

5. CONCLUSION

The MAGIC project has shown that despite challenges of collaborating in a global environment, it is possible to do so. Lessons have been learnt as presented in this deliverable. It is clear that for such global efforts to be sustained, regional research and education networks must play a coordination role in supporting of the communities with the hand of their national counterparts. Virtual events alone are not enough for sustained activity especially that it is not all regions that are well connected. Regular thematic face to face events are good as well to ensure human interactions and relationship building.



European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D6.1 First Dissemination and Training Plan Baseline

Periodical Progress Report

MAGIC Deliverable: D6.1. First Dissemination and Training Plan Baseline

Document Full Name	D6.1. First Dissemination and Training Plan Baseline
Date	20-05-2015
Activity	WP6 Dissemination and Training
Lead Partner	RedCLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document refers to all the activities carried out before the project started in order to ensure its proper dissemination from Day 1, and describes the dissemination plan, MAGIC branding -including documents and presentation templates-, the MAGIC newsletter and website and the tools that will be used for the measurement of both communication tools, outreach and impact. The deliverable also depicts those international events in which the MAGIC project should be represented for its dissemination, where its training activities will be carried out, and how will they be structured and organised.



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MAGIC (Middleware for collaborative Applications and Global virtual Communities – Project number: 654225) is a project co-funded by the European Commission within the Horizon 2020 Programme (H2020), Directorate General for Communications Networks, Content and Technology - eInfrastructure. MAGIC began on 1st May 2015 and will run for 24 months.

For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	María José López Pourailly	RedCLARA / WP6	27/05/2015	RedCLARA
Revised by	Colleen Wint Smith	CKLN / WP6	04/06/2015	RedCLARA
Revised by	Thomas Fryer	GÉANT / WP6	05/06/2015	RedCLARA
Revised by	María José López Pourailly	RedCLARA / WP6	09/06/2015	RedCLARA
Revised by				
Revised by				
Revised by				
Aproved by	Florencio I. Utreras	RedCLARA/CEO	23/06/2015	RedCLARA





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1. INTRODUCTION

The purpose of this document is to define the Dissemination and Training Plan for MAGIC. These Plans will establish the general roadmap of activities that will be carried out by WP6 to help ensure the success of the project. The training and dissemination actions will ensure appropriate promotion of the project and collaboration among its partners.

The objective of the Visibility Plan is to efficiently disseminate the objectives, developments, advances and achievements of MAGIC. It will also help in the construction of an inclusive MAGIC community by building a global dissemination network whose principal aim will be the promotion of MAGIC in each country participating in the project by highlighting the national and regional initiatives within the scope of the project. Equally, MAGIC WP6 will focus on dissemination synergies with the EC-funded TANDEM and Sci-GalA projects.

The Visibility Plan is based upon successful visibility activities carried out in the previous ALICE2 and ELCIRA projects, both co-funded by the EC through the @LIS2 and the FP7 programmes, respectively. The training Plan will take advantage of the lessons learned and initiatives emerging from the Regional Training activities, especially fostering the establishment of local trainers.

2. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
- [R2] Visibility Guidelines established by the European Commission in the document "COMMUNICATION AND VISIBILITY MANUAL for European Union External Actions" http://ec.europa.eu/europeaid/work/visibility/documents/communication_and_visibility_manual_en.pdf

3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, María José López Pourailly, WP6 - Dissemination & Training Manager (RedCLARA – Communications and Public Relations Manager), maria-jose.lopez@redclara.net, and copied to the Management of the MAGIC project.

4. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
Sci-GalA	Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa



TANDEM TransAfrican Network Development
WP Work Package

5. EXECUTIVE SUMMARY

This document refers to all activities carried out before the start of the project in order to ensure appropriate dissemination from Day 1. The majority of these activities were related to MAGIC branding, the working structure of WP6 and also MAGIC participation in a number of international events. At its core, the document describes the Dissemination Plan (that will strictly respect the EC visibility guidelines published in 2010 in the “Communication and Visibility Manual for European Union External Actions” and validated in March 2014 [R2]), MAGIC branding, the MAGIC newsletter and website and the tools that will be implemented for the measurement of both outreach and impact. The deliverable also depicts the international events in which the MAGIC project should be represented for dissemination purposes and those where training activities will be carried out, as well as how they be structured and organised. Training events will contribute to further dissemination of the project and its benefits as trainees can also act themselves as further dissemination vectors within their communities, in line with the intentions of the project.

WP6 will also investigate interactions with other international projects funded by the EC Horizon2020 Programme, such as TANDEM¹ and Sci-GaIA².

¹ TANDEM (TransAfrican Network Development) will create favourable conditions for WACREN, enabling it to draw maximum benefit from the forthcoming AfricaConnect2 project and ensure WACREN's integration into the global Research and Education networking community and its long-term sustainability. TANDEM's long-term goal is to make it possible for researchers and academics to contribute with their peers around the world to the socio-economic development of the West and Central African Region. The project will run for 24 months and is coordinated by the Institut de Recherche pour le Développement (France). Other partners are WACREN (Ghana), GÉANT (UK), RENATER (France), CIRAD (France), Sigma Orionis (France), Brunel University (UK), UbuntuNet Alliance (Malawi) and RedCLARA (Uruguay). Web site: www.tandem-wacren.eu.

² Sci-GaIA (Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa) aims to support National Research and Education Networks, Communities of Practice and Universities in Africa to develop Science Gateways and other e-Infrastructure services. Sci-GaIA will work with new and emerging Communities of Practice to develop these exciting technologies, strengthen e-Infrastructure service provision, especially in terms of open access linked data, and deliver training and dissemination workshops. This will establish a sustainable foundation on which African e-Infrastructures can be developed and linked to science networks across Africa. The results of the project will be usable by Communities of Practice in Europe and the rest of the world. The project will run for 24 months and is coordinated by Brunel University (UK). The partnership is composed of: DIT (Tanzania), University of Catania (Italy), Karolinska Intitutet (Sweden), KTH (Sweden), Sigma Orionis (France), UbuntuNet Alliance (Malawi), WACREN (Ghana) and CSIR (South Africa). Website: www.sci-gaia.eu.



6. WP6 COORDINATION AND MANAGEMENT

WP6 is lead by RedCLARA. However, in order to ensure visibility of every institution and region participating in the project, the Work Package is structured in such a way that each region will be regularly report on their actions to the WP6 coordinator, with a local delegate identified for each region. The overall structure as established in the lead-up to the start of the project, is shown in Figure 1 below, including the delegate organisation for each region:

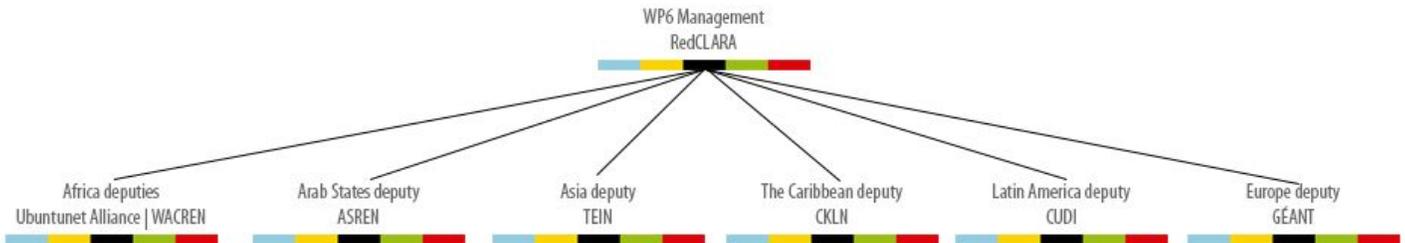


Figure 1: MAGIC's WP6 working structure.

The delegates identified by these institutions by 25th April 2015 are as follows:

- Africa:
 - Ubuntunet Alliance: Patricia Mtungila, pmtungila@ubuntunet.net
 - WACREN: Omo Oaiya, omo@wacren.net
- Arab States: ASREN, Ola Samara, osamara@asrenorg.net
- Asia: TEIN, Patch Lee, patch.lee@teincc.org
- Caribbean: CKLN, Colleen Wint, colleen.wint@ckln.org
- Latin America: CUDI, Martha Avila, cudi@cudi.edu.mx
- Europe: GÉANT, Tom Fryer, Tom.Fryer@geant.org

The individuals identified will be the WP6 delegates for the corresponding regions. However, each organisation is entitled to appoint a different delegate as required. In such cases, the organisation concerned will notify the WP6 coordinator about the change.

7. ROLES AND RESPONSIBILITIES

WP6 is led by RedCLARA and in order to efficiently tackle the needs of and obtain information from all regions, countries and institutions involved in the project, communications are required that reflect the global nature of the project. Consequently, a regional delegate structure has been established (see 6, WP6 Coordination and Management above) with delegates appointed for the Ubuntunet Alliance, WACREN, ASREN, TEIN, CKLN, CUDI and GÉANT. The team will also include individuals from RNP, GRNET, RENATER, NIIFI and NITC (CAREN NOC) to cover different aspects of both dissemination and training.

Nevertheless, it is important to keep in mind that the dissemination of MAGIC is the concern of every partner within its own national and regional context.. This is to say that every member of the MAGIC project should contribute and that dissemination and training strategies should be addressed in common to promote the



purpose and benefits of the project and of its applications, services and the agreements envisioned by the project.

8. OBJECTIVES

8.1. GENERAL OBJECTIVE

To efficiently promote and disseminate the project to the global REN community and scientific and academic communities as well as decision-makers and to organise training events that will increase the number of people able to use MAGIC collaborative applications.

8.2. SPECIFIC OBJECTIVES

- To promote the establishment of agreements for Africa, Asia, the Caribbean, Europe, Latin America and Oceania aimed at consolidating and completing the building blocks of middleware that MAGIC will target.
- To enhance the use of MAGIC services and real-time applications among international and inter-continental research groups and communities.
- To coordinate and promote training on the implementation and use of the services agreed by MAGIC.
- To develop informative material for specific events related to regional advanced networks.

9. RELATIONSHIP WITH THE PROJECT

Dissemination and training are the two main responsibilities of WP6.

The Dissemination and Training Plan defines the strategy to achieve the main WP6 goals (see 7.1 and 7.2).

Dissemination:

The principle of the Dissemination Plan is the recognition of the importance of Public Relations and Dissemination for a global project or the nature of MAGIC.

Dissemination activities will be:

- 1) to reach relevant research communities that can benefit from the use of MAGIC services;
- 2) to demonstrate that in addition to being about services running over the regional advanced e-Infrastructures, the success of MAGIC is highly dependent on close collaboration of all world regions involved that it is based upon a powerful human network.

Training:

While dissemination will provide a general picture of the project, training will provide detailed technical information to potential users and will give them the skills to use the global advanced e-Infrastructure and the services that run on top of it. Moreover, it will directly help the project to achieve its four specific objectives within a face-to-face environment that will be supported on-line.

This task will also focus on relationships with other international projects co-funded by the EC's Horizon2020 Programme, such as TANDEM and Sci-GaIA.



For a project of this size, it is vital that all those involved in it have a clear understanding of the aims of the Dissemination and Training Plan and of what is realistically achievable. The Plan will be revised and updated, as required, in M7, M13 and M19 in the First, Second and Third Dissemination and Training Report.

10. TARGET AUDIENCES

The principle target audiences of the project are:

- Scientists
- Researchers,
- Computing engineers
- Network engineers
- Academics
- National Research and Education Networks
- Specialised technological journalists (specialised media).
- Governments representatives
- Relevant institution stakeholders (University Rectors, Deans, Directors of the National Science and Technology Institutions, Investment Banks, Foundations, the European Commission, etc.),
- The Industry and Service sectors
- The wider science community

This is not an exhaustive list as the target audiences for MAGIC will constantly evolve as the project progresses.

11. MESSAGES

Due to the size and geographical diversity of the MAGIC project, perhaps the single most global collaboration project involving R&E networks, it is vital that the key messages of the dissemination campaign remain consistent. These messages will be based on and reinforced in the activities and material that will be developed. It is envisaged that the key messages will predominantly come from WP1, WP4 and WP5 as they have a greater overview of the relationships and collaboration processes among the world regions involved, and are abreast of the developments and advances taking place within the project. These, in turn, will be forwarded to WP6.

Some key messages may be generated at local levels. Project members are asked to inform WP6 management of these in order to discuss the best way to proceed as the messages may be incorporated to create wider dissemination.

It is also important to note that not all the key messages will be relevant to all of the audiences identified. Therefore, it is the responsibility of WP6 (with assistance from WP1, WP4 and WP5) to ensure that the right messages are tailored to the right audiences.

The concept areas around which key messages will be developed in the campaign can be identified as:

- The precedent success story of the ELCIRA project and its tools and services;
- The precedent success story of collaboration between EU and LA based upon the successful ALICE, ALICE2 and ELCIRA projects, and their positive liaisons with other world regions;



- What MAGIC is about;
- MAGIC aims and their potential academic, scientific, social, industry impact;
- MAGIC potential to revolutionise the way in which researchers and academics work;
- Who is involved in the project;
- MAGIC as the single most global collaboration project involving R&E networks.
- MAGIC participation in conferences and events;
- The MAGIC Kick-off Meeting.

Other messages that are likely to be relevant as the project progresses include:

- Major service integration and service developments;
- Key milestones in the project;
- New user communities benefiting from MAGIC services;
- Real-time collaboration agreements fostered by MAGIC;
- The benefits, successes and outcomes results of specific groups resulting from MAGIC;
- Collaboration between MAGIC, TANDEM and Sci-GaIA.

Key messages will be identified and refined as the project progresses.

In the early stages of the project, it is likely that most messages will be more “general” and only become specific as the project progresses.

12. ACTIONS AND ACTIVITIES

MAGIC will benefit from the dissemination methods, activities and material-creation and experience of its partners, but will also create its own. In order to offer a clear vision of the tasks that will be carried out to meet the objectives of the MAGIC Dissemination & Training Plan, all the activities have been grouped into two main action lines, which are:

- Promotion, awareness-raising and positioning
- Training

12.1. Promotion, awareness-raising and positioning

It is key to define a promotional programme (based on activities that will be carried out during the lifetime of the project) in order to raise awareness of the MAGIC project, the benefits of its applications and services as well as to encourage their use, and also to foster the adoption of global agreements for real-time collaboration. The programme will also serve to highlight the importance of the regional networks (RedCLARA, GÉANT, CKLN, ASREN, UbuntuNet Alliance, WACREN, TEIN, APAN) and their interconnection to foster research in and between world regions, which will contribute to the long-term sustainability of international research collaboration.

The main focus of the promotion activities will be:

- The MAGIC project itself



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institutions and a vote ensued, with the result that the MAGIC logo (see Figure 2) was created before the start of the project and approved by all the project members and delivered at the beginning of M1, and the corresponding graphics made available to all MAGIC partners.



Figure 2: MAGIC logo.

The logo also has a vertical version that can be used depending on the layout of the corresponding material.



Figure 3: Vertical form of the MAGIC logo.

For smaller material with limited space, the vertical form of the logo will be used without the text:



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Figure 4: Vertical form of the MAGIC logo with no additional wording.

The logo communicates the status, subject and personality of the MAGIC project. The branding image is inspired by the collaborative spirit of the project itself, its members and the human network that interconnects the participating world regions. The most relevant element of this logo is the human figure which will be present in all MAGIC graphic material.

Taking the logo as a starting point, a branding and corporate style was defined. This consists of the MAGIC logo, the presentation template, banner, and document and deliverable style sheets. The branding will be completed with the project website and future graphic material.



Figure 5: MAGIC presentation template.



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Figure 6: MAGIC's deliverable template.



Figure 7: MAGIC's documents template.



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For the first MAGIC vinyl banner a slogan was created in order to promote the concept behind MAGIC: “A collaboration project to globally connect researchers and academics”. This first vinyl banner (see Figure 8) was shown during the Kick-off Meeting.

The official language of MAGIC is English.



A collaboration project
to globally connect
researchers and academics

Latin America · The Caribbean · Europe · Africa · Middle East · Asia



www.magic-project.eu



Figure 8: MAGIC's first vinyl banner.



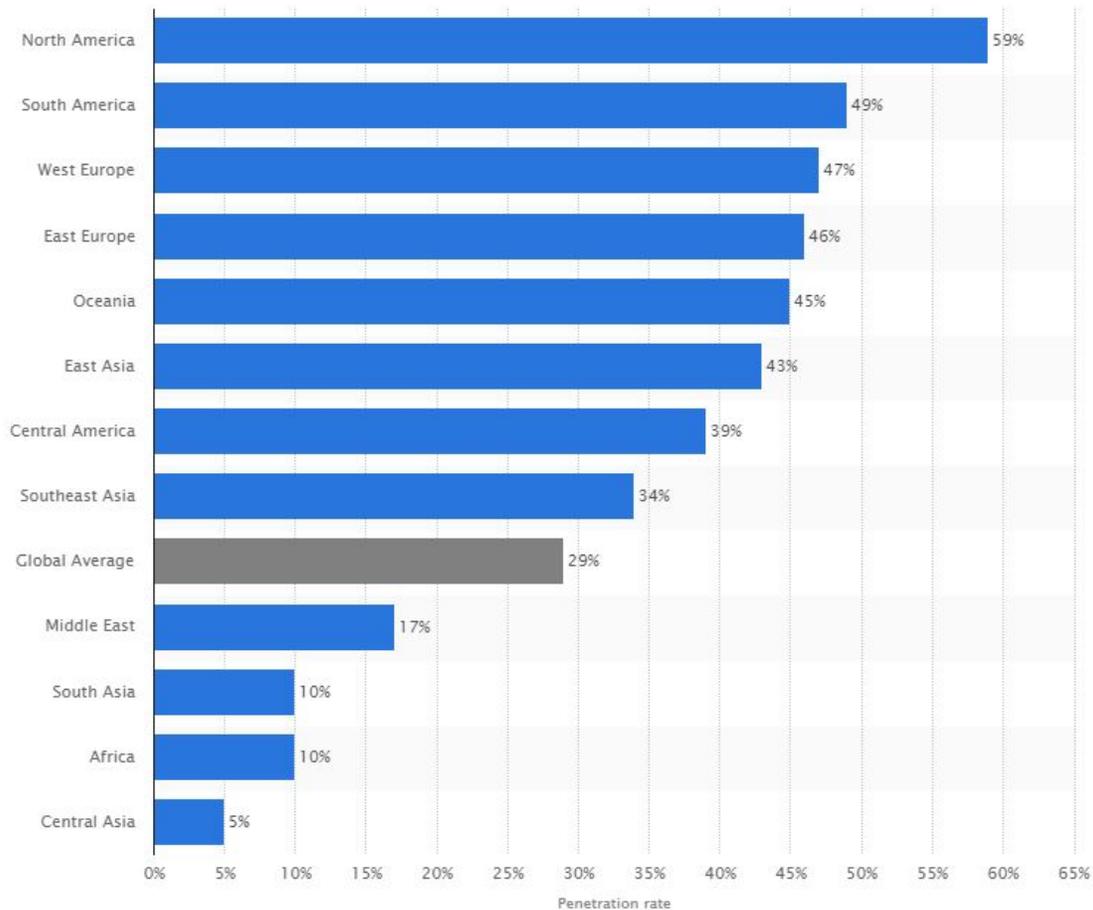
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12.1.2. MAGIC Website and social media presence

In the context of the Information Society, to have a website is to exist. In addition to this apparently trivial consideration, and due to the geographic extension of MAGIC, which implies a wide cultural heritage and, of course, great diversity in terms of education, economy and social realities, having a suitable website is a necessity. Due to the high penetration of social networks (see Figure 9), the MAGIC website must be linked with the MAGIC Facebook and Twitter pages, in order to maximise visibility and impact, and increase brand recognition and inbound traffic, among other things⁵.



⁵ See “The Top 10 Benefits Of Social Media Marketing” at Forbes, published in November 8th 2014, at: <http://www.forbes.com/sites/jaysondemers/2014/08/11/the-top-10-benefits-of-social-media-marketing/>.



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Figure 9: Global social network penetration rate as of 1st quarter 2015, by region, information published by Statista at <http://www.statista.com/statistics/269615/social-network-penetration-by-region/>.

Given the characteristics of MAGIC, its website and the Facebook and Twitter pages will be the first “visible faces” of the initiative. As such, they must reflect not only the core of the project – its objectives, partners, tasks, etc. – but also the collaborative spirit that lies behind every cooperation action that is supported by the EC, the experience gathered over previous years and projects, and the very strong relationships between all project members. It is based on the confidence both of their capacities and also of the leading and partner organisations. The Website will show all available information on MAGIC and the social network presence will be used to enhance the visibility of project news, participation in events and training activities.

Naturally, the website will be built around the MAGIC branding and corporate style.

Recognising the diversity of the MAGIC partners and with the aim of respecting the opinions of those who are working to make MAGIC a success, and having chosen to use the Joomla platform (as it is well known by the RedCLARA team that will be managing it), WP6 invited all project partners to vote for a specific template to be applied to the website. After a review of the various templates, WP6 invited all project partners to vote for a first and a second option from five options (see Annex 1 – Website Template Options). This vote ran in parallel to the poll for the MAGIC logo. The vote resulted in the selection of the JA University template (<http://www.joomlart.com/joomla/templates/ja-universityspect>)

The MAGIC website was developed during M01 and M02, and delivered at the end of M02 with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was also delivered at the end of M02.

RedCLARA’s Colaboratorio environment is used to provide the MAGIC community intranet .

The success of the website and the social network pages, will be statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and inform on how to disseminate the project more effectively. Website usage will be measured using the Piwik open-source tool. The Facebook page will be measured using the tool provided by Facebook itself, and Twitter will be measured in terms of followers and retweeted messages.

12.1.3. News, reports and newsletters

News, reports and interviews with MAGIC project members and relevant MAGIC users/beneficiaries will be produced and published on a regular basis on the project website and replicated on both the Facebook and Twitter presences. However, and though this is important, it will also be very important to enhance the MAGIC partners’ sense of belonging to the project to disseminate news items, reports and interviews via the MAGIC Newsletter; to be created by WP6. This dissemination piece will complement the aforementioned communication channels.

Equally, it is the responsibility of each project partner, and the project partners’ regular communication channels to help disseminate MAGIC news, reports, announcements, etc. as part of the overall MAGIC dissemination activity.

The Newsletter will be delivered every three months, starting in M03, through the all-members list and through the list that WP6 will develop with information provided by its members. In addition, all project partners will be expected to re-distribute the newsletter to their own mailing contacts.



In order to measure the use/success of the Newsletter, the OpenEMM mail-marketing open-source tool will be implemented and used.

Regarding the first actions carried out in this particular area, a news item entitled “MAGIC is officially approved by European Commission’s Horizon2020 Programme” was distributed on 12th May among the project partners in English, Spanish and Portuguese by means of the all-members mailing list, inviting them to publish it on their websites and to distribute it among their partners. This news was published on the RedCLARA website at <http://www.redclara.net/index.php/en/noticias-y-eventos/noticias/destacados/3238-magic-es-aprobado-oficialmente-por-el-programa-horizonte-2020-de-la-comision-europea>. MAGIC will be also disseminated both in the June 2015 issue of the quarterly GÉANT CONNECT magazine and in the June edition of the DeCLARA bulletin (RedCLARA).

12.1.4. Promotional material

Different types of promotional material will be created for the MAGIC project.. In some cases this will mean also the promotion of the project partners’ services. All promotional material will strictly follow the Visibility Guidelines established by the European Commission [R2], and will be delivered in the framework of international events in which MAGIC will be represented in the form of a booth.

12.1.5. Printing material

Promotional brochures and posters that will reflect the core of the project and depict its objectives and/or achievements and its benefits for the global research and education communities will be created and delivered both in PDF and printed versions, as required for MAGIC promotion at relevant international events.

The first MAGIC poster, which gives a detailed overview of the project, was shown during the Kick-off meeting. All printed material will respect MAGIC branding and the Visibility Guidelines established by the European Commission [R2].





Project Evaluated and Approved for a Grant by the EC in Horizon 2020

EU Contribution: 1,388,972€
START: May 1st 2015
END: April 30th 2017

A collaboration project to globally connect researchers and academics



Building on the success of the ELClARA project, RedCLARA – with partners from Africa, Arab States, Asia, Europe, Latin America and The Caribbean – is leading MAGIC, a cooperation project which aims to significantly improve the ability of researchers and academics around the world to collaborate together.

General Objective

- To establish a set of agreements for participating world regions to consolidate complete middleware for a marketplace of services and real-time applications to benefit global science communities.

Specific Objectives

- To enable mobility and seamless access to services by:
 - promoting the establishment of identity federations connected to eduGAIN,
 - creating awareness of privacy and security issues, and
 - increasing uptake of e-services.
- To enable the provision of collaboration tools and services among NRENs based on NREN-run applications made available via a worldwide application market.
- To seek consensus on interoperability of real-time applications and work towards the adoption of standards such as those proposed by the Global CEO Forum.
- To foster the collaborative work of Global Science Communities by actively promoting the participation researchers in European Commission Calls, etc.

Grant Partners

- RedCLARA (Latin America) – Coordinator
- GENE (Europe)
- RENATA (Colombia)
- RNP (Brazil)
- SURFnet (Netherlands)
- REUNA (Chile)
- CECIA (Ecuador)
- CUJED (Mexico)
- RENATER (France)
- GRNET (Greece)
- CESNET (Czech Republic)
- CRUK (Caribbean)
- LibunetNet Alliance (S&E Africa)
- WACREN (W&C Africa)
- ASREN (Arab States)
- TEINCC (Asia-Pacific)
- CAREN-NOC – NITC (Central Asia)
- NIFI (Hungary)
- CSIR (South Africa)

Work Packages Activities

- WP1 Management**
- WP2 Platforms for Mobility**
 - Analyze the regions that will encompass the project scope to design the best Federation architecture to be implemented per territory
 - Develop and adopt training material for Identity Federations and secure management, supporting local language requirements as necessary
 - Implement online training for Identity Federations and advisors as an e-learning platform (MBA or project partner)
 - Identify Federations and advisors supporting the Regional RENs
 - Develop and provide in-class training (local camp) to establish identity management professionals in the region
 - Implement the model established in 2 Federations development
- WP3 Cloud Provisioning and Groupware Standards**
 - Agreements for a standard federated group management (FGM Standard) and Application Programming Interfaces (API) for it
 - Definition of a set of applications that will adopt the FGM Standard
 - Agreement for a Federated Groupware System as a development of view
 - Agreement for a Federated Groupware System as a development of view
 - Definition of a standard for interoperability of cloud provisioning
 - Definition of a standard for interoperability of cloud provisioning
 - Deployment of a pilot Federated Cloud Service (FCS) model for a set of NRENs in U.S., Europe, Africa, etc.
 - Evaluation of the FCS by the open NRENs
 - Refinement of the FCS using the feedback obtained from NRENs
- WP4 Agreements for Real Time Collaboration**
 - To foster the adoption of the WebRTC standard for external dialing using the Domain Name System (DNS) infrastructure
 - To provide and work with the IETF group on the development of a global standard for Internet dialing
 - To integrate I-123 and MCOIP to achieve unified communications for the academic world
- WP5 Global Science Communities**
 - Agreements on a set of WebRTC User communities of common interest to the participating regions
 - Implementation of an Information System on WebRTC dialing opportunities around all the end users and the user communities
 - Development of a set of WebRTC Virtual Spaces to foster collaboration on a worldwide scale on the above selected topics
 - MOU/Agreement on the way to promote participation in these communities
 - Make it mandatory for the set of cloud provider applications for collaboration
 - Worldwide User communities virtual meetings and seminars
- WP6 Dissemination and Training**
 - Planning of dissemination and co-ordination of training activities
 - Creation and management of the project website
 - Developing information related to the project development, advances, achievements, training activities, etc.
 - Publication of online and external dissemination material related to different addresses, news and project results
 - Participation in specific international events in order to promote the advances and success of the project
 - Key events will be IETF and regional conferences such as the IETF, IAS, IAS, IAS, etc.
 - Support to Communities and Training Activities



www.magic-project.eu



Figure 10: First MAGIC poster.

12.1.6. Press releases

MAGIC project press releases will be delivered whenever relevant news items arise within the project. This communication material will be delivered to project partners, the EC, regional RENs and through them to NRENs, related ICT projects and the media.



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12.1.7. Promotion at relevant international events

MAGIC is to be represented by its project partners at relevant conferences and events in all participating world regions, in the form of either a dissemination stand/booth and/or in the form of a presentation given to the event's audience.

It is envisioned MAGIC will participate in regional REN conferences, as well as in the annual TICAL (Latin America) and TNC (Europe) conferences. If required, supplies of MAGIC branded merchandise will be produced in order to be distributed to the audience at these events.

The first dissemination activities in this sense were as follows:

- CUDI's Spring meeting 2015 - April 22, 2015, Puerto Vallarta, Mexico <http://www.cudi.edu.mx/primavera_2015/programa_eduroam.php>
- Workshop at IST Africa – 6-8 May 2015, Lilongwe, Malawi
- TANDEM-SciGaia-MAGIC Meeting – 11 May 2015, Paris, France
- Kick off Meeting – 11-12 June 2015, Paris, France

In addition, a proposal for an exhibition booth at ICT2015 was submitted jointly with TANDEM and Sci-GaIA, under the name of GIISC (Global ICT Infrastructures for International Scientific Collaboration). MAGIC assisted actively in completing the corresponding documentation and the logo (see Figure 1). MAGIC also completed the proposal for a GIISC Networking Session. Both applications were made by the Sci-GaIA project but no confirmation of acceptance was available at the time of writing.



Figure 11: GIISC logo made by MAGIC for the collaboration between TANDEM, SciGaIA and MAGIC for ICT2015, submitted both for a booth proposal and a networking session in April and May 2015 respectively.

In July 2015, MAGIC will have an exhibition booth at TICAL2015 (Vina del Mar, Chile, 6-8 July) and dissemination material tailored to the Latin American audience will be provided.



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12.2. Training

WP6 will support WP2, WP3 and WP5 on training activities. This will consist of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

Six face-to-face training activities will be carried out during the project's lifetime, with the intention of their being in different world/MAGIC regions (Africa, Arab States, Central Asia, Asia-Pacific, the Caribbean and Latin America). If this is not achievable, it will nevertheless be considered an achievement if two face-to-face trainings are carried out in Latin America, Africa and Europe, making up a total of six (6) activities.

Face-to-face training activities on eduroam & AAI (WP2), groupware (WP3), and on the use of applications (WP5) are envisaged. These training activities will be carried out as frequently as possible together with dissemination activities.

The first training activity programmed will be carried out at the TICAL2015 Conference and will focus on NREnum implementation and also on the experiences of the ELCIRA project on the implementation of federated services and eduroam.

13. DELIVERABLES

Deliverable:

Delivery Month:

D6.1 First Dissemination and Training Plan and Baseline	2
D6.2 MAGIC's on-line presence report	2
D6.3 First Dissemination and Training Report	7
D6.4 Second Dissemination and Training Report	13
D6.5 Third Dissemination and Training Report	19



14. ANNEX 1 – WEBSITE TEMPLATE OPTIONS

Selection of the Joomla Responsive Templates for the MAGIC website

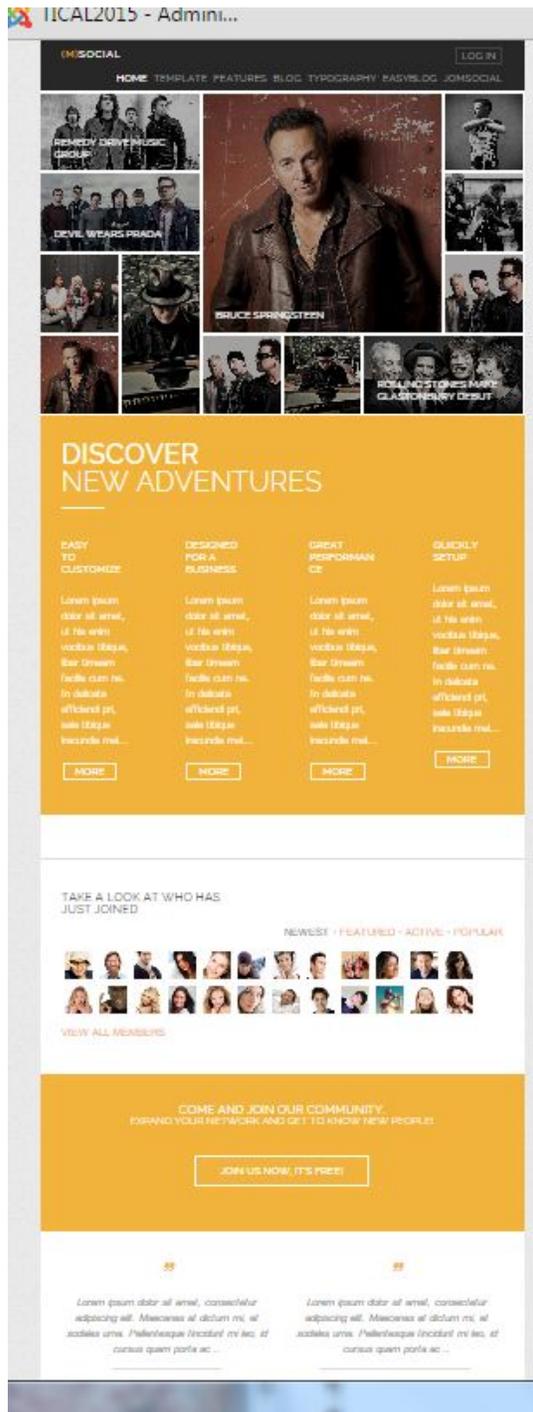
The following text was used to present the principles of the selection process for the website template to be used:

In the following pages a collection of responsive* templates for Joomla is presented, aiming to invite you all to choose one of them in order to be used for the MAGIC project website. All of these templates do fully serve the website purposes. Please, check them all out and vote for the one you like the most and give us also a second option if you can; all the options have a title, so when you vote just write “1) the name of your first option template; 2) the name of your alternative option”.

*Adaptive to various web platforms display.

Thank you very much in advance,
María José López





(M) Social Media Joomla template

<https://www.gavick.com/joomla-templates/m-social,134>

€39

Our Joomla templates require:

PHP 5.3.10+

MySQL 5.1+ with InnoDB support

Apache 2.* with mod_mysql, mod_xml, mod_zlib and optionally mod_rewrite (if you want to use SEF URLs) installed

In addition, some features of the modules and components used in a template may require:

GD library support

cURL library support

Support for mb_* functions in PHP to use multibyte strings

WORDPRESS

Our WordPress themes require:

PHP 5.2.4 or greater

MySQL 5.0 or greater

The mod_rewrite Apache module

Additionally some features of the extensions used in a theme may require:

GD library support

cURL library support

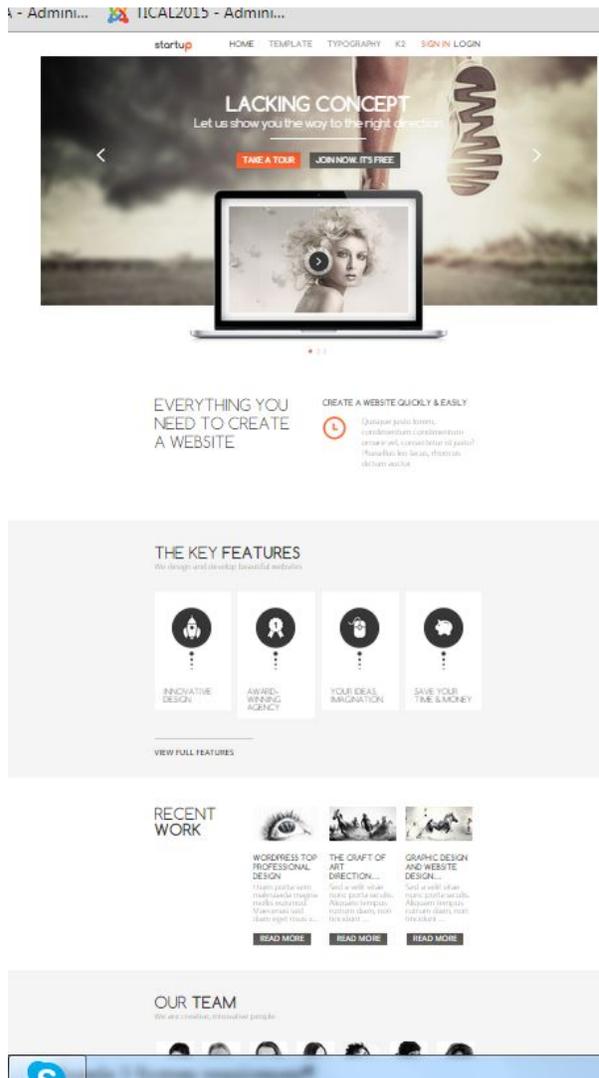
Support for mb_* functions in PHP to use multibyte strings



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Startup

<https://demo.gavick.com/joomla25/startup/>
€39

Our Joomla templates require:

PHP 5.3.10+

MySQL 5.1+ with InnoDB support

Apache 2.* with mod_mysql, mod_xml,
mod_zlib and optionally mod_rewrite (if
you want to use SEF URLs) installed

In addition, some features of the modules
and components used in a template may
require:

GD library support

cURL library support

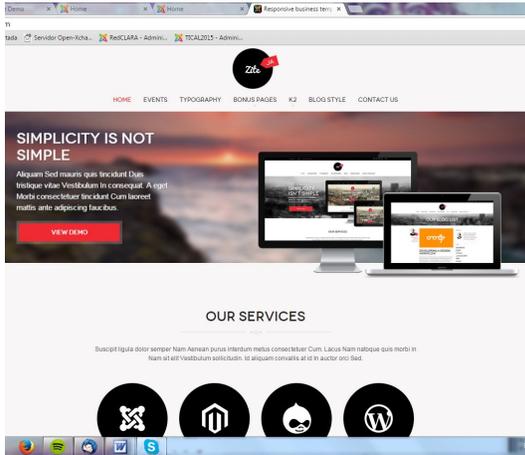
Support for mb_* functions in PHP to use
multibyte strings



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Ja Zite

<http://www.joomlart.com/joomla/templates/ja-zite>

USD\$59

System requirement

JA Zite is compatible with Joomla 3 and Joomla 2.5. Please make sure your system meets the following requirements:

Joomla 3 System requirement

Software

PHP (Magic Quotes GPC off): 5.3.1 + (5.4+ recommended)

Databases

MySQL(InnoDB support required): 5.1+

MSSQL 10.50.1600.1+

PostgreSQL 8.3.18+

Web Servers

Apache 2.x+

Microsoft IIS 7

Nginx 1.0 (1.1 recommended)

Joomla 2.5+ system requirement

Software

PHP 5.2.4+ (5.4+ recommended)

MySQL: 5.0.4+

Web Sever

Apache: 2.x+

Microsoft: IIS 7

Nginx: 1.0 (1.1 recommended)



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JA University

<http://www.joomlart.com/joomla/templates/ja-university>

USD\$59

Joomla 3 System requirement

Software

Software: PHP (Magic Quotes GPC off): 5.3.1 +
(5.4+ recommended)

Databases

MySQL(InnoDB support required): 5.1+

MSSQL 10.50.1600.1+

PostgreSQL 8.3.18+

Web Servers

Apache 2.x+

Microsoft IIS 7

Nginx 1.0 (1.1 recommended)

Joomla 2.5+ system requirement

Software

Software: PHP 5.2.4+ (5.4+ recommended)

MySQL: 5.0.4+

Web Sever

Apache: 2.x+

Microsoft: IIS 7

Nginx: 1.0 (1.1 recommended)





JA Medicare

<http://www.joomlart.com/joomla/templates/ja-medicare>

USD\$59

Joomla 3 System requirement

Software

Software: PHP (Magic Quotes GPC off):
5.3.1 + (5.4+ recommended)

Databases

MySQL(InnoDB support required): 5.1+
MSSQL 10.50.1600.1+

PostgreSQL 8.3.18+

Web Servers

Apache 2.x+

Microsoft IIS 7

Nginx 1.0 (1.1 recommended)

Joomla 2.5+ system requirement

Software

Software: PHP 5.2.4+ (5.4+ recommended)

MySQL: 5.0.4+

Web Server

Apache: 2.x+

Microsoft: IIS 7

Nginx: 1.0 (1.1 recommended)

Browser requirement

The requirements are the same for both Joomla 2.5 and Joomla 3

Firefox 4+

IE (Internet Explorer) 8+

Google Chrome 10+

Opera 10+

Safari 5+



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Periodical Progress Report

MAGIC Deliverable: D6.2. MAGIC on-line presence report

Document Full Name	D6.2. MAGIC on-line presence report
Date	23-09-2016
Activity	WP6 Dissemination and Training
Lead Partner	RedCLARA
Document status	Final revised version
Classification Attribute	Public
Document link	

Abstract: This document refers to MAGIC's on-line presence through its Website and social networks: Facebook and Twitter. MAGIC's Website was launched online on June 8, 2015. After the first project review some modifications were recommended and this second version of the deliverable reflects the changes done following those recommendations.



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MAGIC (Middleware for collaborative Applications and Global vIrtual Communities – Project number: 654225) is a project co-funded by the European Commission within the Horizon 2020 Programme (H2020), Directorate General for Communications Networks, Content and Technology - eInfrastructure. MAGIC began on 1st May 2015 and will run for 24 months.

For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	María José López Pourailly	RedCLARA / WP6	22/06/2015	RedCLARA
Revised by	Thomas Fryer	GEANT Ltd / WP6	23/06/2015	RedCLARA
Revised by	María José López Pourailly	RedCLARA / WP6	25/06/2015	RedCLARA
Revised by	María José López Pourailly	RedCLARA / WP6	30/08/2016	RedCLARA
Revised by	Ognjen Prnjat	GRNet	05/09/2016	RedCLARA
Revised by	María José López Pourailly	RedCLARA / WP6	23/09/2016	RedCLARA
Revised by				RedCLARA
Aproved by	Florencio I. Utreras	RedCLARA/CEO	26/09/016	RedCLARA



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1. INTRODUCTION

The purpose of this document is to introduce the online presence of the MAGIC project, specifically the project website and presence on Facebook and Twitter. This is a revised version of the website according to the requirements made by the Reviewers on June 23, 2016.

2. REFERENCES

- [R1 MAGIC Website <http://www.magic-project.eu>
]
- [R2 MAGIC in Facebook <https://www.facebook.com/MAGICglobalCollaboration>
]
- [R3 MAGIC in Twitter https://twitter.com/MAGIC_our_voice
]

3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, María José López Pourailly, WP6 - Dissemination & Training Manager (RedCLARA – Communications and Public Relations Manager), maria-jose.lopez@redclara.net, and copied to the Management of the MAGIC project.

4. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
WP	Work Package

5. EXECUTIVE SUMMARY

This document relates to the MAGIC website and the tool implemented to measure the project's outreach and impact. In addition, the document covers the project's presence in the social network environment, specifically Facebook and Twitter.

In the context of the Information Society, to have a website is to exist. In addition to this apparently trivial consideration, and due to the geographic extension of MAGIC, which implies a wide cultural heritage and great diversity in terms of education, economy and social realities, having a suitable website is a necessity. Due to the high penetration of social networks (see Figure 1), the MAGIC website must be linked with the MAGIC



Facebook and Twitter pages, in order to maximise visibility and impact, and increase brand recognition and inbound traffic, among other things¹.

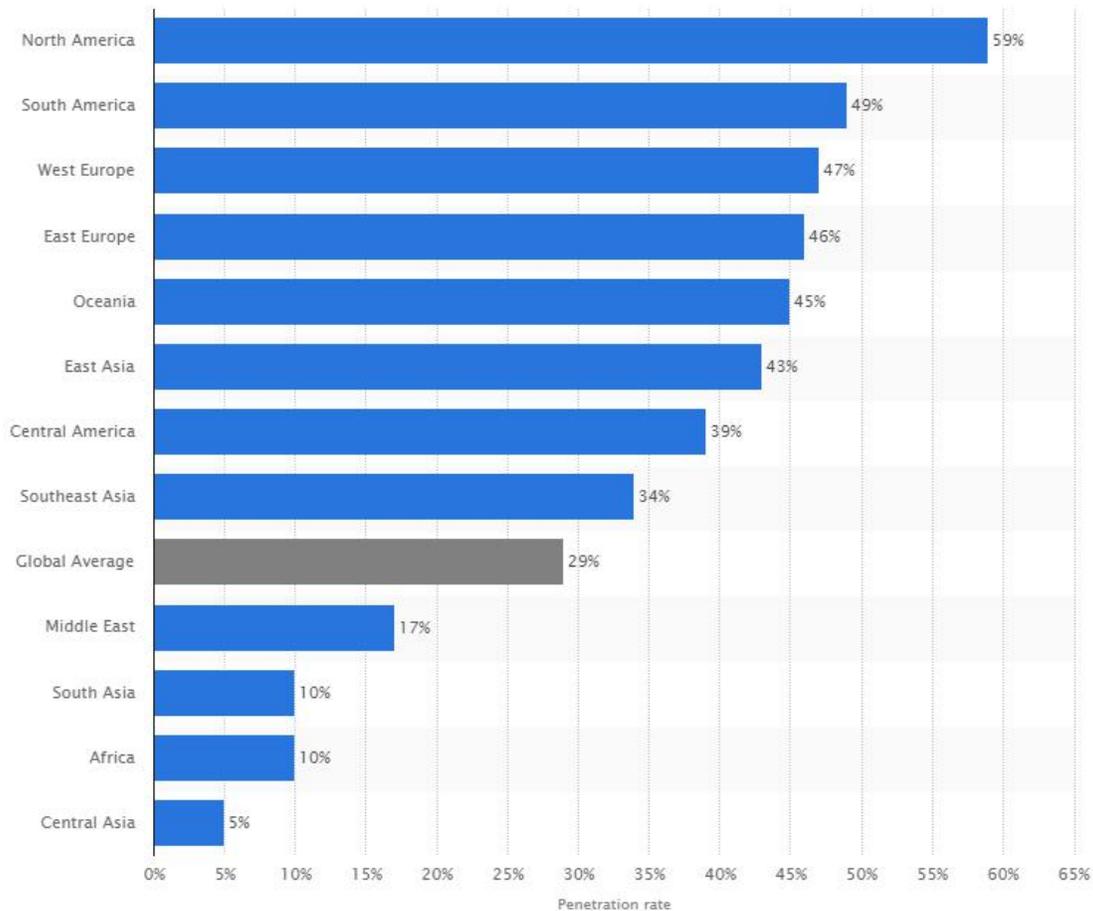


Figure 1: Global social network penetration rate as of 1st quarter 2015, by region, information published by Statista at <http://www.statista.com/statistics/269615/social-network-penetration-by-region/>.

This document describes the presence of the MAGIC project both on Twitter and Facebook and in the project’s first “interface” with the general public - the MAGIC website. The project presence in these three environments is in line with the WP6 Objectives.

¹ See “The Top 10 Benefits Of Social Media Marketing” at Forbes, published in November 8th 2014, at: <http://www.forbes.com/sites/jaysondemers/2014/08/11/the-top-10-benefits-of-social-media-marketing/>.



This is the second version of this deliverable, which was modified in order to reflect the changes done to MAGIC's on-line presence following the recommendations sent to the Project management after the first Project review.

6. WP6 OBJECTIVES

6.1. GENERAL OBJECTIVE

To efficiently promote and disseminate the project to the global REN community and scientific and academic communities as well as decision-makers and to organise training events that will increase the number of people able to use MAGIC collaborative applications.

6.2. SPECIFIC OBJECTIVES

- To promote the establishment of agreements for Africa, Asia, the Caribbean, Europe, Latin America and Oceania aimed at consolidating and completing the building blocks of middleware that MAGIC will target.
- To enhance the use of MAGIC services and real-time applications among international and inter-continental research groups and communities.
- To coordinate and promote training on the implementation and use of the services agreed by MAGIC.
- To develop informative material for specific events related to regional advanced networks.

7. SOME PREVIOUS DEFINITIONS REGARDING MAGIC WEBSITE AND SOCIAL MEDIA PRESENCE

Given the characteristics of MAGIC, its website and the Facebook and Twitter pages will be the first "visible faces" of the initiative. As such, they must reflect not only the core of the project – its objectives, partners, tasks, etc. – but also the collaborative spirit that lies behind every cooperation action that is supported by the EC, the experience gathered over previous years and projects, and the very strong relationships between all project members. It is based on the confidence both of their capacities and also of the leading and partner organisations.

The Website must show all available information on MAGIC, must be a support tool to achieve the project's objective, show what has been done, which are the advancements and how the different target groups -NRENs/RRENs, focal points, communities and researchers, etc. - at a global level, can benefit from what the different Work Packages in MAGIC are producing, while sending clear messages to address the issues and challenges each group faces in order to provide them possible solutions -MAGIC project solutions.

The social network presence will be used to enhance the visibility of project news, participation in events and training activities.





Naturally, the website will be built around the MAGIC branding and corporate style.

8. MAGIC WEBSITE

Recognising the diversity of the MAGIC partners and with the aim of respecting the opinions of those who are working to make MAGIC a success, and having chosen to use the Joomla platform (as it is well known by the RedCLARA team that will be managing it), WP6 invited all project partners to vote for a specific template to be applied to the website. After a review of the various templates, WP6 invited all project partners to vote for a first and a second option from five options. This vote ran in parallel to the poll for the MAGIC logo. The vote resulted in the selection of the JA University template (<http://www.joomlart.com/joomla/templates/ja-universityspect>).

Once the project website template was chosen, the WP6 leader developed a navigation map that was analysed and finally approved by all WP6 members. The navigation map is shown in Figure 2 below.



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MAGIC's Home

ABOUT	Technical Activities	Global Science Communities	Dissemination	Training	Contact us
About MAGIC	Platforms for Mobility	Virtual Meetings	News and Events	Training calendar	
Objectives	Cloud Provisioning and Groupware Standards	Seminars	MAGIC's branding	Training material	
Partners	Agreements for Real Time Collaboration		MAGIC's templates		
Milestones					
Deliverables					
Presentations					
Project Structure					
Project Management					

Figure 2: MAGIC Website first Navigation Map.

It is important to clarify that some of the website content was planned to be produced and added during the lifetime of the project, not at its very beginning. Thus the original version of this deliverable was laying the ground work for future expansion.

The MAGIC website was developed during M01 and M02, and delivered online on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/>. The MAGIC social network presence was delivered on the same date.

After the first project review, carried out in Brussels in July 2016, the reviewers rejected this D.6.2, and stated that “D6.2: The current report and online presence should be reconsidered, in terms of their support to achieve the project objectives. They have to be organised for and target specific groups -NRENS/RRENS, focal points, communities and researchers, etc. - at a global level while sending clear messages to address the issues/challenges each group faces and providing possible solutions. The dissemination material and webpage should include clear information on how to get involved, what to access, and whom to contact in case of interest. The new version of this report should depict the strategies to be redefined in D2.1 and D5.1 and explain how the Colaboratorio will be used in each region. It should also reflect the strategy for those regions where there is no regional replica of the tool. The entry point in each region should follow well established practices of accessing applications using federated access, and not work from scratch. In fact, the user should be informed where he/she is on the landing page and clear explanations on how to access/log-in should be provided. A way to redirect to the regional Colaboratorio instance should be implemented where there are local instances. The user should be able to identify and follow the work on existing communities (active





around the user's region) without participating actively; he/she should be able also to search all the existing communities, even those at which he is not yet a member. A step-by-step user guidance on how to apply/join an existing community should be also provided. The somewhat hidden/restricted organisation of the user communities by the project contradicts the open science notion and principles and hinders the global expansion of the MAGIC-targeted communities.”

Following these recommendations, the website navigation map and its contents were updated and changed in order to better tackle the problems pointed by the reviewers. The new navigation map for the website is now following:

– About MAGIC	Mobility	Groupware	Real Time Collab.	Science Communities	Training
– Objectives	– Platforms for Mobility: What is this about ?	– What is Cloud Provisioning and Groupware Standards about?	– Agreements for Real Time Collaboration: What is this about?	– What is a Global Science Community?	
– Partners	– Platforms for Mobility Objectives	– Objectives	– Objective	– How to Join a Global Science Community?	
– Milestones	– Platforms for Mobility Activities	– Activities	– Activities	– Global Science Communities Activities	
– Deliverables	– Identity Federations	– Group Management in Federation (GMF)	– NRENum: What is this?	– GSC Biodiversity	
– Presentations	– What is an Identity Federation?	– Chosen Standards & Group Management Systems	– Advantages and Benefits	– GSC e-Health	
– Project Structure	– Aiming to establish an Identity Federation?	– SAML2	– NRENum deployment within MAGIC	– GSC Environment	
– Project Management	– On line Training Material on AAI Development for Staff	– VOOT	– Aiming to implement NRENum?	– GSC Remote Instrumentation	
– Dissemination	– eduGAIN	– PERUN	– On-line Course on NRENum.net and DNS		





			Configuration in English
- News and Events	- What is eduGAIN?	- SYMPA	- On-line Course on NRENum.net and DNS Configuration in French
- Newsletter	- Aiming to connect to eduGAIN?	- Pilot Implementation	- On-line Course on NRENum.net and DNS Configuration in Spanish
- MAGIC branding	- eduroam	- Services to be provided	- DNSSec (Security): What is this?
- MAGIC Brochures	- What is eduroam?	- Colaboratorio	- DNSSec deployment for NRENum within MAGIC
- MAGIC Templates	- eduroam for Research and Education Networks	- Colaboratorio's origin	- Aiming to implement DNSSec?
- Contact Us	- Which countries are eduroaming?	- Colaboratorio's deployment	
	- Aiming to provide eduroam?	- Which NRENs have Colaboratorio already installed?	
		- How can I get Colaboratorio for my NREN?	
		- Do you want to install Colaboratorio or one of our applications?	

Figure 3: MAGIC Website new navigation map - August 2016 (M16)

The new navigation map as well as the new contents, show all the tasks and results of the different Work Packages, provide clear and easy access to all those users that are



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interested in using, applying and implementing the applications, services and tools to their web environments, or to have access to them, or to participate in the training courses and/or the Global Science Communities. All this new information is added, while still keeping the project information and news that were the main focus of the project during its first year.

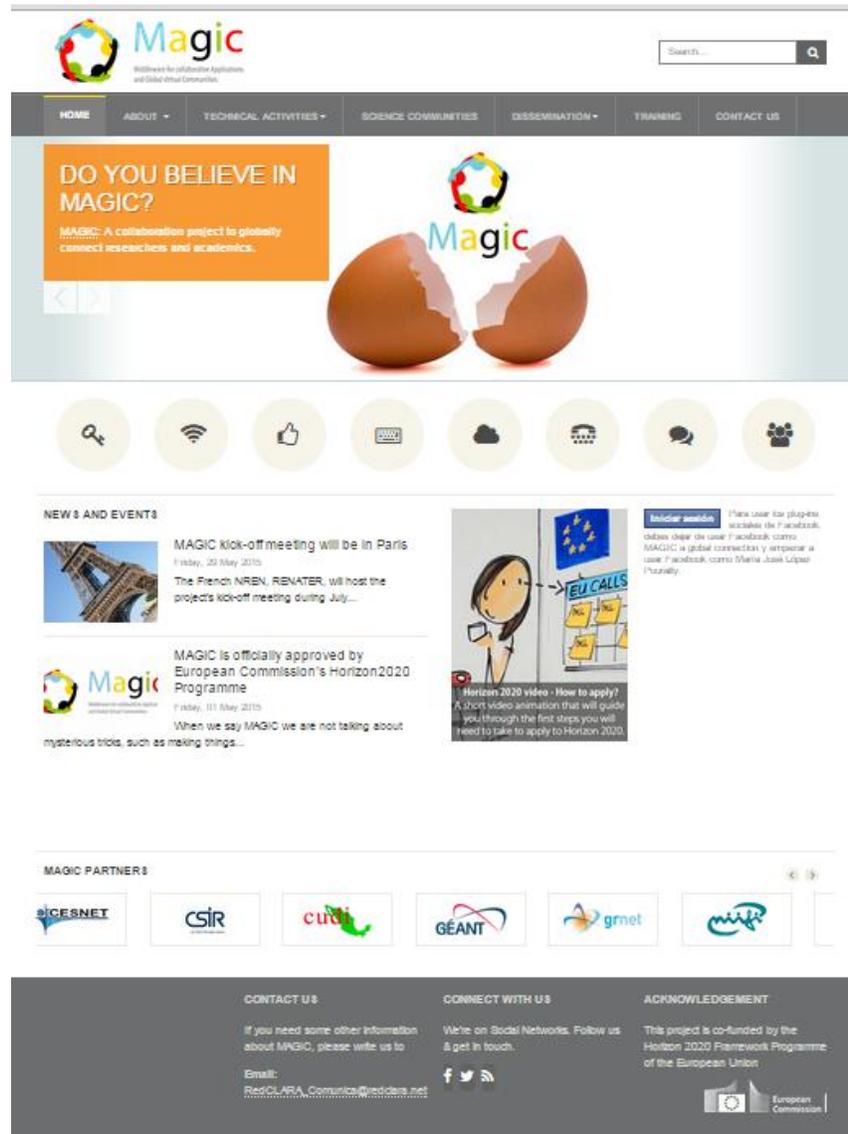


Figure 4: MAGIC Website Homepage, M01.



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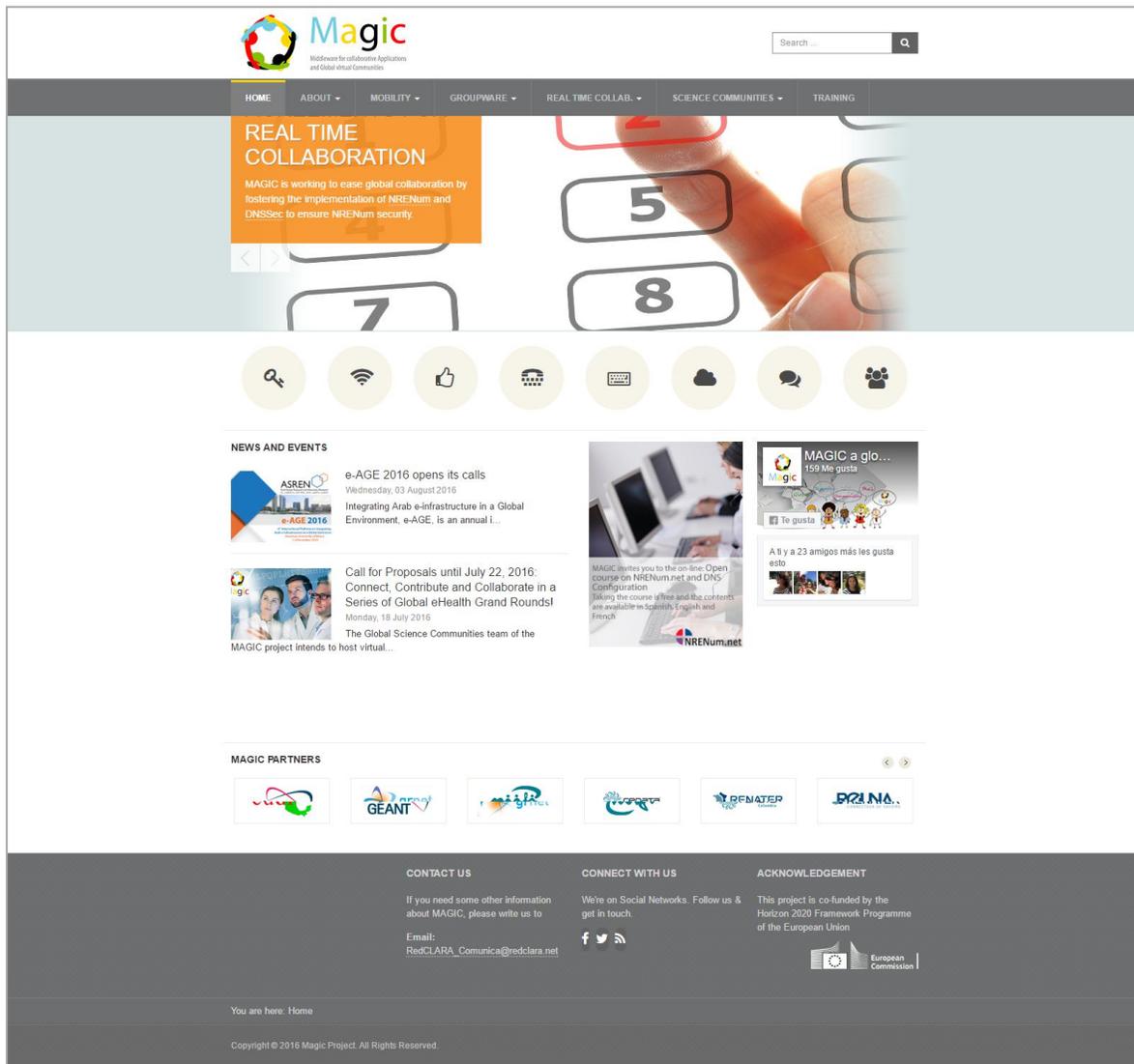


Figure 5: MAGIC Website Homepage, M16.

The success of the website and the social network pages will be statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and inform on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool which started taking website statistics on 16 June 2015. The following table shows the statistics from June 2015 until August 2016:



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MAGIC Web Site															
	June '15	July '15	Aug. '15	Sept. '15	Oct. '15	Nov. '15	Dic. '15	Jan '16	Feb. '16	Mar. '16	April '16	May '16	June '16	July '16	Aug. '16
MAGIC Project															
Unique visitors	231	211	340	328	427	849	412	563	408	378	417	699	413	390	147
Pages viewed	751	610	905	875	943	2062	887	1102	876	821	779	1592	862	683	490

Figure 6: The MAGIC web site general statistics of number of unique visitors and number of pages viewed.

Continents from where the visitors come	
Europe	1810
Central and South America	1588
Africa	1046
North America	726
Asia	461
The Caribbean	291
Unknown	270
Oceania	38

Figure 7: The MAGIC web site general statistics, continents from where the visitors come.

9. MAGIC COMMUNITIES IN THE COLABORATORIO (INTRANET AND WIKIS)

The RedCLARA Colaboratorio environment is used to provide the MAGIC community intranet, with spaces for both the full MAGIC team and each individual Work Package. The platform enables the MAGIC project participants to collaborate and share experience and knowledge (photos, documents, etc.). Each group also has a Wiki space which supports collaborative work regarding the preparation of deliverables and documents and also includes an internal document repository.



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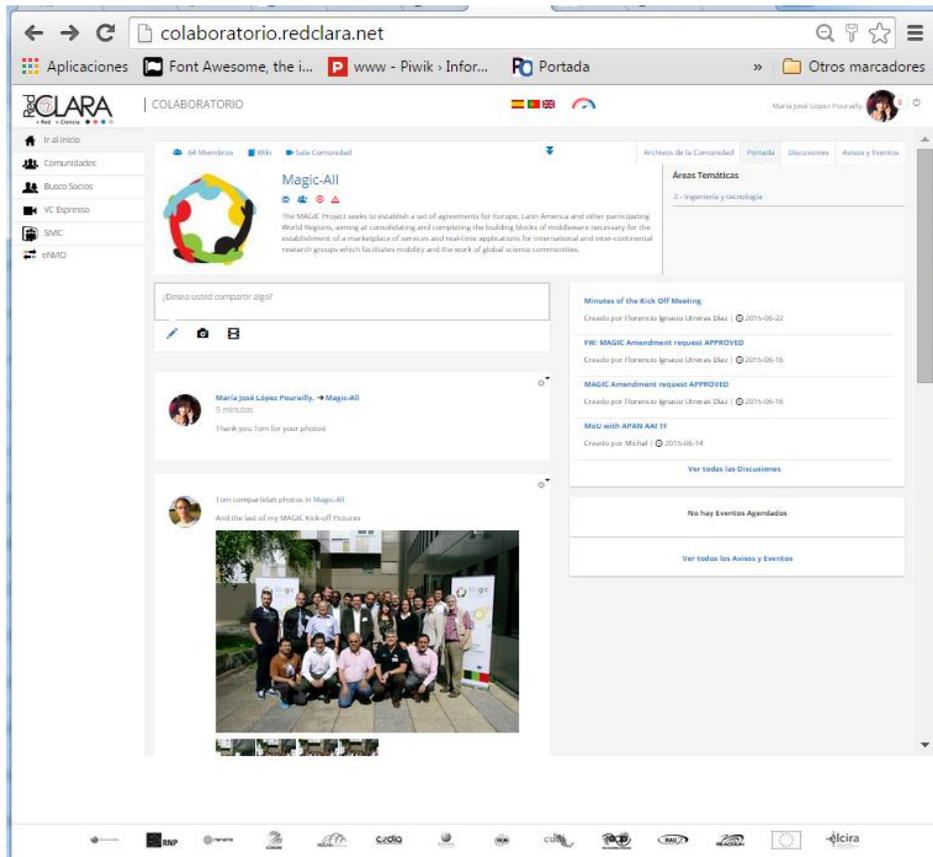


Figure 8: The MAGIC-all community space on the Colaboratorio.



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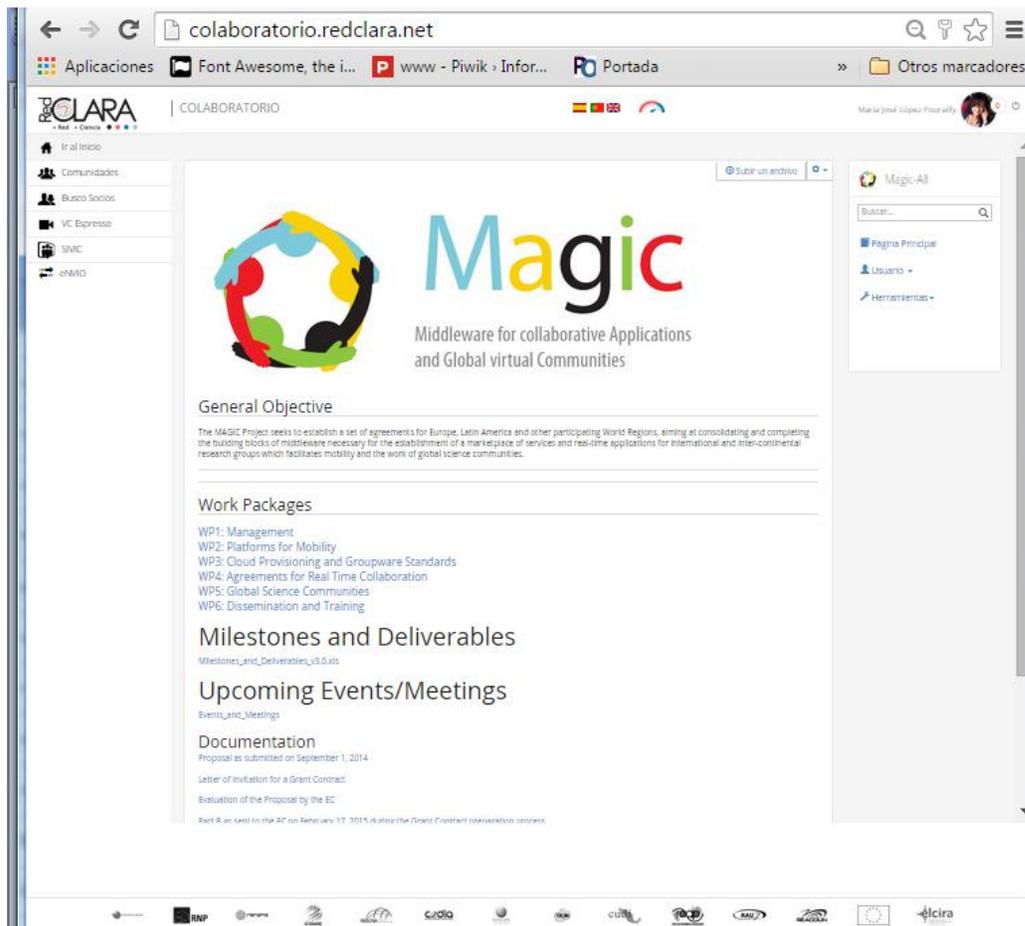


Figure 9: MAGIC-all Wiki (on the Colaboratorio).

10. MAGIC @ FACEBOOK AND TWITTER

The MAGIC Facebook [R2] and Twitter [R3] pages were also launched on 8 June 2015, starting the second month of the implementation of the MAGIC project. The Facebook and Twitter presence was subsequently launched on 11 June 2015 during the MAGIC Kick-off Meeting.

Within its Facebook environment, MAGIC shares all its printing pieces, as well as news through an RSS link that connects the website with both Facebook and Twitter.

“MAGIC a global connection” (the Facebook name for the MAGIC project) is measured using a tool provided by Facebook, and @MAGIC_our_voice (the MAGIC username on Twitter) is measured in terms of followers and retweeted messages. In addition, the Twitter hashtag #MAGIC_Global was established during the project’s kick-off meeting.



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By 22 June 2015, when the first version of this document was delivered, MAGIC had 27 likes on Facebook and ten followers on Twitter, By the end of August 2016, when this document was under its updating process, those numbers changed into 163 likes in Facebook and 106 followers in Twitter.



Figure 10: MAGIC a global connection – Facebook.



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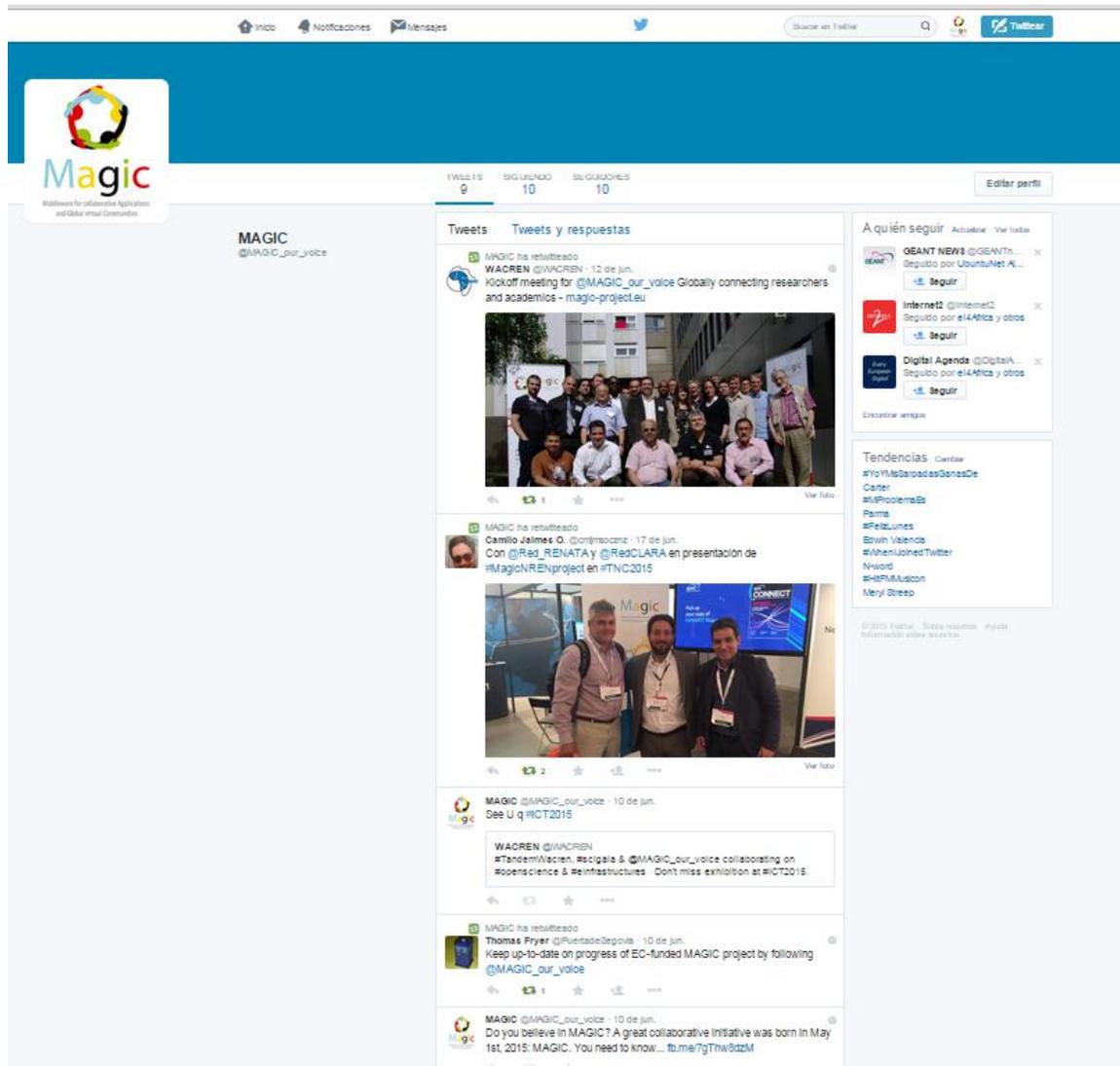


Figure 11: @MAGIC_our_voice – Twitter.

11. COLABORATORIO LANDING PAGE

After the first project review the need for front page for Colaboratorio was identified , and it was also advised to open access to Colaboratorio within the project website. This was



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carried out and within the site we placed a Colaboratorio landing page which is the same that was created for those project partners that needed this functionality. The landing pages currently published in MAGIC website and in WACREN are shown in the following figures.

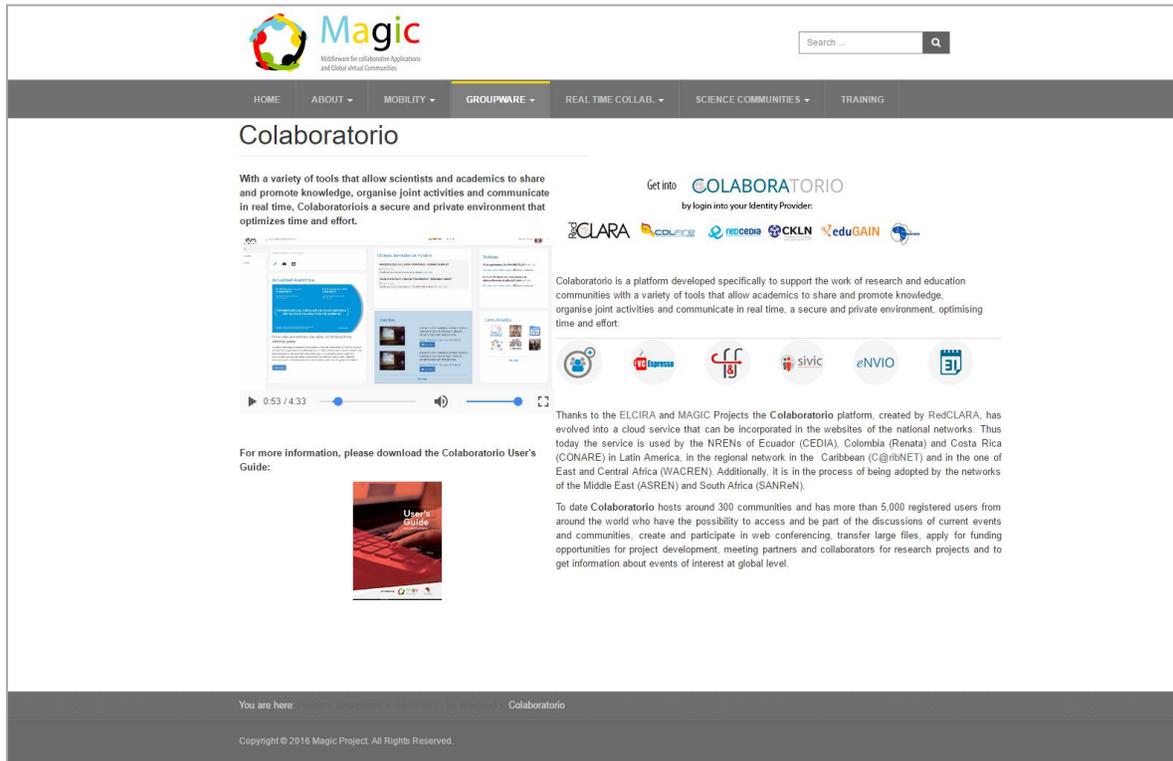


Figure 12: Colaboratorio landing page within the MAGIC project website



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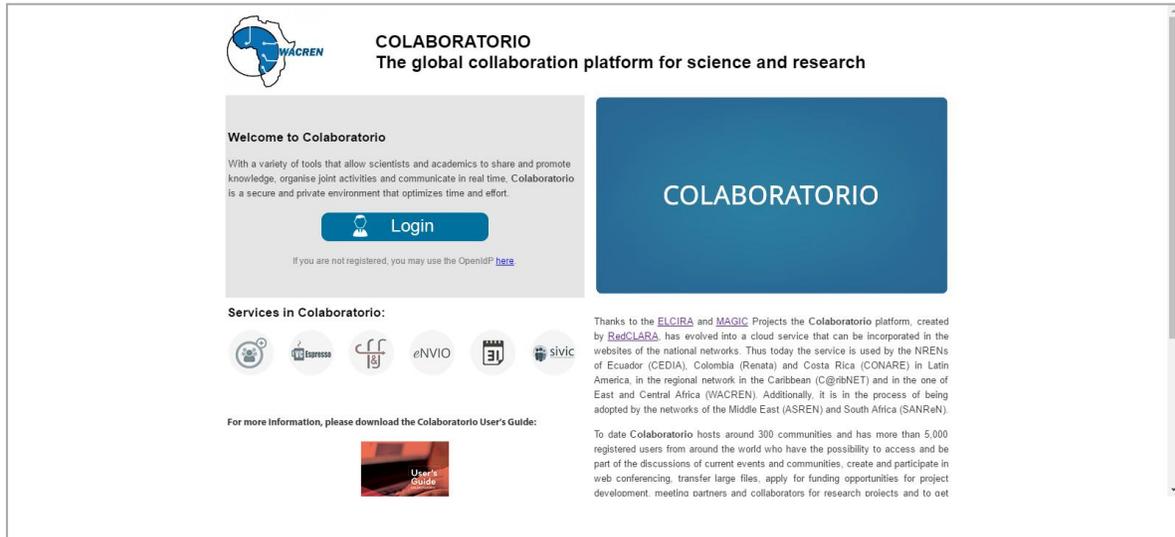


Figure 13: Colaboratorio landing page within the WACREN web environment



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European Union's Horizon 2020 Programme
European Commission
Directorate General for Communications Networks, Content and Technology
eInfrastructure



Magic

Middleware for collaborative Applications
and Global virtual Communities

Deliverable D6.3 First Dissemination and Training Report

Periodical Progress Report

MAGIC Deliverable: D6.3. First Dissemination and Training Report

Document Full Name	D6.3. First Dissemination and Training Report
Date	26-11-2015
Activity	WP6 Dissemination and Training
Lead Partner	RedCLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document refers to all the activities carried out during the first seven months of the MAGIC project in terms of dissemination and training, following the scheme proposed in the Dissemination and Training Plan and Baseline. It describes what has been done and it refers to the outcomes of that work.



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MAGIC (Middleware for collaborative Applications and Global virtual Communities – Project number: 654225) is a project co-funded by the European Commission within the Horizon 2020 Programme (H2020), Directorate General for Communications Networks, Content and Technology - eInfrastructure. MAGIC began on 1st May 2015 and will run for 24 months.

For more information on MAGIC, its partners and contributors please see <http://www.magic-project.eu>.

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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	María José López Pourailly	RedCLARA / WP6	12/11/2015	RedCLARA
Revised by	Yousef Torman	ASREN	18/11/2015	
Revised by	Martha Avila	CUDI	20/11/2015	
Revised by	María José López Pourailly	RedCLARA / WP6	24/11/2015	RedCLARA
Aproved by	Florencio Utreras	RedCLARA(CEO	26/11/2015	RedCLARA



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1. INTRODUCTION

The purpose of this document is to describe what has been done by WP6 during the first seven months of the project and regarding what was committed within the Dissemination and Training Plan for MAGIC.

The objective of the Dissemination and Training Plan is to efficiently disseminate the objectives, developments, advances and achievements of MAGIC. The Plan also helps in the construction of an inclusive MAGIC community by building a global dissemination network whose principal aim is be the promotion of MAGIC in each country participating in the project by highlighting the national and regional initiatives within the scope of the project. In the Plan was also stated that MAGIC WP6 will focus on dissemination synergies with the EC-funded TANDEM and Sci-GaIA projects, and as it will be described in this document that task has been efficiently tackled.

In terms of training, the Plan promised to take advantage of the lessons learned and initiatives emerging from the Regional Training activities, especially fostering the establishment of local trainers, and that is exactly what has been done.

2. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
- [R2] Visibility Guidelines established by the European Commission in the document "COMMUNICATION AND VISIBILITY MANUAL for European Union External Actions" http://ec.europa.eu/europeaid/work/visibility/documents/communication_and_visibility_manual_en.pdf

3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, María José López Pourailly, WP6 - Dissemination & Training Manager (RedCLARA – Communications and Public Relations Manager), maria-jose.lopez@redclara.net, and copied to the Management of the MAGIC project.

4. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
Sci-GaIA	Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa



TANDEM TransAfrican Network Development
WP Work Package

5. EXECUTIVE SUMMARY

This document refers to all activities carried out during the first seven months of the project in order to ensure its appropriate dissemination. The majority of these activities were related to MAGIC promotion by means of its different communication channels (website, Facebook, Twitter, Colaboratorio and the newsletter) and the participation in a number of international events.

Training events had also contributed to further dissemination of the project and its benefits as trainees can also act themselves as further dissemination vectors within their communities, in line with the intentions of the project.

WP6 has also established liasons and dissemination interactions with TANDEM¹ and Sci-GaIA² (both international projects funded by the EC Horizon2020 Programme).

6. DISSEMINATION AND TRAINING PLAN OBJECTIVES

6.1. GENERAL OBJECTIVE

¹ TANDEM (TransAfrican Network Development) will create favourable conditions for WACREN, enabling it to draw maximum benefit from the forthcoming AfricaConnect2 project and ensure WACREN's integration into the global Research and Education networking community and its long-term sustainability. TANDEM's long-term goal is to make it possible for researchers and academics to contribute with their peers around the world to the socio-economic development of the West and Central African Region. The project will run for 24 months and is coordinated by the Institut de Recherche pour le Développement (France). Other partners are WACREN (Ghana), GÉANT (UK), RENATER (France), CIRAD (France), Sigma Orionis (France), Brunel University (UK), UbuntuNet Alliance (Malawi) and RedCLARA (Uruguay). Web site: www.tandem-wacren.eu.

² Sci-GaIA (Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa) aims to support National Research and Education Networks, Communities of Practice and Universities in Africa to develop Science Gateways and other e-Infrastructure services. Sci-GaIA will work with new and emerging Communities of Practice to develop these exciting technologies, strengthen e-Infrastructure service provision, especially in terms of open access linked data, and deliver training and dissemination workshops. This will establish a sustainable foundation on which African e-Infrastructures can be developed and linked to science networks across Africa. The results of the project will be usable by Communities of Practice in Europe and the rest of the world. The project will run for 24 months and is coordinated by Brunel University (UK). The partnership is composed of: DIT (Tanzania), University of Catania (Italy), Karolinska Intitutet (Sweden), KTH (Sweden), Sigma Orionis (France), UbuntuNet Alliance (Malawi), WACREN (Ghana) and CSIR (South Africa). Website: www.sci-gaia.eu.



To efficiently promote and disseminate the project to the global REN community and scientific and academic communities as well as decision-makers and to organise training events that will increase the number of people able to use MAGIC collaborative applications.

6.2. SPECIFIC OBJECTIVES

- To promote the establishment of agreements for Africa, Asia, the Caribbean, Europe, Latin America and Oceania aimed at consolidating and completing the building blocks of middleware that MAGIC will target.
- To enhance the use of MAGIC services and real-time applications among international and inter-continental research groups and communities.
- To coordinate and promote training on the implementation and use of the services agreed by MAGIC.
- To develop informative material for specific events related to regional advanced networks.

7. ACTIONS AND ACTIVITIES

As it was stated in D6.1. MAGIC is benefiting from the dissemination methods, activities and material-creation and experience of its partners, but has also created its own. In order to offer a clear vision of the tasks that have been carried out to meet the objectives of the MAGIC Dissemination & Training Plan, all the activities have been grouped into two main action lines, which were the same two lines defined in D6.1.:

- Promotion, awareness-raising and positioning
- Training

7.1. Promotion, awareness-raising and positioning

7.1.1. To define MAGIC branding and corporate style

The branding image of a corporation, a product, a service, a social institution or a person, is the quantitative and qualitative result of all their communications. The MAGIC logo was created with the participation of all project partners, and together with the branding definition (creation of presentation, banners and documents branding style), defines the MAGIC branding and corporate style. The logo was created before the project beginning and it was delivered in M1 (all about it was widely explained in D.6.1).



Magic

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Figure 1: MAGIC logo.

The logo also has a vertical version that is used depending on the layout of the corresponding material.



Figure 2: Vertical form of the MAGIC logo.

For smaller material with limited space, the vertical form of the logo is used without the text:



Figure 3: Vertical form of the MAGIC logo with no additional wording.

Taking the logo as a starting point, a branding and corporate style was defined. This consists of the MAGIC logo, the presentation template, banner, and document and deliverable style sheets. The branding was completed with the project website and the graphic material (this will be explained further in this document under "Printing Material" subtitle).



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Figure 4: MAGIC presentation template.



Figure 5: MAGIC's deliverable template.



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Figure 6: MAGIC's documents template.

For the first MAGIC vinyl banner a slogan was created in order to promote the concept behind MAGIC: "A collaboration project to globally connect researchers and academics". This first vinyl banner (see Figure 8) was shown during the Kick-off Meeting (M2).

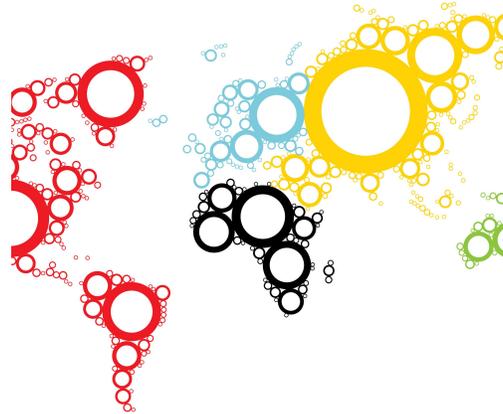
The official language of MAGIC is English.



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A collaboration project to globally connect researchers and academics

Latin America · The Caribbean · Europe · Africa · Middle East · Asia



www.magic-project.eu



Figure 7: MAGIC's first vinyl banner.

7.1.2. MAGIC Website and social media presence

Given the characteristics of MAGIC, its website and the Facebook and Twitter pages are be the first “visible faces” of the initiative. As such, they reflect not only the core of the project – its objectives, partners, tasks, etc. – but also the collaborative spirit that lies behind every cooperation action that is supported by the EC, the experience gathered over previous years and projects, and the very strong relationships between all project



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members. It is based on the confidence both of their capacities and also of the leading and partner organisations.

The success of the website and the social network pages, is statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and inform on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool. The Facebook page is measured using the tool provided by Facebook itself, and Twitter is measured in terms of followers and retweeted messages.

MAGIC Website

The Website shows all available information on MAGIC and the social network presence is used to enhance the visibility of project news, participation in events and training activities, and the interaction with those who are interested in the initiative.

The project website was built around the MAGIC branding and corporate style in Joomla and applying the JA University template (<http://www.joomlart.com/joomla/templates/ja-universityspect>) that was chosen by all the project members (this can be read at D6.1.) during M01 and M02, and delivered at the end of M02 with the URL <http://www.magic-project.eu/>.



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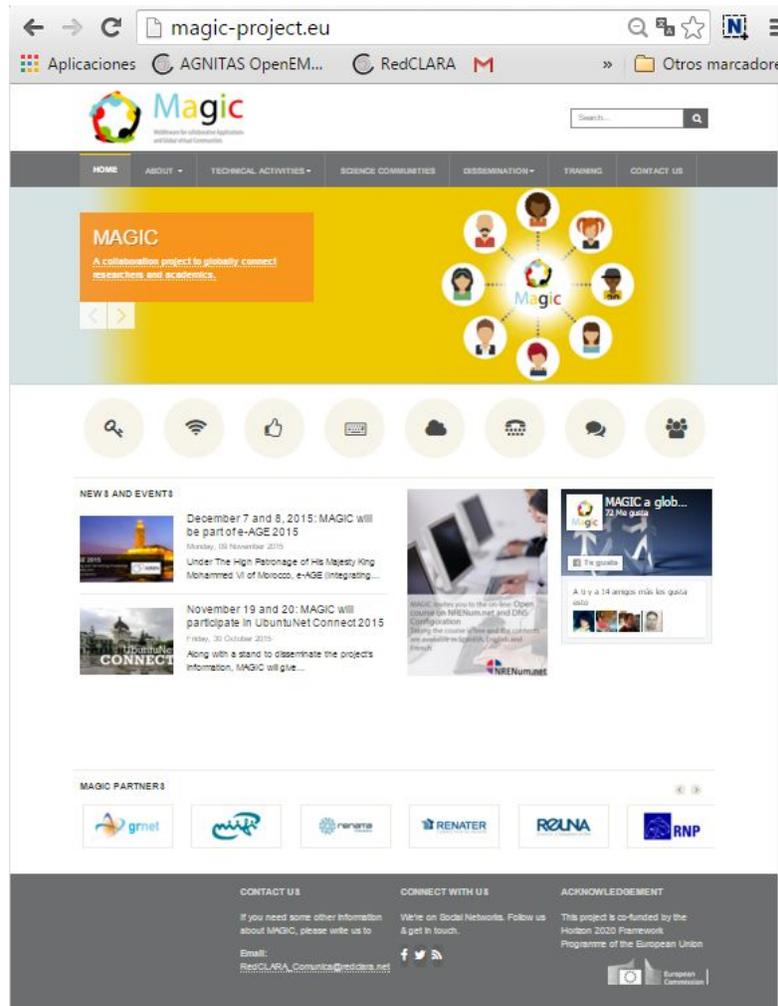


Figure 8: MAGIC website - home page [11-11-2015]

Regarding the website statistics, the visitors numbers have been slowly but constantly growing.

MAGIC Website statistics

	June'15	July'15	August'15	September'15	October'15	Until Nov.8 '15
MAGIC Project						
Number of unique visitors	231	211	340	328	427	189
Number of pages seen	751	610	905	875	943	536

Figure 9: MAGIC website statistics of visitors [11-11-2015]



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As it can be seen in the following table, all the continents have a participation in terms of visitors that is nothing like despicable for a project that has recently lifted-off. The three zones of America summed, give to this whole continent the major participation.

Continents from where the visitors come	
Africa	777
Central America	672
North America	651
South America	630
Asia	735
Europe	693
Oceania	756
Unknown	714

Figure 10: MAGIC website statistics of continent of origin of the total visitors [11-11-2015]

Week after week we have been measuring the ten most visited pages of the MAGIC website, the following table was built with those measures, but we show the 20 most viewed pages of the site until November 8, 2015.

	Total of viewed pages	Unique visitors
Magic Project	1643	1182
About MAGIC	239	181
Objectives	202	163
Partners	146	124
Training	125	95
Deliverables	107	93
News and Events	81	54
September 8 to 10: Workshop on Joining eduroam and Identity Federation	80	65
MAGIC, TANDEM and SciGaIA will share a stand and a network session in ICT2015	77	61
MAGIC Project lifted off	74	64
Milestones	68	61
The Workshop on Joining eduroam and Identity Federation in Amman was a success	68	57
Science Communities	61	52
Presentations	39	31
About	38	34



Project Structure	36	31
Federated Access and eduroam workshop in the Caribbean	33	27
Project Management	30	27
MAGIC' s WP4 makes available on-line: Open course on NRENum.net and DNS Configuration	25	21
July 8: MAGIC project held a training session in NRENum.net and a panel of federations and eduroam services after TICAL2015	23	18

**Figure 11: MAGIC website statistics of most viewed pages
[11-11-2015]**

These statistics tell us about the interest that the project itself has gained over its first months, and what is most interesting, about the importance that the training activities have and some growing interest in science communities.

Social Networks

The MAGIC social network presence was also delivered at the end of M02, both in Facebook and Twitter environments.



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Figure 12: Facebook - MAGIC a global connection - <https://www.facebook.com/MAGICglobalCollaboration>

By November 11, 2015, “Magic a global connection”, the project’s presence in Facebook, which was on-line in June 25, 2015, had 72 likes.



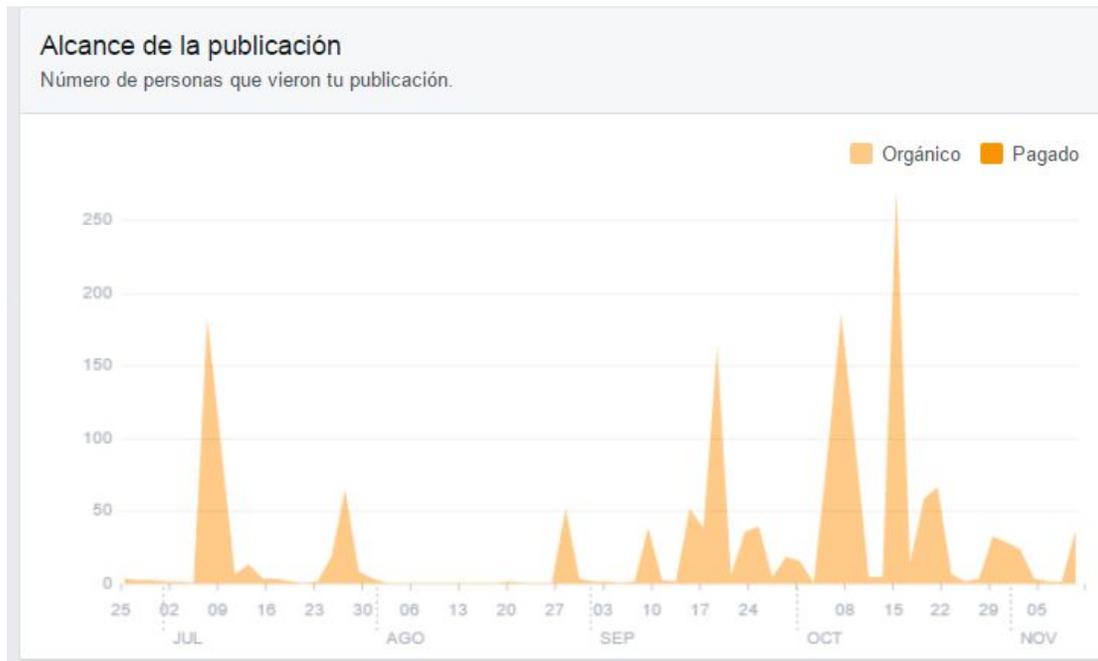
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**Figure 13: Facebook - MAGIC a global connection
 Evolution of Likes (total of likes)[11-11-2015]**



**Figure 14: Facebook - MAGIC a global connection
 Publications outreach [11-11-2015]**



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Figure 15: Twitter - @MAGIC_our_voice - https://twitter.com/MAGIC_our_voice

By November 11, 2015, @MAGIC_our_voice, the project's presence in Twitter, which was settled in June 5, 2015, had 30 followers. Following the statistics of Twitter, it also had 60 interactions and 23 of them were mentions.



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RedCLARA's Colaboratorio environment is used to provide the MAGIC community intranet and it is intensively used by the project members.

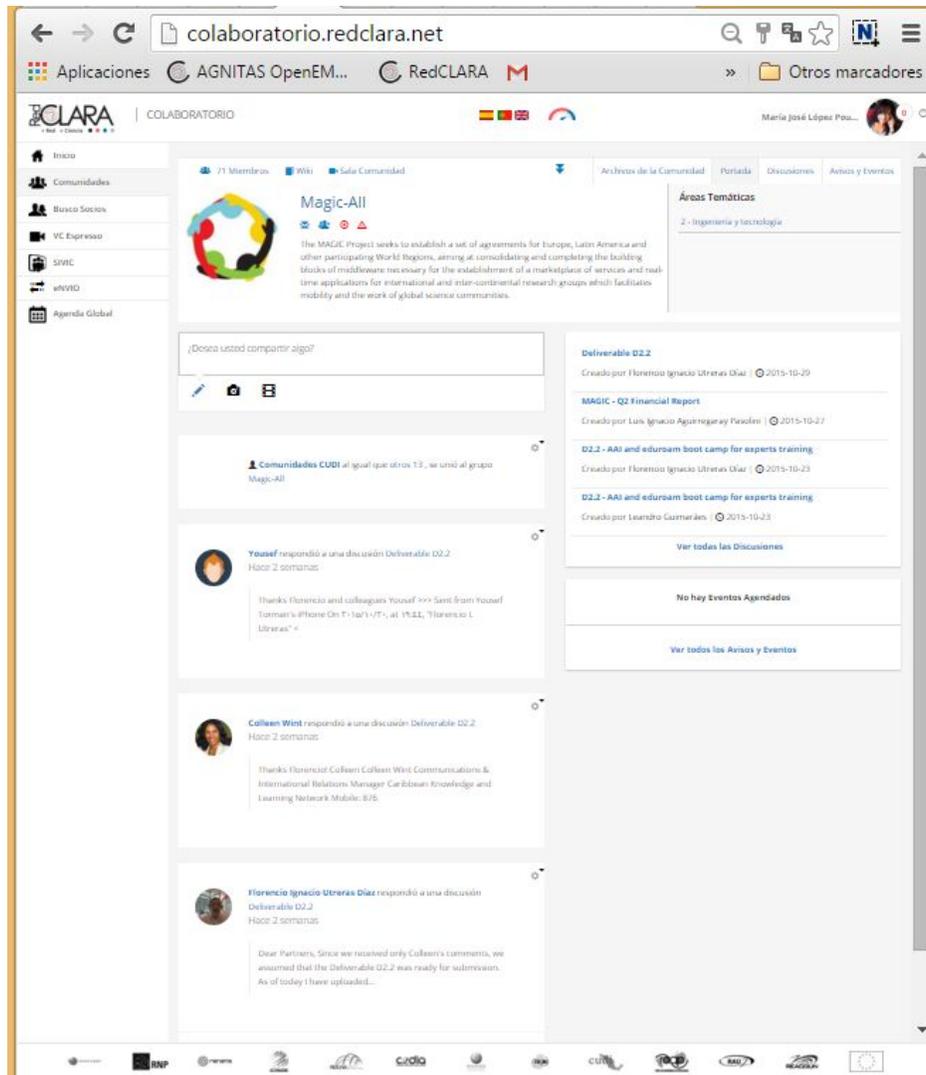


Figure 16: MAGIC in Colaboratorio - all members.

7.1.3. Newsletters

Regarding the first actions carried out in this particular area, a news item entitled “MAGIC is officially approved by European Commission’s Horizon2020 Programme” was distributed on 12th May among the project partners in English, Spanish and Portuguese by means of the all-members mailing list, inviting them to publish it on



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their websites and to distribute it among their partners. This news was published on the RedCLARA website at <http://www.redclara.net/index.php/en/noticias-y-eventos/noticias/destacados/3238-magic-es-aprobado-oficialmente-por-el-programa-horizonte-2020-de-la-comision-europea>.

In D.6.1 it was defined the need of having a project Newsletter that was going to be issued to the project members every three month starting in M03. In fact the first edition of the "MAGIC TIME" was delivered in July (M03) but it was pretty clear that an issue every three months was not enough to tell the projects news and events, so it started to be delivered every two months, counting three editions: July, September and November. All these editions can be revised through the website at: <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.



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Figure 17: MAGIC TIME - first edition, July 2015 [http://www.redclara.net/MAGIC-TIME/01_july2015.html].

In order to measure the outreach of the newsletter, the OpenEMM mail-marketing open-source tool was implemented and has been used since the first edition. The statistics are the following for the MAGIC all members mailing list:



	July	September	November
Opened emails	42	42	38
Failed	0	0	0
Rebound	0	0	0
Recipients	73	78	78
Total recipients clicks	15	9	5
Total clicks	48	10	6

Figure 18: MAGIC TIME - All members mailing statistics.

The MAGIC TIME is also delivered to the Latin American NRENs Communications and Public Relations network (LA NRENs PR Network). Within that list the statistics are the following:

	July	September	November
Opened emails	11	11	14
Failed	0	0	0
Rebound	0	0	0
Recipients	17	20	21
Total recipients clicks	6	4	4
Total clicks	11	247	6

Figure 19: MAGIC TIME - LA NRENs PR Network.

The general results (adding both mailing lists numbers) are:

	July	September	November
Opened emails	53	53	56
Failed	0	0	0
Rebound	0	0	0
Recipients	90	93	94
Total recipients clicks	21	19	19
Total clicks	59	295	54

Figure 20: MAGIC TIME - general statistics.

MAGIC has been also disseminated within the project members communication channels, most of those publications have been addressed at the bottom of the newsletter first and second editions.

7.1.4. Promotional material

Different types of promotional material has been created for the MAGIC project and have been delivered in the framework of international events in which MAGIC have been represented in the form of a booth.



The following photos show the pieces that have been done.



Figure 21: MAGIC branded umbrella.



Figure 22: MAGIC branded speakers and vintage puzzles.

Regarding the branded promotional material, within the reported period we did the following pieces for its distribution in the international events in where MAGIC had representation within a booth:

- 400 umbrellas
- 1000 speakears for mobile devices
- 1500 vintage puzzles

The distribution of these material will be explained in the following paragraphs.

7.1.5. Printing material

In order to serve the different dissemination needs, project brochures were made and printed in Spanish (1000 copies), English (1500 copies), and Portuguese (1000 copies) and also translated into French. All these brochures have been published in the website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) for its downloading in PDF format, and most of them were distributed in those international events where MAGIC had representation by means of a booth .

All printed material will respect MAGIC branding and the Visibility Guidelines established by the European Commission [R2].



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Figure 23: First MAGIC brochure in English.

7.1.6. Press releases

MAGIC project press releases have been delivered whenever relevant news items arise within the project. This communication material has been delivered to project partners, the EC, regional RENs and through them to NRENs, related ICT projects and the media.

The first press release was delivered in May 12, under the title "MAGIC is officially approved by the European Commission"; the second one was delivered in June 12, under the title "MAGIC project lifted off".



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7.1.7. Promotion at relevant international events

MAGIC has been represented by its project partners at relevant conferences and events in all participating world regions, in the form of either a dissemination stand/booth and/or in the form of a presentation given to the event's audience. As it was reported in D.6.1, the first dissemination activities in this sense were as follows:

- CUDI's Spring meeting 2015 - April 22, 2015, Puerto Vallarta, Mexico <http://www.cudi.edu.mx/primavera_2015/programa_eduroam.php>
- Workshop at IST Africa – 6-8 May 2015, Lilongwe, Malawi
- TANDEM-SciGaia-MAGIC Meeting – 11 May 2015, Paris, France
- Kick off Meeting – 11-12 June 2015, Paris, France

July 6th to 8th, TICAL2015, Viña del Mar, Chile:

MAGIC had an exhibition booth at TICAL2015 where brochures in Spanish and umbrellas with MAGIC's logo were delivered. A video explaining MAGIC in Spanish was generated for the occasion and also published in MAGIC's Facebook interphase. In addition, videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

600 MAGIC brochures in Spanish were delivered (the Ecuadorian and the Chilean NRENs took several brochures to distribute among their members) and 257 MAGIC branded umbrellas.

Training sessions within TICAL's Conference framework were coordinated.



Figure 24: MAGIC stand in TICAL2015.

August 25th to 27th, RNP2015 Forum, Brasilia, Brazil:

MAGIC had a space at RNP stand. Brochures of the project were translated into Portuguese and distributed among the attendees. In addition promotional MAGIC umbrellas were given away between those who



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requested more information about our project. Videos of the attendees were recorded and published through MAGIC's Facebook and Twitter accounts.

300 MAGIC brochures in Portuguese and 60 MAGIC branded umbrellas were delivered.



Figure 25: MAGIC space at RNP's stand in RNP2015 Forum.

October 20 to 22nd, ICT2015, Lisbon, Portugal:

A proposal for an exhibition booth at ICT2015 was submitted jointly with TANDEM and Sci-GaIA, under the name of GIIISC (Global ICT Infrastructures for International Scientific Collaboration). MAGIC assisted actively in completing the corresponding documentation and the logo and also completed the proposal for a GIIISC Networking Session. Both applications were made by the Sci-GaIA project and accepted by ICT2015.



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Figure 26: GIISC logo made by MAGIC for the collaboration between TANDEM, SciGaIA and MAGIC for ICT2015, submitted both for a booth proposal and a networking session in April and May 2015 respectively.

The result was a common effort between MAGIC and the Horizon 2020 programme funded projects TANDEM and Sci-GaIA, that shared an exhibition booth under the name of GIISC at the INCO Village, and a Networking Session in ICT2015.

Within the stand MAGIC delivered 100 brochures in Spanish, 150 in Portuguese and 500 in English, with the Project information, and branded goodies: vintage puzzles (700) and speakers for the mobile devices (500).



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Figure 27: MAGIC at the GIIISC stand in ICT2015.



Figure 28: GIIISC networking session in ICT2015.

October 22 and 23, CUDI 2015 Fall members meeting, Puebla, Mexico

Within the second day of the program of this meeting that is carried out by the Mexican NREN every six months, in his role of MAGIC Project Director and Executive Director of RedCLARA, Florencio Utreras was invited to give a presentation referred to MAGIC. The presentation was given through



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videoconference and is available for downloading in the Conference Programme web-page [http://www.cudi.edu.mx/otono_2015/programa.php] or directly through the link posted in MAGIC's website under the sub-menu Presentations located under "About".

November 16th to 20th , Maputo, Mozambique:

Aiming to meet the Eastern and Southern Africa NRENs and their research communities, and to show them the benefits of actively participating in the project or getting its benefits, a delegation of the MAGIC project did participate in the UbuntuNet Connect 2015 Conference , the eighth of its kind and the one that celebrated the 10 year anniversary of one of the MAGIC project regional partners: the UbuntuNet Alliance.

The meetings started in **November 17th**, with the first **face-to-face meeting of the MAGIC Work Package 5 (WP5)**. Within this meetings the members of the group defined the future course of action and structured the actions that will implement within the upcoming months.

During the evening of the same day, MAGIC WP6 leader was invited to participate in the **Africa Connect2 Visibility meeting** in which she was called to talk about RedCLARA and MAGIC's experience in dissemination and outreach and new collaboration possibilities in these areas were envisioned in order to promote the South-South collaboration and, more over, to enhance Africa's participation in MAGIC.

November 18th was the day of MAGIC's participation in the **Sci-GaIA Workshop on Open Science**, by means of the presentations gaved by Dr. Ognjen Prnjat, Project Coordinator at GRnet, and María José López from RedCLARA (both project partners institutions). Through his presentation entitled as "VI-SEEM Concertation with International Cooperation Projects" Dr. Prnjat highlighted the synergies between the collaborations project in which his institution is involved, while MAGIC WP6 leader, through her presentation entiteled as "Collaborating to globally connect researchers and academics" went deeper into the project's benefits for the global research communities.

MAGIC and Sci-GaIA, both H2020 financed projects, will look after new sinergies in order to better serve to the scientists research purposes and, of course, to enhance collaboration.

During **November 18th and 19th** the MAGIC project was an active participant in the reception of the **UbuntuNet Connect 2015 Conference**, where it distributed project's brochures (200 in English and 100 in Portuguese) and goodies that were very appreciated by the attendees (60 branded umbrellas, 250 branded speakers and 300 branded puzzles). With a participation of above 200 participants from all the African continent, Europe, Asia-Pacific and Latin-America, MAGIC was introduced to the attendees throughout two presentations. The first one was given by Dr. Ognjen Prnjat, and it was entitled as "VI-SEEM and MAGIC projects. Virtual Research Environment for value-added services in national and regional NRENs: case studies", and the second, "A collaboration project to globally connect researchers and academics" (a summary of the paper prepared by Leandro Guimarães, WP2 leader - RNP, and María José López) was gaved by MAGIC WP6 leader. Both presentations went through each project component highlightening the collaboration



possibilities and the benefits that the global research community can take from MAGIC, of course, through different perspectives. The presentations were given during Friday 19th within the International Collaboration in Research session that was chaired by Cathrin Stöver, GÉANT's International Relations and Communications Manager.

Also within Friday 19th, but during the Special Session on Research, that was chaired by Bonny Khunga, ZAMREN CEO, Tania Altamirano, member of MAGIC's WP5 and RedCLARA's Academic Communities Coordinator, gave a presentation about the Colaboratorio platform, that was of main interest to know by the leaders of the African NRENs.



Figure 29: November 18th, the Sci-GaIA Workshop on Open Science.



Figure 30: November 19th, UtbuntuNet Connect 2015 Conference, MAGIC assisting in the Registration procedures and giving away its brochures and branded goodies.



Figure 31: November 20^h, UtbuntuNet Connect 2015 Conference, MAGIC project is introduced by WP6 leader.

Future activities

While this deliverable was under its writing process, WP6 was also preparing MAGIC's participation in the e-AGE2015 conference (Casablanca, Morocco, December 7 and 8, 2015), this information will be reported in D.6.4.



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7.2. Training

WP6 supports WP2, WP3 and WP5 on training activities. This consists of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

Within the reported period three face-to-face training sessions were carried out (all of them were widely disseminated through MAGIC's communication channels):

Mobility Federated Services and Nrenum.net

Date: July 8, 2015

Venue: Viña del Mar, Chile. Enjoy Conference Center

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.



Figure 29: Mobility Federated Services and Nrenum.net, Viña del Mar, Chile, July 2015.

Workshop on Joining eduroam and Identity Federation

Date: September 8 to 10, 2015

Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan

Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.

Note from ASREN: "Participants should start immediately working on eduroam then idp".



Figure 30: Workshop on Joining eduroam and Identity Federation, Amman, Jordan, September 2015.

Federated Access and eduroam workshop in the Caribbean

Date: October 7 to 9, 2015

Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica

Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).

Note from CKLN: "Attendees are expected to deploy the pilot and implementation in their respective NRENs/Institutions on the subsequent phases of the project".



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Figure 29: Federated Access and eduroam workshop in the Caribbean, Jamaica, October 2015.

8. DELIVERABLES

During the reported period the following deliverables were delivered:

Deliverable:	Delivery Month:
D6.1 First Dissemination and Training Plan and Baseline	2
D6.2 MAGIC's on-line presence report	2



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Periodical Progress Report

MAGIC Deliverable: D6.4. Second Dissemination and Training Report

Document Full Name	D6.4. Second Dissemination and Training Report
Date	11-05-2016
Activity	WP6 Dissemination and Training
Lead Partner	RedCLARA
Document status	Draft
Classification Attribute	Public
Document link	

Abstract: This document refers to all the activities carried out from month 8 to 12 of the project, in terms of dissemination and training, following the scheme proposed at the D6.1. Dissemination and Training Plan and Baseline. It describes what has been done and it refers to the outcomes of that work.



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DELIVERABLE ROUTE

	Name	Member/Activity	Date	Responsible
From	María José López Pourailly	RedCLARA / WP6	11/05/2016	RedCLARA
Revised by	Thomas Fryer	GÉANT /WP6	17/05/2016	GÉANT
Revised by	Colleen Wint	CKLN / WP6	21/05/2016	CKLN
Revised by	María José López Pourailly	RedCLARA / WP6	23/05/2016	RedCLARA
Revised by	Thomas Fryer	GÉANT /WP6	24/05/2016	GÉANT
Revised by	María José López Pourailly	RedCLARA / WP6	24/05/2016	RedCLARA
Revised by				
Approved by	Florencio Utreras	RedCLARA/CEO	25/05/2016	RedCLARA



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1. INTRODUCTION

The purpose of this document is to describe what has been done by WP6 from M8 to M12 of the project and regarding what was committed within the Dissemination and Training Plan for MAGIC.

The objective of the Dissemination and Training Plan is to efficiently disseminate the objectives, developments, advances and achievements of MAGIC. The Plan also helps in the construction of an inclusive MAGIC community by building a global dissemination network whose principal aim is be the promotion of MAGIC in each country participating in the project by highlighting the national and regional initiatives within the scope of the project. In the Plan was also stated that MAGIC WP6 will focus on dissemination synergies with the EC-funded TANDEM and Sci-GaIA projects, and as it will be described in this document that task has been efficiently tackled.

In terms of training, the Plan promised to take advantage of the lessons learned and initiatives emerging from the Regional Training activities, especially fostering the establishment of local trainers, and that is exactly what has been done.

2. REFERENCES

- [R1] MAGIC Website <http://www.magic-project.eu>
- [R2] Visibility Guidelines established by the European Commission in the document "COMMUNICATION AND VISIBILITY MANUAL for European Union External Actions" http://ec.europa.eu/europeaid/work/visibility/documents/communication_and_visibility_manual_en.pdf

3. DOCUMENT AMENDMENT PROCEDURE

Requests for amendments to this document must be made to the author, María José López Pourailly, WP6 - Dissemination & Training Manager (RedCLARA – Communications and Public Relations Manager), maria-jose.lopez@redclara.net, and copied to the Management of the MAGIC project.



4. GLOSSARY

EC	European Commission
EU	European Union
EU-LAC	Europe, Latin America and the Caribbean
Sci-GaIA	Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa
TANDEM	TransAfrican Network Development
WACREN	West and Central African Research and Education Network
WP	Work Package

5. EXECUTIVE SUMMARY

This document refers to all activities carried out months 8 and 12 of the project in order to ensure its appropriate dissemination. The majority of these activities were related to MAGIC promotion by means of its different communication channels (website, Facebook, Twitter, Colaboratorio and the newsletter) and participation in some international events.

Training events also contributed to further dissemination of the project and its benefits as trainees can also become further dissemination vectors within their communities, in line with the intentions of the project.

WP6 has also continued to strengthen relations and dissemination interactions with TANDEM¹ and Sci-GaIA² (both international projects funded by the EC Horizon2020

¹ TANDEM (TransAfrican Network Development) will create favourable conditions for WACREN, enabling it to draw maximum benefit from the forthcoming AfricaConnect2 project and ensure WACREN's integration into the global Research and Education networking community and its long-term sustainability. TANDEM's long-term goal is to make it possible for researchers and academics to contribute with their peers around the world to the socio-economic development of the West and Central African Region. The project will run for 24 months and is coordinated by the Institut de Recherche pour le Développement (France). Other partners are WACREN (Ghana), GÉANT (UK), RENATER (France), CIRAD (France), Brunel University (UK), UbuntuNet Alliance (Malawi) and RedCLARA (Uruguay). Web site: www.tandem-wacren.eu.

² Sci-GaIA (Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa) aims to support National Research and Education Networks, Communities of Practice and Universities in Africa to develop Science Gateways and other e-Infrastructure services. Sci-GaIA will work with new and emerging Communities of Practice to develop these exciting technologies, strengthen e-Infrastructure service provision, especially in terms of open access linked data, and deliver training and dissemination workshops. This will establish a sustainable foundation on which African e-Infrastructures can be developed and linked to science networks across Africa. The



Programme).

6. DISSEMINATION AND TRAINING PLAN OBJECTIVES

6.1. GENERAL OBJECTIVE

To efficiently promote and disseminate the project to the global REN community and scientific and academic communities as well as decision-makers and to organise training events that will increase the number of people able to use MAGIC collaborative applications.

6.2. SPECIFIC OBJECTIVES

- To promote the establishment of agreements for Africa, Asia, the Caribbean, Europe, Latin America and Oceania aimed at consolidating and completing the building blocks of middleware that MAGIC will target.
- To enhance the use of MAGIC services and real-time applications among international and inter-continental research groups and communities.
- To coordinate and promote training on the implementation and use of the services agreed by MAGIC.
- To develop informative material for specific events related to regional advanced networks.

7. ACTIONS AND ACTIVITIES

As stated in D6.1. MAGIC benefits from the dissemination methods, activities and material-creation and experience of its partners, but has also created its own. In order to offer a clear vision of the tasks that have been carried out to meet the objectives of the MAGIC Dissemination & Training Plan, all the activities have been grouped into two main action lines, which were the same two lines defined in D6.1.:

- Promotion, awareness-raising and positioning
- Training

7.1. Promotion, awareness-raising and positioning

7.1.1. To define MAGIC branding and corporate style

This was widely explained in D.6.1 and D6.3. There are no changes in this matter.

results of the project will be usable by Communities of Practice in Europe and the rest of the world. The project will run for 24 months and is coordinated by Brunel University (UK). The partnership is composed of: DIT (Tanzania), University of Catania (Italy), Karolinska Institutet (Sweden), KTH (Sweden), UbuntuNet Alliance (Malawi), WACREN (Ghana) and CSIR (South Africa). Website: www.sci-gaia.eu.





7.1.2. MAGIC Website and social media presence

The success of the website and the social network presence is statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and to provide feedback on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool. The Facebook page is measured using the tool provided by Facebook itself, and Twitter is measured in terms of followers and retweeted messages.

The website shows all available information on MAGIC and the social network presence is used to enhance the visibility of project news, participation in events and training activities, and the interaction with those who are interested in the initiative.

MAGIC Website

The project website (<http://www.magic-project.eu/>) has been continuously updated in order to reflect the project's progress.



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Figure 1: MAGIC website - home page [12-05-2016]



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Regarding website statistics, visitors numbers have kept growing slowly but constantly, with substantial growth in November 2015, when MAGIC participated in the UbuntuNet Connect2015 Conference (20 November 2015; Maputo, Mozambique).

MAGIC website statistics

	Nov.'15	Dec.'15	Jan.'16	Feb.'16	Mar.'16	Apr.'16	May '16
MAGIC Project							
Number of unique visitors	849	412	563	408	378	417	261
Number of pages seen	2062	887	1102	876	821	779	622

Figure 2: MAGIC website statistics of visitors [11-05-2016]

As can be seen in the following table, there are visitors from all continents around the world. As reported in D6.3., the three regions of America combined provide the highest number of visitors, followed by Europe (that in the previously reported period was in the fourth position after Asia and Africa).

Origin of visitors by continents	
Europe	1031
Africa	816
South America	599
North America	351
Asia	228
Unknown	160
Central America	96
Oceania	24

Figure 3: MAGIC website statistics of continent of origin of the total visitors [11-05-2016]

The ten most visited pages of the MAGIC website are measured on a weekly basis. The following table shows the 20 most viewed pages of the website from November,1, 2015 to 8 May 2016.

	Total of viewed pages	Unique visitors
Magic Project	2727	2193
About MAGIC	369	298



Objectives	309	264
Partners	232	198
Training	224	201
MAGIC' s WP4 makes available on-line: Open course on NRENum.net and DNS Configuration	208	162
Science Communities	207	179
Deliverables	123	110
The Ethiopian NREN is now part of MAGIC	117	107
WP3: Cloud Provisioning and Groupware Standards	98	83
News and Events	85	39
Presentations	77	66
Project Structure	53	43
Milestones	50	47
EthERNet	43	36
10 months doing MAGIC	38	35
Contact us	37	23
H2020	27	25
Join the First virtual meeting of the Global Science Community on e-Health	27	23
About	26	23

Figure 4: MAGIC website statistics of most viewed pages [11-05-2016]

These statistics tell us about the interest that the project gained over its first year, which areas raise most interest (as stated in the previous deliverable), the importance of training activities, and how interest in the Global Science Communities and their activities are growing.

Social Networks

The MAGIC social network presence was delivered at the end of M02, both in the Facebook and Twitter environments.



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Figure 5: Facebook - MAGIC a global connection - [12-05-2016]
<https://www.facebook.com/MAGICglobalCollaboration>



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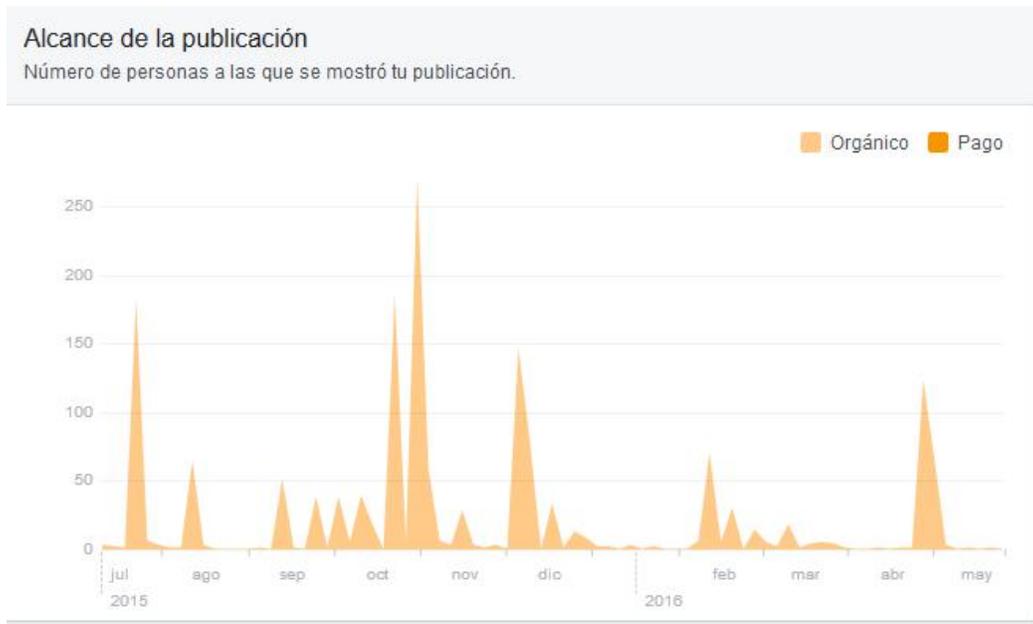


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By November 11, 2015, “Magic a global connection”, the project’s presence on Facebook, which went live on-line on 25 June 2015, had 72 likes. By 12 May 2016, this number had grown to 173, 240% higher than the previously reported figure. The growth of likes since July 2015 is shown in the following figure.



**Figure 6: Facebook - MAGIC a global connection
Evolution of Likes (total of likes)[12-05-2016]**



**Figure 7: Facebook - MAGIC a global connection
Publications outreach [12-05-2016]**



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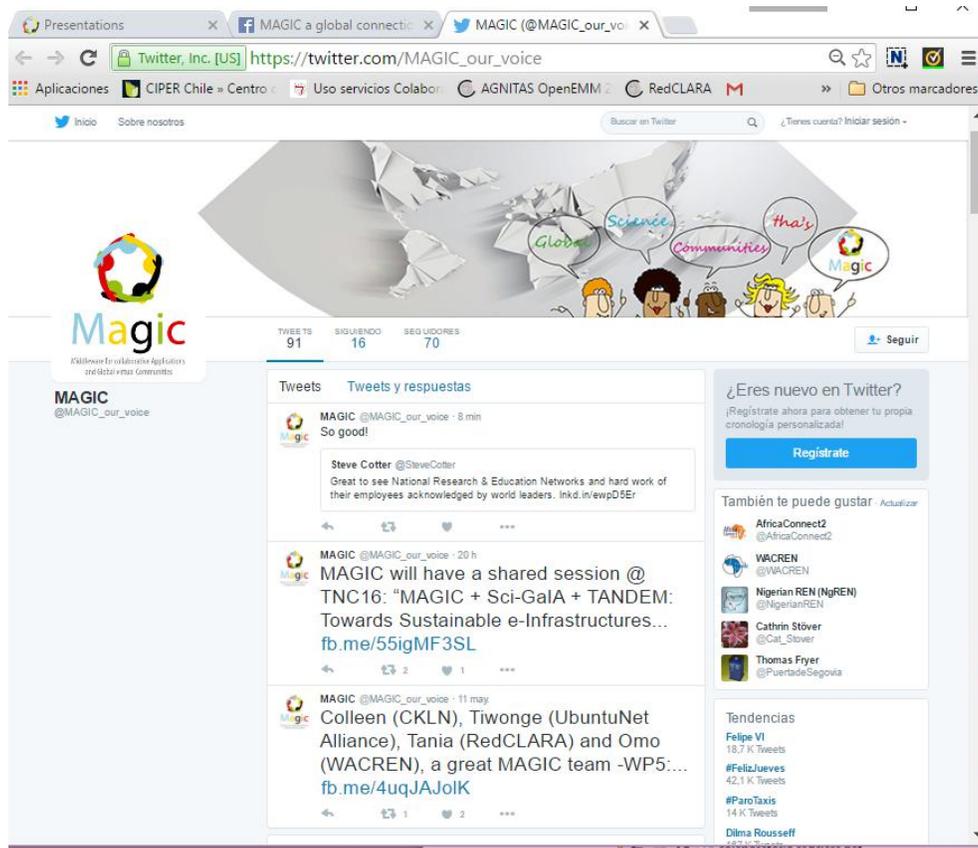


Figure 8: Twitter - @MAGIC_our_voice - [12-05-2016]
https://twitter.com/MAGIC_our_voice

By 11 November 2015 @MAGIC_our_voice, the project's presence on Twitter, which was on 5 June 2015, had 30 followers. By 12 May 2016, this number grew by 233% to 70, with several interactions (most of them mentions).

As reported in the past deliverables, the RedCLARA Colaboratorio environment is used to provide the intranet for the MAGIC community and is continuously used by project members.

7.1.3. Newsletters

Deliverable D.6.1 defined the need for a project newsletter that would be issued to project members every three months starting in M03. As was reported in D.6.3, the first edition of "MAGIC TIME" was delivered in July 2015 (M03). It became clear that one issue every



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three months was not enough to cover all projects news and events, so it started to be published every two months, with three editions in 2015. 2016 has not had the same intensity in terms of public news, and so for the reported period the initial plan of quarterly newsletters as reinstated with one issue in January and a second one in May. All issues can be found on the project website at: <http://magic-project.eu/index.php/2015-05-28-22-53-32/newsletter>.

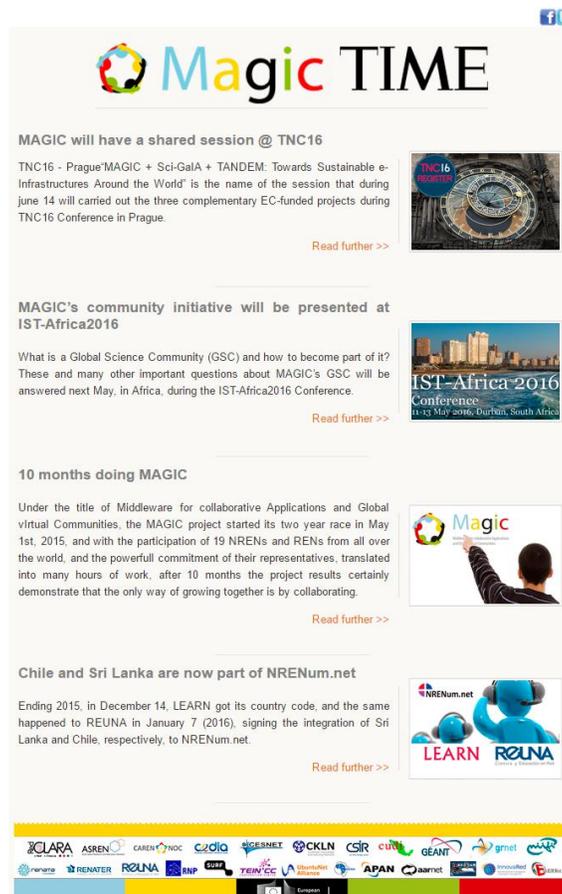


Figure 9: MAGIC TIME - 5th edition, May 2016 [http://www.redclara.net/MAGIC-TIME/05_may2016.html].

To measure the outreach of the newsletter, the OpenEMM mail-marketing open-source tool was implemented and has been used since the first issue. The statistics in Figure 10 below relate to the following mailing lists: MAGIC-all-members; MAGIC-TIME; and the Latin American NREN Communications and Public Relations network (LA NRENs PR Network):



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	July	September	November	January	May
Opened emails	42	42	38	44	78
Failed	0	0	0	0	0
Rebound	0	0	0	0	0
Recipients	73	78	78	83	184
Total recipients clicks	15	9	5	9	7
Total clicks	48	10	6	42	10

Figure 10: MAGIC TIME newsletters mailing statistics.

MAGIC has also been disseminated via the project members' own communication channels.

7.1.4. Promotional material

Different types of promotional material have been created for the MAGIC project and have been distributed at international events at which MAGIC has been represented with an exhibition booth.

The following photos show the items that have been made.



Figure 11: MAGIC branded pen drive and key holder.



Figure 12: MAGIC branded pen drives.

Within the reported period, the number of branded promotional items for distribution at international events was as follows:

- 150 pen drives and key holders
- 300 pen drives

The distribution of these material will be explained in the following paragraphs.

7.1.5. Printed material

In order to serve the dissemination needs of WP5 at the IST-Africa 2016 Conference, project brochures focused on raising awareness of the Global Science Communities that MAGIC is currently fostering were designed and printed in English (300 copies). A total of 150 invitations were sent out for the session that WP5 carried out at the event.

As with all project brochures, the new one has been published on the project website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/2015-05-28-22-53-32/magic-brochures>) and is available to download in pdf format. The brochure, and those that were reported on in D.6.3 were distributed at international events where MAGIC had representation.

All printed material is in line both with the MAGIC branding guidelines and the Visibility Guidelines established by the European Commission [R2].



Figure 13: MAGIC Global Science Community brochure in English.





Figure 14: MAGIC Global Science Community invitation to the session at IST-Africa 2016.

7.1.6. Promotion at relevant international events

MAGIC has been represented by project partners at relevant conferences and events around the world, in the form of either an exhibition stand/booth and/or a presentation given to the event's participants. In the reported period MAGIC was represented at the following international events:

- e-AGE 2015, December 7 and 8, 2015, Casablanca - Morocco, Arab States
- APAN41, January 24 - 29, Manila, The Philippines, Asia
- IST-Africa 2016 – 11-13 May 2016, Durban, South Africa

e-AGE 2015, December 7 and 8, 2015, Casablanca - Morocco, Arab States:

A stand was shared with TEIN*CC where MAGIC project information and promotional material was distributed. The project was included in the third session of the conference ("Evolving Services for Science, Research, and Education Communities") with the



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presentations entitled “Advanced services for international cooperation: case of VI-SEEM and MAGIC projects” and “MAGIC, a Global Connection Community”, given by GRNet - and RedCLARA representatives, enabling MAGIC to describe face-to-face the importance of the participation of the Arab research and education networking community in the project.

The MAGIC project wants to thank ASREN for its support and collaboration in making the project’s participation in the event a success.

300 MAGIC brochures in English and 200 MAGIC-branded pen drives and key holders were distributed among attendees.



Figure 14: MAGIC stand in e-AGE2015.

APAN41, January 24 - 29, Manila, The Philippines, Asia:

At the 41st Asia Pacific Advanced Network Meeting (Manila Revisited: Enabling Connectivity for an Integrated World), MAGIC was represented with a presentation entitled “MAGIC Project and NRENum Service Middleware for collaborative Applications and Global Virtual Communities”.

WACREN 2016 Conference – Enabling Virtual Research and Education Communities, 14-18 March 2016, Dakar, Senegal, Africa:

Organised by WACREN (West and Central African Research and Education Network), MAGIC was represented through a presentation given by the GRnet representative, entitled “National, Regional and Global e-Infrastructures”.

Second joint Sci-GaIA-TANDEM-MAGIC workshop, 15 March 2016, Dakar, Senegal, Africa:



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MAGIC was represented through two presentations: “MAGIC - Colaboration tools and communities/group sharing for science applications”, given by the representative of RedCLARA, and “Sharing e-Research services across borders”, given by the representative of GRnet.

IST-Africa 2016 – 11-13 May 2016, Durban, South Africa:

What is a Global Science Community (GSC) and how to become part of it? This and many other important questions about the MAGIC GSCs were answered by WP5 at the IST-Africa2016 Conference. WP5 participation at the conference was led by representatives of the MAGIC project partners, UbuntuNet Alliance, CKLN and RedCLARA, who led the workshop “Global Science Communities - That’s MAGIC!” on the second day of the conference.



Figure 15: The MAGIC WP5 team at IST-Africa 2016: Colleen Wint (CKLN), Tiwonge Banda (UbuntuNet Alliance), Tania Altamirano (RedCLARA) and Omo Oaiya (WACREN).

All the material specially prepared for this event was distributed among attendees: 150 invitations for the session, 300 brochures and 300 pen drives. The demonstration of the use of Colaboratorio within the session was very successful; 20 attendees participated in the session.

Future activities

At the time of writing, WP6 was also preparing MAGIC participation at the TNC16 Conference (2-16 June 2016, Prague, Czech Republic). It should nevertheless be noted that MAGIC WP6 coordinated a proposal for a joint full session with Sci-GAia and TANDEM which was accepted.

The session is entitled “MAGIC + Sci-GaIA + TANDEM: Towards Sustainable e-Infrastructures Around the World”. The session will start with brief introductions of the three sister projects. The introductions will consist of with one short presentation per project and will show how the projects are fostering and empowering scientific collaboration around the world.

The introductions will be followed by a joint session in which the three projects will showcase real examples of the benefits that they are already giving to science and research communities.

Finally, there will be a slot of 20 minutes for questions and answers, in which the audience will be invited to ask questions about the projects and how the projects interact, and also to exchange ideas on what is still required and/or missing in order to better foster and enhance global collaboration.

The results of this activity will be reported in D.6.5.

7.2. Training

WP6 supports WP2, WP3 and WP5 on training activities. This consists of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

Within the reported period there were no face-to-face training sessions, but an intense dissemination to the on-line open course on NRENum.net and DNS - was carried out by means of the MAGIC communication channels and of those of its partners as well.

WP6 also did the translation into Spanish of the On line Training Material on AAI development.



Periodical Progress Report

MAGIC Deliverable: D6.5. Third Dissemination and Training Report

Document Full Name	D6.5. Third Dissemination and Training Report
Date	28-11-2016
Activity	WP6 Dissemination and Training
Lead Partner	RedCLARA
Document status	Final
Classification Attribute	Public
Document link	

Abstract: This document refers to all the activities carried out from month 13 to 19 of the project, in terms of dissemination and training, following the scheme proposed at the D6.1. Dissemination and Training Plan and Baseline. It describes what has been done and it refers to the outcomes of that work.



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	Name	Member/Activity	Date	Responsible
From	María José López Pourailly	RedCLARA / WP6	11-11-2016	RedCLARA
Revised by	Tom Fryer	GÉANT	18-11-2016	RedCLARA
Revised by	María José López Pourailly	RedCLARA / WP6	23-11-2016	RedCLARA
Aproved by	Florencio Utreras	CEO/RedCLARA	28-11-2016	RedCLARA



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7.2. Training.....	25



1. INTRODUCTION

The purpose of this document is to describe what has been done by WP6 from M13 to M19 of the project and regarding what was committed within the Dissemination and Training Plan for MAGIC.

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In terms of training, the Plan promised to take advantage of the lessons learned and initiatives emerging from the Regional Training activities, especially fostering the establishment of local trainers, and that is exactly what has been done.

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4. GLOSSARY

- EC European Commission
EU European Union



EU-LAC	Europe, Latin America and the Caribbean
Sci-GaIA	Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa
TANDEM	TransAfrican Network Development
WACREN	West and Central African Research and Education Network
WP	Work Package

5. EXECUTIVE SUMMARY

This document refers to all activities carried out months 13 and 19 of the project in order to ensure its appropriate dissemination. The majority of these activities were related to MAGIC promotion by means of its different communication channels (website, Facebook, Twitter, Colaboratorio and the project partners communication channels) and participation in some international events.

The document refers to what has been done in terms of training.

After the first project review, carried out in Brussels in July 2016 (M15), the reviewers rejected D.6.2, and did some recommendations about MAGIC's on-line presence. This document also refers to what was done in order to tackle the reviewers observations.

6. DISSEMINATION AND TRAINING PLAN OBJECTIVES

6.1. GENERAL OBJECTIVE

To efficiently promote and disseminate the project to the global REN community and scientific and academic communities as well as decision-makers and to organise training events that will increase the number of people able to use MAGIC collaborative applications.

6.2. SPECIFIC OBJECTIVES

- To promote the establishment of agreements for Africa, Asia, the Caribbean, Europe, Latin America and Oceania aimed at consolidating and completing the building blocks of middleware that MAGIC will target.
- To enhance the use of MAGIC services and real-time applications among international and inter-continental research groups and communities.
- To coordinate and promote training on the implementation and use of the services agreed by MAGIC.
- To develop informative material for specific events related to regional advanced networks.



7. ACTIONS AND ACTIVITIES

As stated in D6.1. MAGIC benefits from the dissemination methods, activities and material-creation and experience of its partners, but has also created its own. In order to offer a clear vision of the tasks that have been carried out to meet the objectives of the MAGIC Dissemination & Training Plan, all the activities have been grouped into two main action lines, which were the same two lines defined in D6.1.:

- Promotion, awareness-raising and positioning
- Training

7.1. Promotion, awareness-raising and positioning

7.1.1. To define MAGIC branding and corporate style

This was widely explained in D.6.1 and D6.3. There are no changes in this matter.

7.1.2. MAGIC Website and social media presence

The MAGIC website was developed during M01 and M02, and delivered online on 8 June 2015 (M02) with the URL <http://www.magic-project.eu/> and the navigation map the shows Figure 1. The MAGIC social network presence was delivered on the same date.

MAGIC's Home

ABOUT	Technical Activities	Global Science Communities	Dissemination	Training	Contact us
About MAGIC	Platforms for Mobility	Virtual Meetings	News and Events	Training calendar	
Objectives	Cloud Provisioning and Groupware Standards	Seminars	MAGIC's branding	Training material	
Partners	Agreements for Real Time Collaboration		MAGIC's templates		
Milestones					
Deliverables					
Presentations					
Project Structure					
Project Management					

Figure 1: MAGIC website navigation map [01-05-2016]

After the first project review, carried out in Brussels in July 2016, the reviewers rejected D.6.2, and stated that “D6.2: The current report and online presence should be





reconsidered, in terms of their support to achieve the project objectives. They have to be organised for and target specific groups -NRENS/RRENS, focal points, communities and researchers, etc. - at a global level while sending clear messages to address the issues/challenges each group faces and providing possible solutions. The dissemination material and webpage should include clear information on how to get involved, what to access, and whom to contact in case of interest. The new version of this report should depict the strategies to be redefined in D2.1 and D5.1 and explain how the Colaboratorio will be used in each region. It should also reflect the strategy for those regions where there is no regional replica of the tool. The entry point in each region should follow well established practices of accessing applications using federated access, and not work from scratch. In fact, the user should be informed where he/she is on the landing page and clear explanations on how to access/log-in should be provided. A way to redirect to the regional Colaboratorio instance should be implemented where there are local instances. The user should be able to identify and follow the work on existing communities (active around the user's region) without participating actively; he/she should be able also to search all the existing communities, even those at which he is not yet a member. A step-by-step user guidance on how to apply/join an existing community should be also provided. The somewhat hidden/restricted organisation of the user communities by the project contradicts the open science notion and principles and hinders the global expansion of the MAGIC-targeted communities.”

Following these recommendations, the website navigation map and its contents were updated and changed in order to better tackle the problems pointed by the reviewers. The new navigation map for the website is now following:

– About MAGIC	Mobility	Groupware	Real Time Collab.	Science Communities	Training
– Objectives	– Platforms for Mobility: What is this about ?	– What is Cloud Provisioning and Groupware Standards about?	– Agreements for Real Time Collaboration: What is this about?	– What is a Global Science Community?	
– Partners	– Platforms for Mobility Objectives	– Objectives	– Objective	– How to Join a Global Science Community?	
– Milestones	– Platforms for Mobility Activities	– Activities	– Activities	– Global Science Communities Activities	
– Deliverables	– Identity Federations	– Group Management in Federation (GMF)	– NRENum: What is this?	– GSC Biodiversity	





– Presentations	– What is an Identity Federation?	– Chosen Standards & Group Management Systems	– Advantages and Benefits	– GSC e-Health
– Project Structure	– Aiming to establish an Identity Federation?	– SAML2	– NRENum deployment within MAGIC	– GSC Environment
– Project Management	– On line Training Material on AAI Development for Staff	– VOOT	– Aiming to implement NRENum?	– GSC Remote Instrumentation
– Dissemination	– eduGAIN	– PERUN	– On-line Course on NRENum.net and DNS Configuration in English	
– News and Events	– What is eduGAIN?	– SYMPA	– On-line Course on NRENum.net and DNS Configuration in French	
– Newsletter	– Aiming to connect to eduGAIN?	– Pilot Implementation	– On-line Course on NRENum.net and DNS Configuration in Spanish	
– MAGIC branding	– eduroam	– Services to be provided	– DNSSec (Security): What is this?	
– MAGIC Brochures	– What is eduroam?	– Colaboratorio	– DNSSec deployment for NRENum within MAGIC	
– MAGIC Templates	– eduroam for Research and Education Networks	– Colaboratorio's origin	– Aiming to implement DNSSec?	
– Contact Us	– Which countries are eduroaming?	– Colaboratorio's deployment		





<ul style="list-style-type: none"> – Aiming to provide eduroam? 	<ul style="list-style-type: none"> – Which NRENs have Colaboratorio already installed?
	<ul style="list-style-type: none"> – How can I get Colaboratorio for my NREN? – Do you want to install Colaboratorio or one of our applications?

Figure 2: MAGIC Website new navigation map - August 2016 (M16)

The new navigation map as well as the new contents, show all the tasks and results of the different Work Packages, provide clear and easy access to all those users that are interested in using, applying and implementing the applications, services and tools to their websites, or to have access to them, or to participate in the training courses and/or the Global Science Communities. All this new information was added, while still keeping the project information and news that were the main focus of the project during its first year. News are updated under a regular basis.



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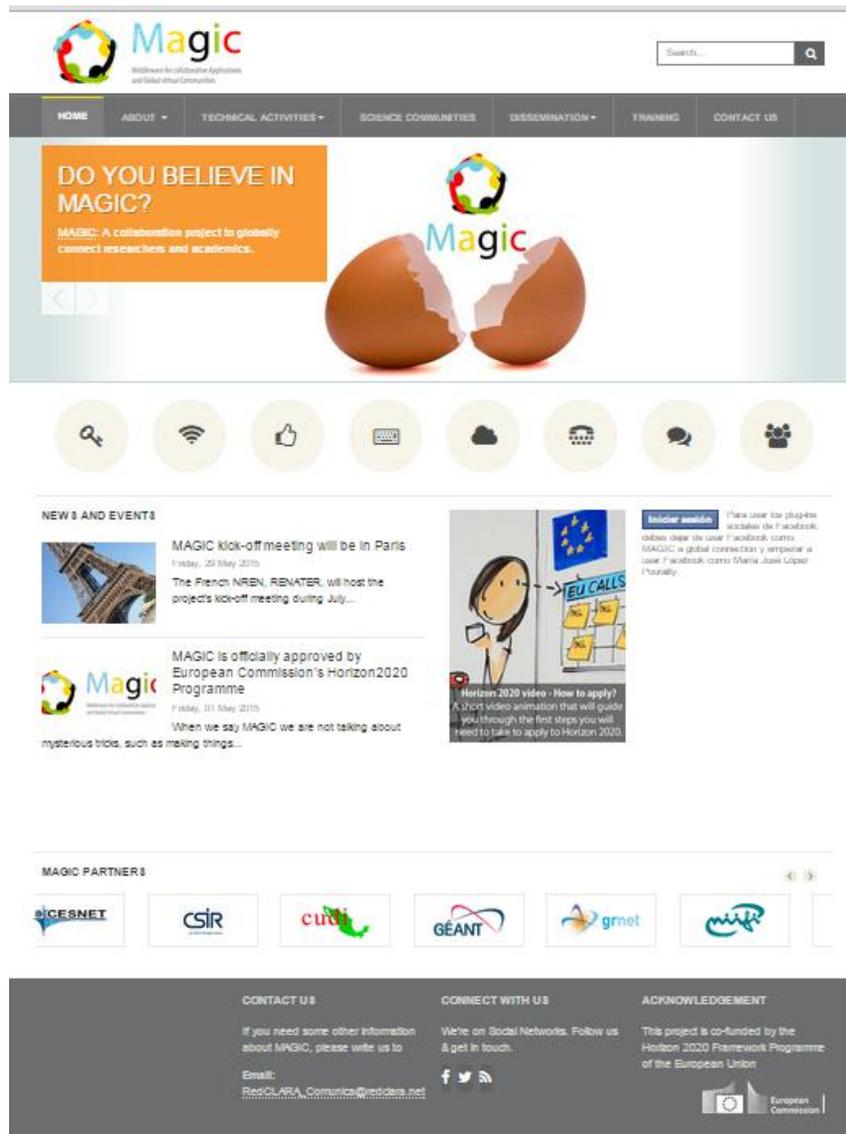


Figure 3: MAGIC Website Homepage, M01.



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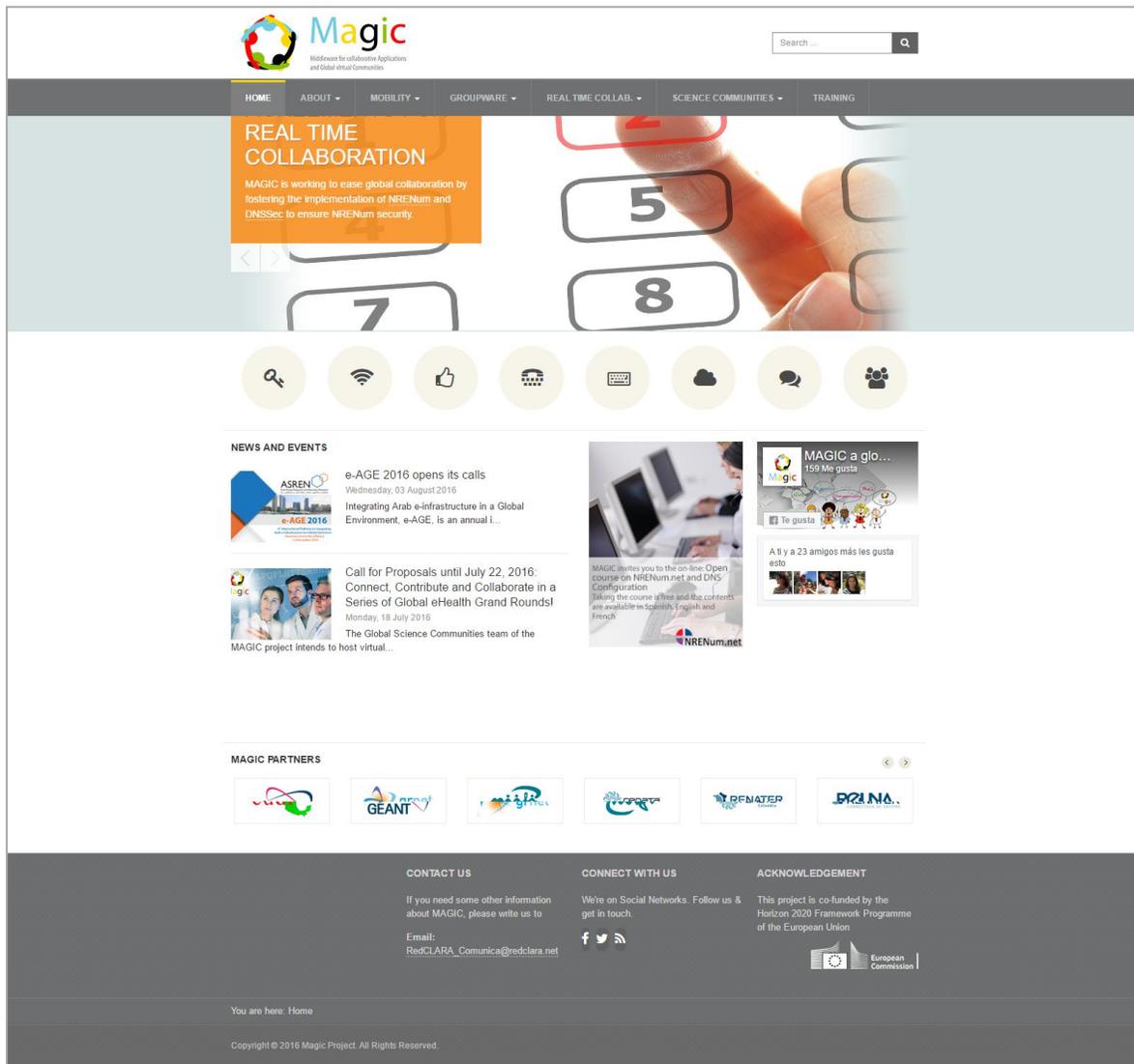


Figure 4: MAGIC Website Homepage, M16.

The success of the website and the social network presence is statistically measured by WP6 to identify the type of information which is of greater relevance for the different media users and to provide feedback on how to disseminate the project more effectively. Website usage is measured using the Piwik open-source tool. The Facebook page is measured using the tool provided by Facebook itself, and Twitter is measured in terms of followers and retweeted messages.



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MAGIC Web Site																	
	2015								2016								
	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dic.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.
MAGIC Project																	
Unique visitors	231	211	340	328	427	849	412	563	408	378	417	699	413	390	147	74	391
Pages viewed	751	610	905	875	943	2062	887	1102	876	821	779	1592	862	683	490	146	698

Figure 5: MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

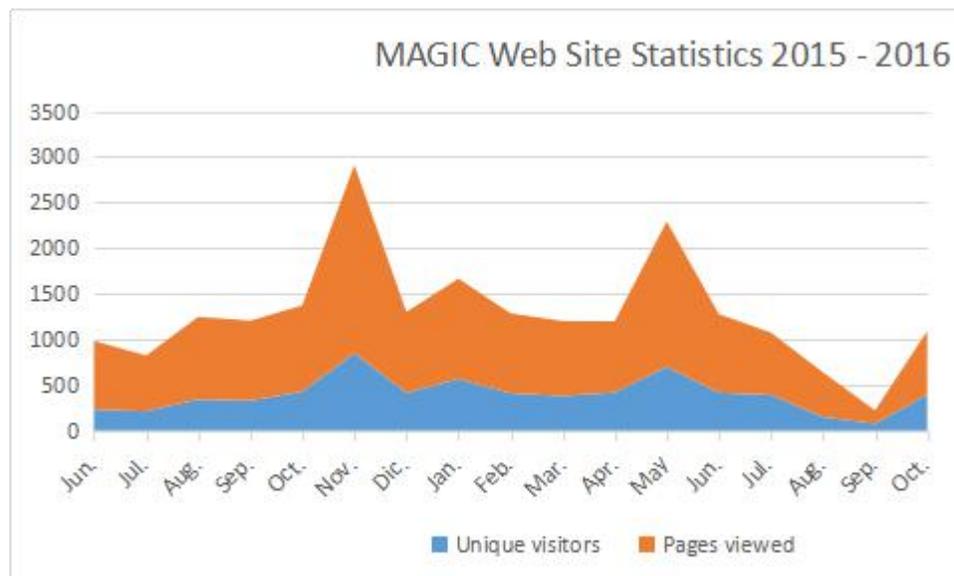


Figure 6: Graphic of the evolution of the MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

Though the numbers are a bit dissappointing right after the website was modified, it is important to consider that August and September are the months in which most of the north of the world is on vacations, so the low numbers only reflect the stationary falls, while the two strong increases were marked in the context of international events (UbuntuNet Connect and eAGE, 2015; TNC and TICAL, 2016).

In addition to the number of unique visitors and more viewed pages, since M02 every week we have measured the 10 most viewed pages of the web site, with the sum resulting from those 10 weekly most viewed pages we create the ranking of the 20 most viewed pages, where the results show that the visitors have given more attention to the project itself, training, science communities and to the Cloud Provisioning and Groupware Standards (WP3) activities. This is shown in the figure 7, while figure 8 shows the regions from where the visitors come (the statistics where taken until October 30).



10 most viewed pages per week - MAGIC Web Site			
	Total of viewed pages	Unique visitors	
1	Magic Project	6013	4695
2	About MAGIC	826	671
3	Objectives	688	572
4	Partners	497	420
5	Training	395	340
6	Science Communities	362	310
7	Deliverables	280	247
8	MAGIC's WP4 makes available on-line: Open course on NREnum.net and DNS Configuration	224	176
9	New s and Events	180	100
10	Presentations	154	130
11	Milestones	152	138
12	The Ethiopian NREN is now part of MAGIC	117	107
13	Project Structure	106	88
14	WP3: Cloud Provisioning and Groupware Standards	100	85
15	September 8 to 10: Workshop on Joining eduroam and Identity Federation	84	69
16	Project Management	81	71
17	MAGIC Project lifted off	80	69
18	MAGIC, TANDEM and SciGalA will share a stand and a network session in ICT2015	77	61
19	10 months doing MAGIC	69	61
20	The Workshop on Joining eduroam and Identity Federation in Amman was a success	68	57

Figure 7: Graphic of the evolution of the MAGIC Website Statistics - Unique visitors and Pages viewed, M02 - M18.

Continents from where the visitors come	
Europe	2063
Central and South America	1740
Africa	1075
North America	818
Asia	512
Unknown	304
The Caribbean	307
Oceania	53

Figure 8: The MAGIC web site general statistics, regions from where the visitors come.



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Social Networks

The MAGIC social network presence was delivered at the end of M02, both in the Facebook and Twitter environments.

By November 07, 2016, “Magic a global connection”, the project’s presence on Facebook, which went live on-line on 25 June 2015, had 165 likes. The growth of likes since July 2015 is shown in the following figure.



Figure 9: Facebook - MAGIC a global connection Evolution of Likes (total of likes)[07-11-2016]



Figure 10: Facebook - MAGIC a global connection Publications outreach [07-11-2016]





Figure 11: Facebook - MAGIC a global connection
Reactions, comments and times that a publication was shared [07-11-2016] (the lecture of the table is the same than the one of the title of this figure)



Figure 12: Facebook - MAGIC a global connection
Reactions: number of likes for the publications [07-11-2016]



By 11 November 2015 @MACIC_our_voice, the project's presence on Twitter, which was on 5 June 2015, had 30 followers, almost a year later, 8 November 2016, this number grew to 112, with several interactions (most of them mentions).

As reported in the past deliverables, the RedCLARA Colaboratorio environment is used to provide the intranet for the MAGIC community and is continuously used by project members.

7.1.3. COLABORATORIO landing page

After the first project review the need for front page for Colaboratorio was identified, and it was also advised to open access to Colaboratorio within the project website. This was carried out and within the site we placed a Colaboratorio landing page which is the same that was created for those project partners that needed this functionality. The landing pages currently published in MAGIC website and in WACREN are shown in the following figures.

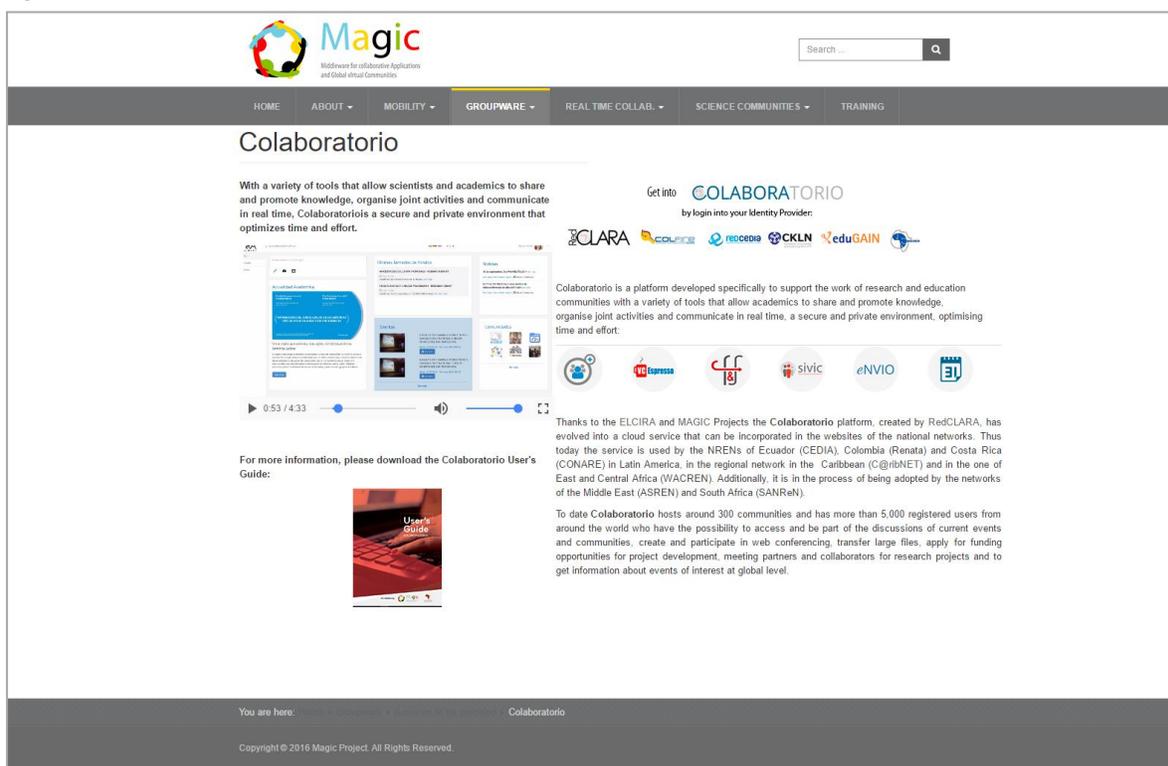


Figure 13: Colaboratorio landing page within the MAGIC project website



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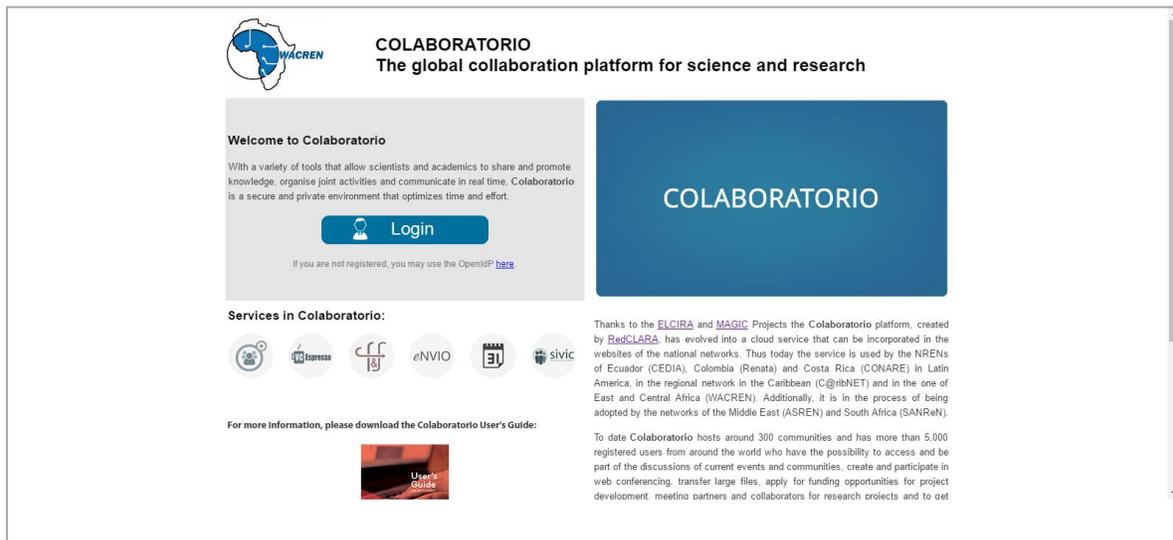


Figure 14: Colaboratorio landing page within the WACREN web environment

7.1.4. Partners Dissemination Channels

Once it was defined that the bulletin was not really efficient to communicate and help to disseminate the news produced by the project, the strategy changed and every time WP6 needed to share an information and/or invitation made by other WP, a news was written in English, then published in the website, and translated into Spanish and Portuguese in a document format, and shared with all the project members together with a picture asking them to share the information with their local communities. This new way of functioning worked fine and within the reported period, the project partners did a good job disseminating the project; the following lines tell us what they did:

ASREN: A banner with the MAGIC logo in the home page of the web site and several publications about MAGIC and of the news shared by WP6 within the MAGIC project partners [<http://asrenorg.net/?q=search/node/MAGIC>].

CEDIA: Within the reported period CEDIA published a banner with the MAGIC logo in the home page of the web site and a news about the e-Health Grand Rounds [<https://www.cedia.org.ec/magic-2016>].

CESNET: A brief description of the MAGIC project was included within the International Projects section [<https://www.cesnet.cz/projects/international-projects/?lang=en>], and a mention in 2015 Yearly report recently delivered [see page 37, left column, https://www.cesnet.cz/wp-content/uploads/2016/08/Vyrocn_i_zprava_CESNET_2015_ENG_web.pdf].

CKLN: Within the reported period, every activity carried out by the Global Science Communities has been delivered through its mailing list to the entire CKLN community.



CUDI: CUDI has a banner with the MAGIC logo in the home page of the web site and MAGIC has been part of the contents of CUDI's bulletin in the editions of June [http://www.cudi.edu.mx/boletin/2016/06_boletin_junio.html], and October [http://www.cudi.edu.mx/boletin/2016/10_boletin_octubre.html]; every news about MAGIC has been replicated in its website [<http://www.cudi.edu.mx/search/node/MAGIC>], and invitations by mailing list have been delivered to its members in order to participate in the e-Health Grand Rounds.

GÉANT: Connect issue 22 [see page 07: https://issuu.com/geantpublish/docs/geant_connect_issue22] and 23 [see page 37: <https://issuu.com/geantpublish/docs/connect23>].

NIIF: A mention to the project in "Running Projects" section [http://niif.hu/hu/futo_projektek] and in "History" [<http://niif.hu/en/history>].

RedCLARA: All the news spread by MAGIC within the reported period were published by RedCLARA in its website in English, Spanish and Portuguese [<http://www.redclara.net/index.php/en/component/search/?searchword=MAGIC&searchphrase=all&Itemid=0>], reports in the editions of June and August of the DeCLARA bulletin [June, see page 13: http://dSPACE.redclara.net/bitstream/10786/1019/1/DeCLARA_en_46.pdf ; August, see page 17: http://www.redclara.net/images/stories/DeCLARA/DeCLARA_en_47.pdf].

RENATA: All the news spread by MAGIC within the reported period were published by RENATA in its Web site [<http://www.renata.edu.co/index.php/component/search/?searchword=MAGIC&searchphrase=all&Itemid=159>].

REUNA: Several publications of the MAGIC news [http://www.reuna.cl/index.php?searchphrase=any&limit=20&ordering=newest&view=search&option=com_search&searchword=MAGIC], and a description of the project in 2015 Yearly report delivered in July [see page 53, <http://www.reuna.cl/difusion/memorias.html?download=133:memoria-2015>].

RNP: Within the reported period the Brazilian NREN published a long explanation about MAGIC [<https://www.rnp.br/destaques/projeto-apoiado-tic-aprimora-colaboracao-global>]

UbuntuNet Alliance: Within the edition of September of the Nuance newsletter, UbuntuNet published an article about the e-Health Grand Rounds [<https://www.ubuntunet.net/september2016#article5>].

7.1.5. Videos

During October all the project member were invited to generate interviews with their local communities asking them about the benefits of the MAGIC project. ASREN committed the elaboration of these interviews within the e-AGE 2016 Conference that will be held at the end of M19 (November) in Lebanon (Beirut) in December 1-2.



Within the UbuntuNet Connect 2016 Conference held in Entebbe (Uganda) in October 30 to November 4, it was carried a video interview with professor Dibungi T. Kalenda from University of Kinshasa of the Democratic Republic of The Congo, and CEO of the DRC NREN of The Congo.

Efforts to coordinate interviews with researchers of The Caribbean and Mexico are under its way.

It is envisioned that these videos will be published during January 2017.

7.1.6. Printed material

Within the reported period, new brochures and flyers were created for the MAGIC project and have been distributed at international events where MAGIC has participated (and will participate): TICAL2016, UbuntuNet Connect 2016 and e-AGE2016.

A new MAGIC brochure was developed in order to disseminate the developments in platforms for mobility, cloud provisioning and groupware standards and agreements for real time collaboration, and ease the contacts with the project in order to get more information. 400 printed copies of the brochure were done, 200 were distributed within TICAL2016 (Buenos Aires, Argentina, September 13-15), 100 at UbuntuNet Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November 2016), and 100 will be distributed at e-AGE2016 (Lebanon, Beirut, December 1-2).

In order to serve the dissemination needs of WP5 at the UbuntuNet Connect 2016 and e-AGE2016 conferences, flyers focused on raising awareness of the Global Science Communities that MAGIC is currently fostering were designed and printed in English (500 copies). A total of 200 were distributed in the UbuntuNet Connect 2016 Conference, and 300 will be distributed at the e-AGE Conference.

As with all project brochures, the new brochure and the new flyer were published on the project website under Dissemination section, tab >> MAGIC Brochures (<http://magic-project.eu/index.php/about/2015-05-28-22-53-32/magic-brochures>) and are available to download in pdf format.

All printed material is in line both with the MAGIC branding guidelines and the Visibility Guidelines established by the European Commission [R2].





Figure 15: New MAGIC brochure in English.



Figure 16: New MAGIC Global Science Community flyer.



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7.1.7. Promotion at relevant international events

Within the reported period MAGIC has been represented by project partners at relevant conferences in Latin America and Africa:

- TNC16 (Prague, Czech Republic, June 2-16)
- TICAL2016 (Buenos Aires, Argentina, September 13-15)
- UbuntuNet Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November)

TNC16 (12-16 June 2016, Prague, Czech Republic)

By means of the MAGIC + Sci-GaIA + TANDEM: Towards Sustainable e-Infrastructures session, held during the second day of TNC16, and of its presence at GÉANT's booth, the MAGIC Project had a very important visibility in this relevant conference, the one that gathers all the PanEuropean NRENs leaders and their worldwide peers with the research and also the industry communities.

During its session, the EC funded MAGIC, SciGaIA and TANDEM projects join forces to promote the cross-border collaboration which is needed to develop global research infrastructures for 2020 and beyond. The three projects showcased the development and operation of research e-infrastructures in the different world regions covered by them, introducing their approaches on these issues and stimulating the discussion about the benefits of developing new world class research e-Infrastructures for the R&D communities. The session video can be seen at: <https://tnc16.geant.org/web/media/archive/7A>. The presentations given within this session can be downloaded at: <https://tnc16.geant.org/core/session/79>.

Thanks to the collaboration of GÉANT, MAGIC also had the chance of enhancing its outreach by means of its dissemination slots at GÉANT's booth, where the project's benefits were shared with the visitors as well as the projects dissemination brochures and goodies (branded vintage puzzles and speakers).

TICAL2016 (Buenos Aires, Argentina, September 13-15):

MAGIC had a stand where 200 MAGIC project brochures were distributed and researchers were informed about the benefits they can get from the applications, services and global science communities.





Figure 17: MAGIC stand in TICAL2016.

UbuntuNet Connect 2016 (Kampala, Uganda, 30 October 2016 to 4 November):

Within the Conference, 200 Global Science Communities flyers and 100 MAGIC brochures were distributed. During November 4th, the MAGIC was part of the “Session 5: Enhancing Research and Collaboration through regional and global projects”. The session was chaired by Cathrin Stover -Chief Collaboration officer at GÉANT-, and MAGIC was represented by Tiwonge Msulira Banda and Tania Altamirano-Lopez (WP5) who explained everything about the Global Science Communities through the presentation “Experiences with Global Science Communities”. Previously to the Conference, in November 2, there was a workshop where MAGIC had two presentations slots to share about “End User Engagement Lessons from RedCLARA” and “The MAGIC Global Science Communities”.



Figure 18: Tania Altamirano at the MAGIC presentation in UbuntuNet Connect2016.

Future activities

While this deliverable was under writing process, WP6 was helping WP5 to prepare its participation at e-AGE2016 (Lebanon, Beirut, December 1-2), Arab States.

7.2. Training

WP6 supports WP2, WP3 and WP5 on training activities. This consists of administrative support if assistance is required for the organisation of face-to-face training activities (coordination of transportation, hotels, catering, etc.), dissemination and promotion of the courses, translation of training material, etc.

Within the reported period there were no face-to-face training sessions, but there was an intense work in order to coordinate face-to-face trainings in eduroam and federations in the CAREN covered region.