

EGI-InSPIRE

ANNUAL REPORT ON EGI AND ITS EXTERNAL RELATIONS ACTIVITY

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Abstract

This document reports on the external relations activity (NA2) which evolved into the community engagement activity (merged NA2 and NA3) for the EGI-InSPIRE project. It reviews the main activities completed during the second year and the impact of these activities to date. The document covers the work of the dissemination/communications team, the strategic planning and policy development team, the user community support team and the technical outreach team, as well as the major events organised by the event teams in EGI.eu and the NGIs.

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IV. APPLICATION AREA

This document is a formal deliverable for the European Commission, applicable to all members of the EGI-InSPIRE project, beneficiaries and Joint Research Unit members, as well as its collaborating projects.

V. DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the authors. The procedures documented in the EGI-InSPIRE “Document Management Procedure” will be followed:

<https://wiki.egi.eu/wiki/Procedures>

VI. TERMINOLOGY

A complete project glossary is provided at the following page: <http://www.egi.eu/about/glossary/>.

VII. PROJECT SUMMARY

To support science and innovation, a lasting operational model for e-Science is needed – both for coordinating the infrastructure and for delivering integrated services that cross national borders. The EGI-InSPIRE project will support the transition from a project-based system to a sustainable pan-European e-Infrastructure, by supporting ‘grids’ of high-performance computing (HPC) and high-throughput computing (HTC) resources. EGI-InSPIRE will also be ideally placed to integrate new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids, to benefit user communities within the European Research Area.

EGI-InSPIRE will collect user requirements and provide support for the current and potential new user communities, for example within the ESFRI projects. Additional support will also be given to the current heavy users of the infrastructure, such as high energy physics, computational chemistry and life sciences, as they move their critical services and tools from a centralised support model to one driven by their own individual communities. The objectives of the project are:

1. The continued operation and expansion of today’s production infrastructure by transitioning to a governance model and operational infrastructure that can be increasingly sustained outside of specific project funding.
2. The continued support of researchers within Europe and their international collaborators that are using the current production infrastructure.
3. The support for current heavy users of the infrastructure in earth science, astronomy and astrophysics, fusion, computational chemistry and materials science technology, life sciences and high energy physics as they move to sustainable support models for their own communities.
4. Interfaces that expand access to new user communities including new potential heavy users of the infrastructure from the ESFRI projects.
5. Mechanisms to integrate existing infrastructure providers in Europe and around the world into the production infrastructure, so as to provide transparent access to all authorised users.
6. Establish processes and procedures to allow the integration of new DCI technologies (e.g. clouds, volunteer desktop grids) and heterogeneous resources (e.g. HTC and HPC) into a seamless production infrastructure as they mature and demonstrate value to the EGI community.

The EGI community is a federation of independent national and community resource providers, whose resources support specific research communities and international collaborators both within Europe and worldwide. EGI.eu, coordinator of EGI-InSPIRE, brings together partner institutions established within the community to provide a set of essential human and technical services that enable secure integrated access to distributed resources on behalf of the community.

The production infrastructure supports Virtual Research Communities (VRCs) – structured international user communities – that are grouped into specific research domains. VRCs are formally represented within EGI at both a technical and strategic level.

VIII. EXECUTIVE SUMMARY

This report describes the external relations activity taking place during the second year and its evolution into the community engagement activity halfway through the year, with the merger of the NA2 (WP2) and NA3 (WP3) work packages of the EGI-InSPIRE project in November 2011. The document covers the activities of the communications team, the strategy and policy team (including the policy groups within EGI that the team supports and the various categories of external partners that EGI-InSPIRE collaborates with) and the major events organised by the event teams in EGI.eu and the NGIs.

The dissemination task in EGI-InSPIRE aims to communicate the EGI community's activity both within the project and worldwide. This document summarises the dissemination activities during the second year of the project, including content developed for the main EGI website and an overview of other materials produced such as news items, newsletters and Director's Letters. The communications team has also highlighted the success stories achieved using the infrastructure and developed case studies for brochures, news items, blog posts and articles for external publications. The communications team has reached out to new and existing users of the infrastructure through events and exhibition booths, and a summary of the events attended is included.

The Policy Development task evolved to be named as Strategic Planning and Policy Support, to more accurately reflect the additional emphasis in strategic planning that emerged during the first year and that is now formally defined to better support EGI's strategic decision making process. The strategy and policy team (SPT) supported the development of policy and the governance of the technical, operational and user community activities through the various policy groups in addition to preparing policy related briefing papers. Sixteen MoUs were signed during the year to consolidate the project's collaborative activities within the community.

The events task provides support and management for the two large community-driven events organised by the collaboration each year: the Technical Forum and the Community Forum. This review document summarises the organisational, policy and communications activities supporting the two large events that have been held during the first year of EGI-InSPIRE: the EGI Technical Forum 2011 in September 2011 in Lyon and the EGI Community Forum 2012 in March 2012 in Munich, held in conjunction with the second EMI Technical Conference. Plans are also underway for the next Technical Forum in Prague in September 2012.

A key aspect of the project re-structuring that took place from PM19 was the establishment of the NGI International Liaisons (NILs) role within each NGI to handle the non-operational coordination of NGI activities. Since the kick-off meeting in November 2011, NILs have been established across the NGIs and have been used to create Virtual Teams across the NGIs to tackle short-lived projects on topics important to the EGI community. A new task, technical outreach to new communities, was established to help support the work of the Virtual Teams by providing services that help connect different user communities and to support the development of new user communities.

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1 INTRODUCTION

The External Relations work package in EGI-InSPIRE includes activities in the areas of policy, communications, technical outreach, user community support and events.

The document is structured as follows:

- An overview of the different teams delivering external relations activities
- An overview of the metrics
- A more detailed summary of the activities in each of the different areas
- A summary of the Virtual Team activities
- An outline of the activities of the NGI International Liaisons (NILs)
- Conclusions and summary

Providing an integrated approach to new communities, at both a national and European level relies on close integration of the different non-operational teams within EGI.eu who provide services to the NGIs and to each other. At the end of the first year of the project, the non-operational teams ie policy, dissemination and community outreach, were all managing large, distributed networks of contacts at the NGIs. The effort available within the NGIs for these activities, at the level of both the task and the individual, was highly fragmented, leading to the scattering of effort and duplication of activities in some areas, with gaps in activities in others.

These issues were raised by the task leaders via the quarterly reports during the first year of the project, and were also the subject of recommendations by the EC reviewers after the first year review. The reviewers recommended merging the NA2 and NA3 work packages, including merging the effort allocated to all non-operational activities. User support activities under NA3.4 were moved to SA1, without change in the effort levels to SA1. The resulting changes to the reporting structure were implemented from the beginning of PQ7, i.e. November 2011.

As part of the merger of NA2 and NA3, a new role was created within the project. The NGI International Liaisons role replicates a similar model that has proven to be successful in the EGI operations community – the NGI Operations Manager. The NGI International Liaison is responsible for ensuring that the appropriate individuals or teams within the NGI respond to any particular non-operational issue or activity needed. These may include policy, strategy, communication, training, outreach or events, but with a particular focus on new communities and sustainability.

One of the key functions of the NGI International Liaisons is to identify technical expertise within an individual NGI that can be brought to tackle issues of importance to the EGI community as a whole. This is achieved through establishing *ad hoc* Virtual Teams to meet specific community driven goals for short periods of 3-6 months. New Virtual Teams may be proposed by EGI.eu and/or by NGIs, and can be led by EGI.eu or NGI staff. The outcomes and progress of current and concluded Virtual Teams are tracked through weekly meetings and reports, and coordinated through the wiki site¹.

The instigation of the NGI International Liaison role and the Virtual Teams in this way aims to consolidate and leverage non-operational effort available within the project at the NGIs, providing a path for more effective engagement in community outreach by the NGIs at a European level.

¹ https://wiki.egi.eu/wiki/Virtual_Team_Projects

2 COMMUNITY ENGAGEMENT ACTIVITY IN EGI

2.1 Overview

This section gives an overview of the different strands of activities within the Community Engagement (previously External Relations before 1/11/11) work package. This includes an overview of EGI's two large annual events aimed at reaching out to users and the wider EGI community, the EGI Community Forum and the EGI Technical Forum.

2.2 Communications and Marketing

The communications and marketing activity was set up in November 2011 as part of the merger of NA2 and NA3. This activity is coordinated by EGI.eu on behalf of the European NGIs, DCI projects, and other international partners. The aim is to communicate the work of the EGI and its user communities and target audiences to new and existing user communities, journalists, the general public, grid research and standards communities, resource providers, collaborating projects, decision makers and governmental representatives. Means for dissemination include the project website, wiki site, materials and publications, media and public relations, social media channels and participation in events in order to market EGI to new users, including driving the outreach for EGI's two large annual community events.

2.3 Strategic Planning and Policy Support

Resulting from the first EC project review, the name of this task was expanded from "Policy Development" to "Strategic Planning and Policy Support". The new task description includes activities at the strategic level that were started during the first year and that are now structured to better reflect the team activities and support the EGI strategic development.

This activity is led by the EGI.eu Strategy and Policy Team (SPT) (formerly the Policy Development Team) and encompasses the development of strategies and policies within and external to EGI.eu relating to governance, standardisation and integration with other infrastructures, EGI strategic response and alignment to EU strategic development, and supporting the boards and groups within EGI that draft policies and procedures for evolving the production infrastructure.

The main objectives are to analyse strategic themes and trends globally and in Europe and produce documents and reports to inform the EGI management bodies. These documents support the decision-making process and inform the EGI community about strategic-level policies or information. The team also aims to liaise with other projects and organisations, including industry and international policy bodies in order to establish collaboration agreements and monitor their progress. In addition, the team organises meetings and workshops on strategic themes that are key to the EGI community and attend relevant events and conferences to gather information, contribute to European level discussions and build contact networks. Finally, the team also supports the formulation and development of policies and procedures by the EGI policy groups.

2.4 Community Outreach and Events

Regularly bringing together all members of the EGI ecosystem is vital for enabling collaborations within the community and provides an opportunity to showcase EGI's achievements internally and to new user communities. EGI organises up to two community wide meetings per year, one meeting driven by contributions from the community, and the other focusing on a more structured technical agenda. EGI works in collaboration with other European e-Infrastructure providers and their user

communities to make these meetings as infrastructure neutral as possible, to promote harmonisation and interoperability. In addition to these broad community wide events, smaller targeted events and workshops are organised to address specific technical issues relevant to new and existing user communities.

The events task (which became part of the Community Outreach from PM18) provides support and management for the two large community-driven events organised by the collaboration each year: the Technical Forum and the Community Forum. Later sections summarises the organisational, policy and dissemination activities supporting the two large events that have been held during the first year of EGI-InSPIRE: the EGI Technical Forum 2011² (EGITF11) in September 2011 in Lyon and the EGI Community Forum 2012³ (EGICF12) in March 2012 in Munich, held in conjunction with the second EMI Technical Conference. Plans are also underway for the next Technical Forum in Prague in September 2012.

In addition to the bi-annual forums, EGI-InSPIRE also participated in various meetings organised by the user communities as well as technology-focused events targeted at research communities. In addition to the User and General EGI Sustainability meeting (24th – 26th January, 2012) these included the following:

- HealthGrid Conference⁴, Bristol, UK, 27th July, 2011
- Astro meeting⁵, Paris, 7th November, 2011 (VRC meeting co-located with Astronomical Data Analysis Software & Systems)
- Cracow Grid Workshop⁶, Cracow, 7th – 9th November, 2011
- MAPPER school⁷, London, 1st February, 2012
- SHIWA workshop⁸, Budapest, 9th February, 2012
- RAMIRI⁹ March, Prague, 12th – 14th March, 2012
- European Geoscience Union (EGU) General Assembly¹⁰, Vienna, 23rd – 27th April, 2012

Representatives from EGI-InSPIRE attended all of these events and contributed to the discussions and outcomes of the meetings. At the Cracow Grid workshop and EGU, the Community Outreach Officer gave invited presentations outlining EGI's role and offerings to the communities. The Astro meeting was a planning meeting which led to increased coordination within the Astronomy community. The RAMIRI workshop helped form a number of closer working relationships with a range of ESFRI projects including the EISCAT_3D project and EPOS.

For the EGU event, a Virtual Team was set up to coordinate EGI's contribution to the programme. The benefit of this was to draw in contributions to the event planning process from partners as well as raise awareness of this activity. In addition to a lively and well attended session on grid, HPC and

² <http://tf2011.egi.eu/>

³ <http://cf2012.egi.eu/>

⁴ <http://bristol2011.healthgrid.org/>

⁵ <http://www.eso.org/sci/meetings/2011/adass2011.html>

⁶ <http://www.cyfronet.pl/cgw11/>

⁷ http://www.mapper-project.eu/web/guest/home/-/asset_publisher/dTq5/content/1st-seasonal-school-on-multiscale-modelling-and-simulations

⁸ <https://www.egi.eu/indico/conferenceDisplay.py?confId=656>

⁹ <http://www.ramiri.eu/>

¹⁰ <http://www.egu2012.eu/>

cloud computing, the event also led to the first formal meeting with the coordinator of the VERCE seismology project taking place.

The other workshops and schools have also led to concrete follow on activity within the Technical Outreach team, as outlined in the following sections.

2.5 Technical Outreach

Converting a potential new user community into an active user community requires substantial technical effort and planning at European and national level. This may include identifying which resources will be used within the production infrastructure, ensuring the integration of new resources into EGI, porting applications to an EGI platform, deploying new services to meet the new needs of new communities, training and so on. This task provides the European level coordination, working with the NGI International Liaisons (NILs) to ensure that a coordinated, systematic and strategic approach is taken to this work, including gathering requirements. These new requirements are entered into the EGI Requirements Tracker and processed through the OMB, UCB and TCB as appropriate.

In addition to the technical resources that can be accessed within the NGIs through the NILs, there are further sources of technical expertise that this task coordinates:

- Heavy user communities
- Training marketplace
- Application database
- NGI assets and activities
- External collaborations

This task works to develop consistent information and architecture across these activities in order to offer a suite of services that can be used to help new communities starting to use EGI resources. Once the new community is up and running, support passes to SA1.

2.6 NGI Distributed Competency Centre

The distributed competency centre has been established across the NGIs, first by setting up a network of contacts at NGIs that are responsible for non-operational tasks, called the NGI International Liaisons (NILs). This network draws on expertise within the NGIs in the areas of communications and marketing, strategic planning and policy support, community outreach and technical outreach to new communities. This expertise is brought to bear on solving issues blocking access to EGI resources for new users, through the mechanism of setting up *ad hoc* Virtual Teams established over a short period of a few months to solve individual problems. Such activities could include helping a new community with the integration of their applications into the infrastructure through exemplar ‘proofs of concept’, workshops to establish community priorities, technical effort such as porting new applications into the infrastructure, communication and marketing to publicise new applications and updating policies to establish new modes of operation with the production infrastructure.

The operation of Virtual Teams and the activities of the NILs are described in further detail in Sections 7 and 8.

2.7 Metrics

The purpose of the NA2 metrics is to indicate the level of engagement between the EGI community and the user communities. The metrics also record the outputs of the project, its press activity, the broad impact of the press activity, the scientific output through published papers and the outreach achieved through events. Policy activities are assessed through the MoUs signed with EGI stakeholders, charting the progress towards integrated activities. A summary of the metrics for NA2 is presented below:

Metric ID	Metric	Public / Internal	No. (PQ5-7)	Task
M.NA2.1	Number of press releases issued	P	3	TNA2.2
M.NA2.2	Number of media contacts following press releases	P	127	TNA2.2
M.NA2.3	Number of press cuttings relating to EGI, EGI.eu or EGI-InSPIRE	P	38	TNA2.2
M.NA2.4	Number of interviews given to media organisations	P	4	TNA2.2
M.NA2.5	Number of papers published by users of EGI	P	85	TNA2.2
M.NA2.6	Public events organised by EGI.eu & NGI teams	P	49	TNA2.2
M.NA2.7	Events with EGI presence (stand, presentation, or literature)	P	26	TNA2.2
M.NA2.8	Number of unique visitors per month on the main websites	P	7722	TNA2.2
M.NA2.9	Number of MoUs or agreements signed with technology providers	P	0	TNA2.3 & TSA2.1
M.NA2.10	Number of MoUs or agreements signed with external (non-EGI) resource providers	P	2	TNA2.3 & TSA1.1
M.NA2.11	Number of MoUs or agreements established with collaborating virtual user communities	P	3	TNA2.3 & TNA3.1
M.NA2.12	Number of MoUs or agreements signed with other partners	P	11	TNA2.3
M.NA2.13	Number of policies or procedures recorded by EGI.eu that apply to User Communities	P	2	TNA2.3 & TNA3.1
M.NA2.14	Number of policies or procedures recorded by EGI.eu that apply to Infrastructure Providers	P	6	TNA2.3 & TSA1.1
M.NA2.15	Number of policies or procedures recorded by EGI.eu that apply to Technology Providers	P	1	TNA2.3

These metrics, defined in D1.5 Quality Plan and Metrics¹¹ in PM5 give an indication of the level of activity within NA2 and track some of its outputs. However, these metrics do not fully assess the impact of these activities at a deeper level within the wider community. In order to achieve this, more qualitative measurements are needed. These should include mechanisms for defining user numbers in a way that shows our market penetration, metrics for measuring the progress towards engagement by new user communities, such as the ESFRI projects, and the impact of activities around events, especially in new user communities. Similarly, the metrics around measuring the impact of press outreach activities should go beyond numbers and types of press cuttings to assessing attitude change in the audience, levels of brand recognition and the extent of interaction with EGI's materials, through downloads, comments on blogs, social media campaigns and trends in website traffic.

Evidence of these more qualitative rather than quantitative metrics for NA2 is presented in the following narrative sections.

¹¹ <https://documents.egi.eu/document/436>

3 COMMUNICATIONS & MARKETING

3.1 Dissemination Plan

The plans for dissemination in year two were outlined in D2.9 *Dissemination Plan*¹² and MS217 *Dissemination Handbook*¹³, which were completed during PQ5. The activities carried out to meet the plan and to respond the first year review are outlined below.

3.2 Success Factors

To achieve success in disseminating the project's core messages to its wide range of audiences, the following critical success factors should be met during the lifetime of the project:

- **Effective communication within NA2.2.** For a project of this size it is vital that NA2.2 partners maintain good communication channels.
- **Close collaboration with NA1 and the Policy team.** A close working relationship is essential to ensure messages are accurate and consistent across the whole project.
- **Build on the NA3 networks.** Use networks reached through the user support activities to disseminate the project's messages as widely as possible and to foster new user communities. NA2.2 and NA3 must also coordinate their attendance at events in order to reinforce each other.
- **Clear internal communication of what NA2.2 requires from the other activities to achieve its aims.** Communicate what NA2.2 needs from the other activities to achieve success e.g. timely input of information, regular updates of project webs, leads to potential new users or scientific fields, suggestions for events to attend, early notification of press opportunities, details of key achievements.
- **Manage expectations through clear communication of the task's implementation plan.** The activity will concentrate its resources where it can achieve the biggest wins for the project.
- **Make optimum use of budgetary resources.** The aim is to achieve high production values at a reasonable cost, with re-use of content across a wide range of media e.g. press releases, web, blogs, publicity materials.
- **Build a sense of community.** The dissemination activities should foster a sense of community among new and existing users and also between the activity partners.
- **Reinforce realistic expectations of grid technology.** NA2.2 should communicate both the benefits of grid and DCI technology and also its current limitations.

¹² <https://documents.egi.eu/document/507>

¹³ <https://documents.egi.eu/document/541>

- **Establish communications channels with NGIs.** Pass information to all NGIs and EIROs, including those who are not partners in EGI-InSPIRE and ensure that the NGI's own communication channels are exploited. Gather information from NGIs on case studies, publications, events for dissemination through EGI.eu's communication channels.

3.3 Means for dissemination

The project uses the following channels for communication.

3.3.1 Main website and wiki

A full review of the EGI website¹⁴ was carried out in the light of the review comments, which were received after the milestone MS220 *Review of the website*¹⁵ and a new structure for the navigation was developed, together with reworked and additional content. The new structure is based on a dynamic two tier menu, and pulls out strands of content for new users, existing users, the general public, policy makers and others. The new layout has been realised mainly in html/css by an in-house designer and an external web developer, and then imported into the CMS by CESNET in PQ8, for launch at the EGI Community Forum in March 2012.

A review of the website was carried in PM15, in preparation for MS220 *Review of the website*. A number of use cases have been developed and made available on the website¹⁶, including a use case on research into dinosaur movement which was also published as a news item, and in iSGTW¹⁷. A story on the LizzaPAKP grid-enabled application, which is helping city planners to manage drinking water supplies around Belgrade, Serbia. A case study on hunting viruses using the grid was published in iSGTW in January 2012, and is currently one of the top rated stories on the iSGTW website¹⁸. The Glossary, Staff pages, EGI-InSPIRE's Deliverables and Milestones and other pages have been updated as required throughout the year.

From the 1 May 2011 to 28 February 2012, the following web statistics have been gathered. Over 67,000 people visited the site, corresponding to 162,000 visits and 665,000 page views. Around 40% were new visitors, and 60% were returning visitors. The "stickiness" of the website was quite high in that on average people viewed 4.1 pages per visit and spent an average of 6:26 minutes on the site. The bounce rate was around 51%. The peak in visits was seen on during the week of 19 September, the week of the EGI Technical Forum in Lyon, with 1772 visits on one day that week. The most popular pages were the homepage, the timetables for the main events and the conference websites, followed by the documents pages and the intranet page, which contains details of how to access EGI's management tools. The highest levels of traffic were from search engine traffic at 39%, referrals at 35% and 25% direct traffic. Most people who found the site were searching for EGI or one of the events.

¹⁴ www.egi.eu

¹⁵ <https://documents.egi.eu/document/601>

¹⁶ http://www.egi.eu/results/success_stories/

¹⁷ <http://www.isgtw.org/feature/how-fast-could-t-rex-run?>

¹⁸ <http://www.isgtw.org/feature/hunting-viruses-finding-needle-haystack>



The wiki site¹⁹ has continued to provide the internal engine for the project, and was restructured in November 2011 to reflect the new project structure.

3.3.2 Materials, press and publications

Three issues of the EGI *Inspired*²⁰ newsletter have been prepared during the first three quarters of the second project year. The project team also produced Directors letters²¹ on a monthly basis, which were distributed to the whole consortium. Articles about EGI were also published in the e-IRG Newsletter, *The Parliament* magazine, the IN2P3 Newsletter, the CLARIN newsletter, *Public Service Review: European Science & Technology*, *Supercomputing Online*, *HPC in the Cloud*, *International Innovation*, *Public Service Review: European Union* 22. Extended articles about EGI were published in the first issue of *PanEuropeanNetworks: Science & Technology* and there were 15 EGI-related items in *iSGTW*, which in December and January corresponded to an average of nearly one article per issue²². The article in *PanEuropeanNetworks: Science & Technology* included a front cover logo, and an advert for the Community Forum in the inside cover, next to a full page article by David Willetts, UK Minister for Universities and Science who is a known proponent of e-infrastructures. A press release “EGI releases the first Unified Middleware Distribution” was issued on 27 July, and also released via the EGI news and Twitter feeds. Press cuttings are featured on the EGI website²³.

In PQ7, NA2.2 worked with *Public Service Review* to produce a dedicated 8 page booklet about EGI, which included an article about the Digital Agenda Commissioner, Neelie Kroes by the *Public Service Review: European Union* Editor, a 4 page article on EGI and a full page advert for the Community Forum. This was distributed to 140,000 policy subscribers by email and in printed form at the SciTech Europe event in Brussels in November.

Further articles about EGI will be published in *PanEuropeanNetworks: Science & Technology* and *iSGTW* during PQ8 A dedicated weblink from the newly re-launched PanEuropean Networks website will point to the EGI website for 12 months from January 2012, and web traffic from this source will be monitored. The DVD of the SciTech Europe masterclass will also be issued in PQ8 on the cover of

¹⁹ Wiki.egi.eu

²⁰ <http://www.egi.eu/news-and-media/newsletters/>

²¹ http://www.egi.eu/news-and-media/directors_letters/

²² <http://www.isgtw.org/feature/protecting-portugals-aveiro-lagoon;>
<http://www.isgtw.org/feature/hunting-viruses-finding-needle-haystack;>
<http://www.isgtw.org/spotlight/gem-user;><http://www.isgtw.org/feature/roots-all-arabic;>
<http://www.isgtw.org/feature/fixing-analog-link-digital-chain;>
<http://www.isgtw.org/feature/horizon-2020-structural-funds-2014%E2%80%932020-%E2%80%93what-expect>

²³ <http://www.egi.eu/news-and-media/press/>

PSR: Science & Technology. Brochures featuring case studies on health and earth sciences will also be produced for events, along with the EGI Annual Report.

3.3.3 Social media and videos

The team has also been working closely with the EGI-InSPIRE work package leaders to encourage regular contributions to the EGI blog from across the project and wider community. By the end of March 2012, 92 blog posts had been contributed in total. The EGI team worked with CESNET to publish the feed from the most recent blog posts on the home page of the website in time for the EGI Technical Forum.

Members of the dissemination team have also blogged for the GridCast blog²⁵ at events such the Innovation Forum, Brussels, the eScience2011 event in Sweden and the SARA 40th anniversary event. A new social media strategy was developed in PQ7²⁶, creating dedicated social media feeds for general, user community, tech/ops and policy through Twitter, Facebook and the blog, bringing the strands together through IFTTT (If This Then That, a social media aggregator). News items published on the website are automatically fed to EGI's Twitter accounts and Facebook pages via RSS feeds. Following EGI via social media is now much easier, as the one click buttons feature prominently on the home page, and at the footer of every webpage. Every webpage also has a 'share this' button at the top, making it convenient for visitors to share our contents via their preferred social media channels. In addition, every news and case study article has a more prominent button to encourage sharing. To publicise the revitalised Facebook page²⁷, the EGI mascot competition used Facebook as a forum for discussion and keeping in touch with progress of the competition. The competition included a People's Choice prize, determined by public vote (voting period from 11 January to 8 February). This successfully stimulated activities, with some entrants using EGI's Facebook page as a public forum to campaign for their favourite mascot. The People's Choice and a Grand Prize winner were announced via social media on 15th February. According to 'Facebook Insights' statistics of the page (sample period 20 December 2011 to 12 April 2012), the pre-announcement of the mascot competition result (posted on 14 February) and the actual result announcement were amongst the top 3 highest ranking posts on the EGI Facebook page for the categories: 'Engaged users', 'Talking about this' and 'Virality'.

The EGI Flickr account was re-launched in October 2011, it received a total of 724 views up to 12 April 2012.

EGI is also working with a local film production company, Een van de Jongens, to produce a series of videos called "Stories from the grid". These short, YouTube friendly videos aim to introduce some of the work being carried out using the grid. The first video "Episode 1: The cone snail and the hunt for more power anaesthetics²⁸" was released on 29 February 2012 at the ISGC2012 meeting to accompany the WeNMR keynote by Alexandre Bonvin. The video was announced through a press release on the website and the AlphaGalileo and Cordis press services, as well as through the social media channels. Since its launch, the video has had 793 views (statistic taken on 12 April 2012), 11 'Likes' and 0 'Dislikes' on EGI's You Tube channel. 26.7% was traffic to the channel, directed from 'external websites' (i.e. outside You Tube and excluding Google search) – amongst these, the top three sites were: Facebook (11.4%), www.egi.eu (7.1%) and Twitter (2.2%). Two further videos in the

²⁵ www.gridcast.org

²⁶ www.egi.eu/news-and-media/newsletters/Inspired_Winter_2012/EGI_going_social.html

²⁷ <https://www.facebook.com/europeangrid>

²⁸ <http://go.egi.eu/conco>



series are in preparation on the lost sounds orchestra and high energy physics. According to 'Facebook Insights' statistics (sample period 20 December 2011 to 12 April 2012), the post "Stories from the Grid, episode 2 - the making of!" (content shared from Een van de jongens's Facebook page on 13 March 2012) was the highest ranking post on the EGI Facebook page for the category: 'Reached'.

3.3.4 Events and marketing to new users

The EGI.eu dissemination team worked with local NGI contacts to present the project at events throughout the year. These included booths at ISC2011 in Hamburg, Germany in June, in collaboration with KIT and at HPCS 2011 in Istanbul, Turkey in collaboration with the team at TUBITAK. EGI also hosted a booth at the HealthGrid 2011 event in Bristol, UK, run by the User Community Support Team. Members of the dissemination team have also blogged for the GridCast blog²⁹ at events such as e-Challenges event in Florence in October. NA2.2 attended a number of additional events during PQ6, including the TERENA communications meeting in Belgrade, Serbia in September, the UK All Hands Meeting, York, in September, and a booth at eChallenges in October. EGI.eu also worked together with NGI_HU, who gave several talks on EGI and services for the DCI Summer School 2011³⁰. This will be repeated for the summer school 2012³¹. EGI partner SWiNG also worked with KIT to promote and provide material for the International GridKa School in September 2011³².

In PQ7, the work packages NA2 and NA3 merged. The new collaborative events team formed between TNA2.2 and TNA2.4 is jointly planning outreach and attendance at events, and has worked on attendance at events such as the SHIWA workshop in Budapest and CloudScape IV, Brussels in February and ISGC 2012 in Taipei, and is looking ahead to the EGI Community Forum, the EGU General Assembly in Vienna and the HealthGrid 2012 event in Amsterdam.

NA2.2 has continued to participate in the Programme Committee for the ISGC2012 event in Taiwan in March 2012 and to the PC and LOC for the Community Forum in March, contributing to the website, the exhibition and sponsorship guides, the marketing materials and advertising of the event.

The communications team also attended and prepared for a number of additional events during PQ7. NA2.2 produced an EGI postcard added to the delegate pack for the first European Gender Summit in Brussels, which led to EGI signing the European Gender Summit Policy Manifesto. Activities also included hosting a booth at SC11, Seattle, US in November, an event which attracted around 10,000 delegates. EGI distributed T-shirts at the event which featured a QR code leading to a hidden "Easter Egg" page on the website³³, so that access to the page from the T-shirts could be tracked. As a result there were 90 unique page views on the website immediately around the event of which 50% went on to view other areas of the website after spending around 5 minutes reading the initial landing page.

EGI also hosted an information stand and a masterclass given by the EGI.eu Director at SciTech Europe in Brussels, Belgium in November. A DVD featuring the masterclass, slides and the 8 page booklet is in preparation for distribution on the cover of *PSR: Science&Technology*. The team also

²⁹ www.gridcast.org

³⁰ <https://www.mgk.hu/content/dci-summer-school-11-16-july-budapest-hungary>

³¹ <http://www.lpds.sztaki.hu/summerschool2012>

³² <http://gridka-school.scc.kit.edu/2011/53.php>

³³ <http://www.egi.eu/node.html>



attended the eScience 2011 event in Stockholm in December, including blogging from the event and publishing an article in iSGTW based on an interview with Nobel Prize winning scientist, Brian P Schmidt³⁴. EGI has a booth and presentations at ISGC2012 in Taipei, and the first episode of “Stories from the Grid” was launched to accompany one of the keynote talks, as described above. EGI also contributed to the 10th Anniversary celebration DVD for the event.

3.3.5 EGI Events Outreach

3.3.5.1 EGI Technical Forum 2011

The EGI Technical Forum was held from 19-23 September 2011 in Lyon, France. The event was organised in collaboration with local hosts CC-IN2P3 and France Grilles. In total, 655 participants registered for the event. There were 132 contributions from 296 speakers and 34 session conveners. Women made up 9% of speakers and 21% of session conveners. The event was collocated with the Open Grid Forum, Grid2011, GlobusEUROPE, a French Grid Day and the 9th e-Infrastructure Concertation meeting, which was organised by the e-ScienceTalk project in collaboration with the EC. Of the total number of delegates, 120 attended the Concertation meeting.

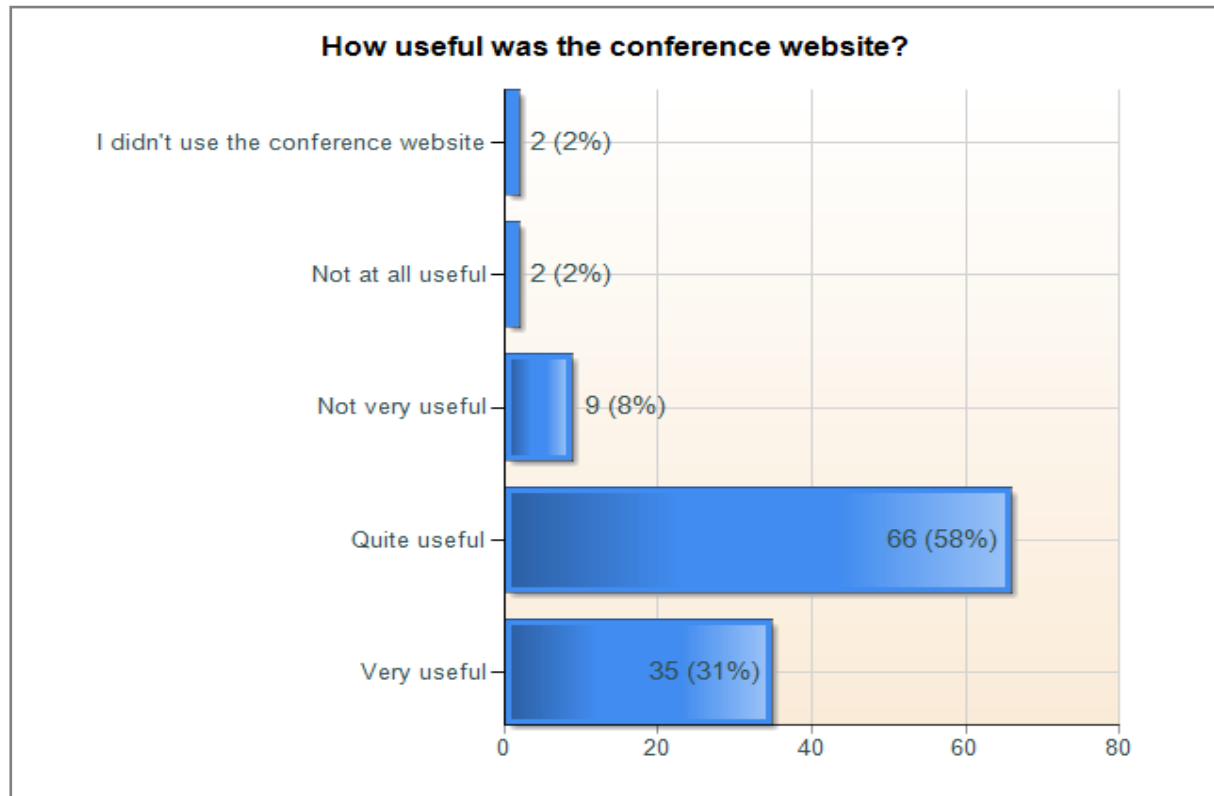
NA2.2 participated in the Programme and Organising Committees. Content was developed for the conference website³⁵ and the site was regularly updated. The dissemination team worked with the Organising Committee and the local organisers to produce the badges, signage, programmes, giveaways and conference bags.

A co-marketing agreement was signed between EGI, GlobusEUROPE and Tabor Communications to cover the EGI Technical Forum and GlobusEUROPE conference. A joint press release was issued “Tabor Communications announces co-marketing partnership for the European Grid Forum and GlobusEUROPE conference” on 13 September, and also released via the EGI news and Twitter feed. The US *HPC in the cloud* Editor attended the conference and posted several articles in *HPC in the Cloud* based on interviews at the event, including videos. A separate media invitation was issued to 2,600 journalists through the AlphaGalileo press service.

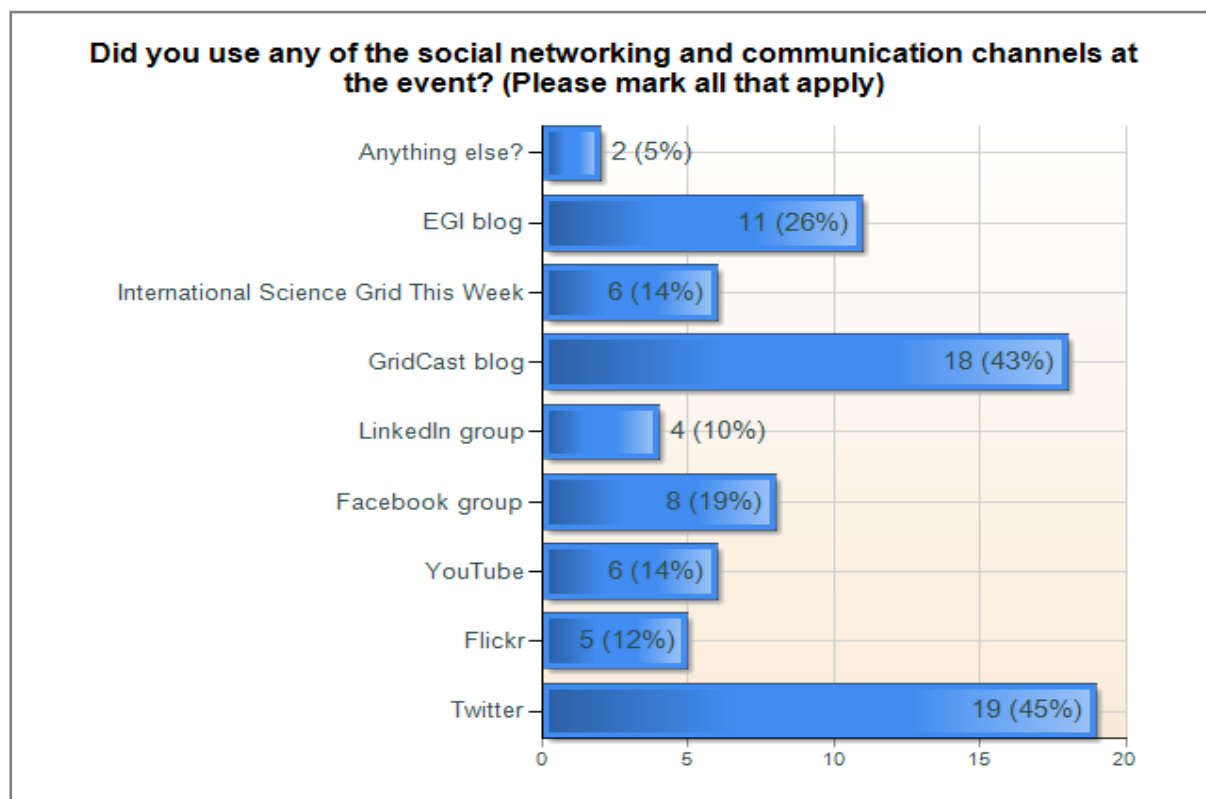
NA2.2 ran an outreach campaign during the EGI Technical Forum 2011 event which included supporting the journalist from *HPC in the cloud*, running an EGI dissemination booth, establishing the social media channels and blogging from the event. During the event, there were 250 Tweets from 27 people, 24 photos on Flickr tagged with ‘egitf11’, 27 blog posts on GridCast, including 9 videos. Before the event, the website received 3000 unique visitors, spending nearly 3 minutes on the pages, with 30,000 pages viewed. Nearly 1000 of these visitors went to the website during the event and 25% of these were new visits. In the run up to the event, the team updated the website with content about sponsors, added poster and presentation templates for delegates and also printed booth materials such as posters and banners. The team also created promotional materials for distribution on the booth to advertise the EGI Community Forum in Munich in March 2012, and participated in the Programme and Organising Committee. A bookmark was designed and printed to advertise the training market place in collaboration with NA3. During the forum, a number of MoU’s were signed and announced, between EGI and SAGrid, EGI and SIENA and EMI and EDGI.

³⁴ <http://www.isgtw.org/feature/where-astronomy-meets-data>

³⁵ <http://tf2011.egi.eu/>



A feedback survey was launched at the end of the event and received 114 responses, a response rate of 17%. Nearly 90% of respondents found the conference website quite or very useful, tying in with the high hit rate for the site. Around 75% found the registration process quite or very easy to use and around the same percentage found the EGI staff helpful (with 23% responding 'I don't know'). Over 80% referred to the online programme for the event, and 69% found the short programme provided in the badges useful. Only 40% reported that they used the printed programme provided in the conference bags. About 10% found the registration fees good value for money, with 46% finding them acceptable and 39% higher than average for similar events. For the social media channels, around a quarter referred to the EGI blog, 14% to iSGTW, 43% read the GridCast blog, 19% looked at the Facebook group and 45% used Twitter.



3.3.5.2 EGI Community Forum 2012

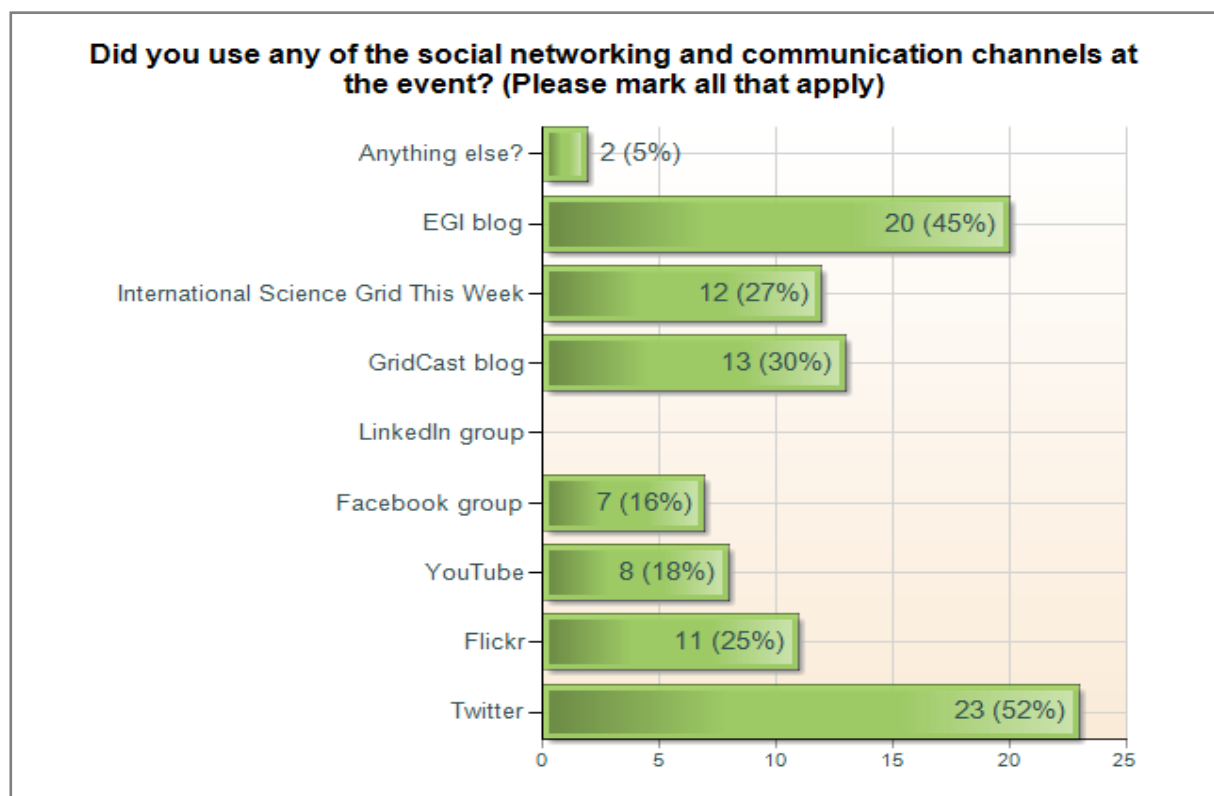
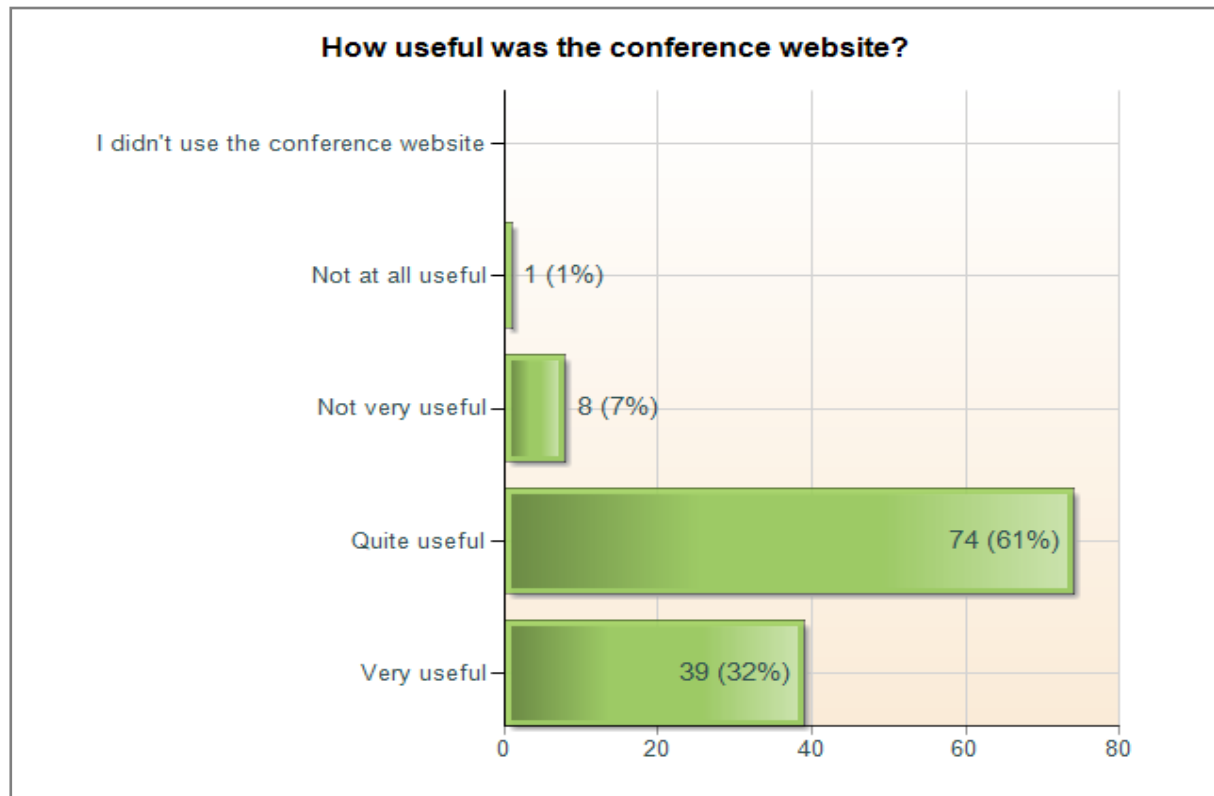
The EGI Community Forum 2012³⁶, was held in Munich between 26-30th March 2012, partnership with the Munich Network Management, a consortium of four German research institutions. The Community Forum was held in conjunction with the 2nd EMI Technical Conference and co-located with the 2nd Annual European Globus Community Forum. Through the media partnership with Tabor Communications, the EGI Community Forum is a banner featured event on the HPCwire events website, and is included in the events feed sent to all subscribers for *HPCwire*, *HPC in the cloud* and *Datanami*.

The new website for EGI featuring new images, a new structure and enhanced social media interactivity was launched at the EGI Community Forum in Munich. The new social media channels were advertised at the event, as part of an outreach package including visiting journalists from iSGTW and the US and blogs.

The winning entries to the mascot Facebook competition announced on 15 February were presented at the event, and a media training course was held for the benefit of collaborating partners and NGIs. The event was attended by 518 participants and featured 171 contributions from 208 speakers and 44 session convenors. The marketing team produced a combined printed programme and book of abstracts. During the event, there were over 400 Tweets from more than 60 users, including the EGI news, policy, users and technical twitter feeds. Around 220 photos were uploaded to Flickr using the egicf tag and over 150 delegates downloaded the Conference4me conference app. The GridCast blog brought together 10 bloggers, posting more than 30 posts and 14 videos from the event. The event website received over 5380 visits from 1700 visitors. A Zoomerang survey was issued to the delegates, and 122 responses were received. In total, 93% found the conference website useful or

³⁶ Cf2012.egi.eu

very useful and 96% reported that registration was easy to use. 90% reported that the conference staff were helpful, or very helpful. For social media channels, of those that responded, 52% used Twitter, 25% Flickr, 18% viewed YouTube, 30% the GridCast blog and 45% the EGI blog.



Event	Participants	Contributions	Speakers	Session convenors
EGI Technical Forum 2010	611	288	168	53
EGI User Forum 2011	427	196	173	34
EGI Technical Forum 2011	655	132	296	34
EGI Community Forum 2012	518	171	208	44

Table 1 – Table comparing figures for EGI events in PY1 and PY2

3.3.6 Collaboration with NGIs and other bodies

EGI is very active in the e-Infrastructure dissemination landscape and is part of a communications working group run jointly by TERENA³⁷, DANTE (Delivery of Advanced Network Technology to Europe)³⁸ and EGI, and has regular meetings with the communication representative for e-IRG. Joint dissemination efforts run through the majority of the MoUs signed with EGI and EGI-InSPIRE and summary reports of these activities have been generated.

Since November 2011, NA2.2 has also worked with the NGIs through the virtual Teams. A Virtual Team has been established in order to coordinate on NGI participation in the European Geophysics Union event to reach out to current users of the infrastructure in the earth sciences field. A further Virtual Team was also set up to work with the NGIs to contribute organisational and people profiles, together with local success stories to the EGI website. The Virtual Team set up to work with the NGIs to contribute organisational and people profiles to the EGI website closed at the end of PQ7 and the content will be launched with the new website. Reports on the virtual teams are included in Section 7 below.

NGIs also report their nationally focused EGIactivities within the EGI-InSPIRE project through the quarterly milestone reports. During PQ5, e- ARENA hosted a stand at a session of the State Panel on high technology and innovations, devoted to the development of scientific research infrastructures of “mega science” facilities, chaired by the Prime Minister of the Russian Federation V.V. Putin “Grid at JINR” presented Google Earth dynamic overlays for WLCG and showed the experiments³⁹⁴⁰. The UK team established the Community Champion Programme in the UK, which included establishing the network, holding a one day workshop and coordinating fortnightly meetings of the Champions, who are disseminating their expertise to Champions in other research fields.

IGI followed up the EGI User Forum in Vilnius EGI-UF by presenting the materials produced at an IGI/NGI workshop in Italy. IISAS produced a website for the 7th International Workshop on Grid Computing for Complex Problems GCCP2011, October 24-26, 2011, Bratislava⁴¹. The ex-president of SAS, Stefan Luby, also gave an interview for Slovak radio *Z prvej ruky*. KTH is planning for a cloud

³⁷ <http://www.terena.org/>

³⁸ <http://www.dante.net/>

³⁹ http://www.jinr.ru/img_news/11/080711/p1_b.jpg

⁴⁰ http://www.jinr.ru/news_article.asp?n_id=958

⁴¹ <http://conference.ui.sav.sk/gccp2011>



workshop in collaboration with StratusLab and Venus-C at the upcoming eScience 2011 conference in Sweden in December.

Partners in NA2.2 from IPB attended LMC8 -8th Liquid Matter Conference in Vienna and the TEDx event in Belgrade. CESNET published a year book for 2010 and hosted a workshop on campus network monitoring.

3.4 Summary and Analysis

The second year of the project has been very active for the communications and marketing team. The ground work for many of the dissemination channels was carried out in year one and year two has seen the maturing of several initiatives in the areas of social media, policy outreach, videos and the website. A further analysis of the global communications task is also included in M115 Global Task Review⁴².

In considering the success factors for the outreach activities, the following summaries can be added:

Effective communication within NA2.2

The new themed social media channels, Directors letters and quarterly newsletters all enable the members of NA2.2, the NILs and the NGIs to mutually communicate on activities, strategies and goals. The newsletter in particular is a collaborative effort, coordinated by the central team and features profiles and use cases from NGIs, which are also used in iSGTW, on the website and in the annual report. There are meetings held at the bi-annual major events to share experiences and training and the wiki pages are kept up to date to share contact details and key documents.

Close collaboration with NA1 and policy team

NA2.2 works very closely with NA1 to deliver the two annual EGI events, and the outreach strategies are programmed into the development of the events at an early stage through both the Local Organising Committee and Programme Committee, from the initial site visits onwards. The policy team contributes content to the website, monitors the dissemination activities around the MoUs and contributes articles to iSGTW, the EGI blog, GridCast and the news, Twitter and Facebook feeds.

Build on the NA3 networks

Collaboration with NA3, particularly around events, has become more streamlined now that the NA3 and NA2 activities are merged. Attendance at meeting is planned jointly, and couples development of the materials produced centrally, such as poster, brochures, booths and branded materials, with the content generated by the community. The Virtual Team set up to coordinate contributions from the NGIs for the EGU General Assembly is a good example of how this process works in practice. The use cases gathered by the NGIs from their contacts in the geographical sciences community will be added to the poster and materials, and the NGIs will be invited to attend the event, present during the grid session and be part of the booth staff. The ESFRI projects and their support projects are a key audience for targeting new users, and the communications teams will seek to work with them, either through MoUs, through participation in dissemination work packages, such as for ENVRI and BioMedBridges, or by attendance at their community events, once these are established.

Clear communication of what NA2.2 requires from the other activities to achieve its aims

⁴² <https://documents.egi.eu/document/961>



The Director's letters and newsletter are sent to every member of SSO, including the NILs, with a permanent invitation to contribute materials and announce events. Web content has been gathered through a Virtual Team, and NA2.2 will also participate in the Virtual Team set up to compile an EGI compendium. The EGI blogs and social media feeds are advertised at each of the main EGI events, with an invitation to participate. The communications strategy is also available from the wiki site, and is published on the website. However, the feedback from the global services summarised in this year's EGI Global Task Review⁴³ indicates that NGIs are still not fully aware of the central EGI channels open to them – which will be addressed in PY3. The NILs structure continues to expand however, as not all NGIs have yet nominated a contact, so this situation may improve through the VT team leader meetings and mailing lists.

Manage expectations through clear communications of the task's implementation plan

The materials produced by the central team rely heavily on strong input from NGIs, in terms of use cases, reports, articles and further dissemination of press materials. For this reason it is important that NGIs are aware of the channels open to them as described above, and also develop their own national communications channels, with users and with the press and general public.

Make optimum use of budgetary resources

The aim is to achieve high production values at a reasonable cost. Much of our communication with users, the general public and the press is achieved through free, social media channels. Measuring the impact of these efforts is also measured through free tools, such as Google Analytics and Klout. Reaching the press requires a small level of expenditure on a commonly used press service, AlphaGalileo, although this again is run by a not for profit organisation. The channels provided by the e-ScienceTalk project are available without charge to EGI, such as iSGTW, GridCast and the e-ScienceBriefings on policy but supported by free press registrations to EGI events. All printed materials are available through multiple online channels, and the quantities of printed materials produced for conferences and events are generally decreasing, being largely aimed at driving traffic to online resources, such as through QR codes on postcards, flyers, T-shirts and posters. However, feedback from the NGIs indicates that some high production value materials are beneficial for targeting policy makers and funders, such as the Public Service Review brochure and the Annual Report. In general, reaching a policy audience is the most expensive form of outreach, due to the high production costs of the commercially run, very high circulation publications that are the key channel for reaching this difficult but vital audience.

Build a sense of community

EGI itself is a strong and collaborative community. This is evidenced by the growing success and attendance levels at the two EGI main events each year. The programme for these events feature demos, presentations and posters, with several parallel tracks and co-located meetings. The events themselves are well attended, with the EGI Technical Forum in Lyon attracting the highest number of delegates since 2007, and are now also attracting good coverage in the trade press through our media partnerships with Tabor Communications, iSGTW and GlobusOnline. However, the success and sustainability of the community relies on being able to reach out beyond the existing communities, to the new users. One way to achieve this is through creating online and virtual communities. Within the EGI community, this is being to be achieved through the Virtual Teams. Outside the community, EGI is building its presence on tools with large pre-existing user bases, such as Research Gate, Google+, Twitter, Facebook, LinkedIn and YouTube.

⁴³ <https://documents.egi.eu/document/961>



Reinforce realistic expectations of grid technology

The realities of working with the grid are communicated through our use cases, and by collaborating with the discussions with the user communities led by the user community support team. Articles in iSGTW concentrate on the challenges that the work featured has addressed, including the challenges presented by the use of the infrastructure itself. The aim is also to include more 'How to' information on the website, to give users a practical guide and this is a top level link on the new website. The website has been reorganised in its new version to pull together information that is targeted specifically at new users to make this information easier to find.

Establish communications channels with NGIs

As outlined above, there are several communications channels with NGIs in operation, through the EGI events, mailing lists, newsletters, wiki site, website, social media, Virtual Team structure and face to face to meetings. In PY3, the communications team will work with the NILs and the NGIs to ensure that they are fully aware of these channels and take advantage of them.

To summarise, the ground work established during PY1 has been built on significantly during PY2, and the main activities for PY3 will be to work with the user community support team and NGIs to maintain a high profile presence at user community events, concentrate outreach around the EGI events, target the ESFRI projects and their support projects, and maintain the various outreach channels, websites and social media feeds, supported by materials generated by the community for the community. The detailed plans for these activities are presented in D2.15 Communications Strategy⁴⁴.

⁴⁴ <https://documents.egi.eu/document/1070>

4 STRATEGIC PLANNING AND POLICY SUPPORT

4.1 Strategic Planning

Following on from the first project review, the name of this task was expanded from “Policy Development” to “Strategic Planning and Policy Support”. The new task description includes activities at the strategic level that were started during the first year and that are now formally defined to better support EGI’s strategic decision making process.

4.1.1 Strategic Papers / Reports

The SPT has supported the development of the EGI Strategic Plan by providing several key pieces of information such as a market segment analysis, a detailed value network analysis a SWOT analysis for the different roles in the EGI ecosystem and inputs to the structure and content of the document.

For strategic policy matters relating to the EC, the SPT provided inputs by participating in a number of surveys either by answering the questionnaires or by submitting a position paper. EGI.eu has provided inputs to:

- the survey on cloud computing⁴⁵
- the survey on the Common Strategic Framework for Research and Innovation⁴⁶
- the survey on the European Research Area⁴⁷.

In relation to the EU2020 initiatives, during PY2, the SPT has updated the list of actions that apply to EGI, mainly in the area of the Digital Agenda for Europe⁴⁸ and the Innovation Union⁴⁹. A number of key indicators to measure the contribution of EGI to these actions have been identified and will be used to build the EGI Scoreboard.

Concerning the ERIC legal framework, following the analysis made during the first year, the SPT prepared and submitted a number of questions to the ERIC Team for clarifying some aspects relevant to EGI. The ERIC team provided general answers to these questions⁵⁰.

In the area of impact assessment, the SPT has participated in the study “Development of Impact Measures for e-Infrastructures”⁵¹ by contributing to the survey and participating in the dissemination workshop. The SPT has also contributed to the beta-test phase of the ERINA+ impact assessment tool⁵².

⁴⁵ <https://documents.egi.eu/document/1011>

⁴⁶ <https://documents.egi.eu/document/664>

⁴⁷ <https://documents.egi.eu/document/891>

⁴⁸ https://wiki.egi.eu/wiki/Europe_2020_actions/DAE

⁴⁹ https://wiki.egi.eu/wiki/Europe_2020_actions/IU

⁵⁰ <https://documents.egi.eu/document/1011>

⁵¹ <http://www.ri-impact.eu/>

⁵² <http://www.erinaplus.eu/>

4.1.2 Articles

The SPT strives to communicate on-going developments through targeted messages. In terms of message delivery through the EGI blog, the SPT authored eight articles⁵³:

1. Understanding costs of e-Infrastructures
2. Exploring Business Models to Sustain EGI
3. Report from e-IRG Workshop
4. Horizon 2020 - a new dawn for e-Infrastructures?
5. EGI in a Virtual World
6. Driving EGI policy
7. How strategic is Common Strategic Framework for EGI?
8. EGI Sustainability – Clearer Skies

The SPT has also contributed to iSGTW with an article titled: “Horizon 2020 & Structural Funds (2014–2020) – What to expect”⁵⁴. In the e-IRG newsletter, the SPT published two articles: “EGI on a virtual road”⁵⁵ and “Towards a sustainable EGI ecosystem”⁵⁶. One more article for the e-IRG newsletter is planned during the last quarter of the PY2 and it will be related to EGI and the ERA.

SPT regularly contributed to the EGI Inspired newsletter

1. Spring 2011: Driving EGI policy
2. Spring 2011: EGI User Virtualisation Workshop
3. Summer 2011: In search of the best practices of Service Level Management
4. Autumn 2011: Horizon 2020 - what to expect?
5. Winter 2012: European Research Area – no investment without reform
6. Winter 2012: Sustainability: the next steps

4.1.3 EGI Compendium Virtual Team

The Virtual Team project “EGI Compendium”⁵⁷ has been established 5th December 2001 to meet the need of EGI for a structured collection of information describing NGIs/EIROs and their relationships to the user communities. The goal is to: 1) increase transparency; 2) support better strategic making process; 3) provide an essential body of information for the various stakeholders.

The Virtual Team has been established under the guidance of the EGI.eu Strategy and Policy Manager and has active representatives from the Irish and Moldovan NGIs. Through a number of VT meetings, the group has performed the following tasks:

- Analysis of background material (EGI Design Study knowledge base, e-IRG knowledge base, TERENA Compendium, OSIRIS Study)
- Defined a draft structure for the questionnaire
- Identified a tool for the first year’s data collection
- Prepared a draft online survey
- Sought public comment phase on the survey

⁵³ <http://www.egi.eu/blog/categories/policy/>

⁵⁴ <http://www.isgtw.org/feature/horizon-2020-structural-funds-2014–2020—what-expect>

⁵⁵ http://www.e-irg.eu/images/stories/e-irg_newsletter_july_2011.pdf

⁵⁶ http://www.e-irg.eu/images/stories/e-irg_newsletter_dec_2011.pdf

⁵⁷ https://wiki.egi.eu/wiki/VT_EGI_Compendium

By the end of the PY2, the group plans to finalise the questionnaire and launch the data collection. During the first part of PY3, the data will be analysed and organised for distribution to the EGI Community.

4.1.4 Workshops

The SPT supported the community by chairing, note taking and post-event reporting (see below) of the User Virtualisation Workshop (12-13 May 2011, Amsterdam). The SPT also supported the organisation of the first NGI International Liaisons Kick-off Meeting held in Amsterdam on 10 Nov 2011 and the 2nd workshop around User and General EGI Sustainability held 24-26 Jan 2012 also held in Amsterdam. In addition to supporting the agenda structure and content, SPT members managed a breakout session and provided a presentation on value and governance of EGI.

Date	Location	Title	Participants	Outcome (Short report & Indico URL)
12-13/05/2011	Amsterdam	User Virtualisation Workshop	72	https://www.egi.eu/indico/conferenceDisplay.py?confId=415 https://documents.egi.eu/document/258
10/11/2011	Amsterdam	NGI Int'l Liaisons Kick-off Meeting	35	https://www.egi.eu/indico/conferenceDisplay.py?ovw=True&confId=659
24-26/01/2012	Amsterdam	User and General EGI Sustainability Workshop	60	https://www.egi.eu/indico/conferenceDisplay.py?ovw=True&confId=709
27/01/2012	Amsterdam	CHAIN-EGI meeting	8	agenda.ct.infn.it/conferenceDisplay.py?confId=701

The SPT also contributed to the organisation of the two community events (Technical Forum and Community Forum) by participating in the program committees. Furthermore, it has organised and chaired policy related sessions during these meetings:

- TF11: EGI Policy workshop focused on disseminating of the latest developments in the area of Horizon 2020 and Structural Funds through two hand-outs⁵⁸, presentations and discussions
- TF11: EGI Sustainability and Business Models workshop discussed the sustainability aspects of the EGI ecosystem entities (user communities, technology providers, NGIs). An analysis document based on a survey was given to the attendants while a summary report was written afterwards⁵⁹
- CF12: Sustaining the EGI ecosystem workshop covered various initiatives contributing towards a stable EGI ecosystem including presentations and discussions regarding the EGI2020 strategy and evolution of the EGI business model.

⁵⁸ <https://documents.egi.eu/document/799> and <https://documents.egi.eu/document/800>

⁵⁹ <http://go.egi.eu/egitf11-sustainability-workshop>

4.2 Policy Support

4.2.1 EGI Policy Groups

The first year of EGI policy activities was devoted to managing the transition from a project-based organisation of the Grid activities and to establish policy bodies through Terms of References and the Policy Development Process. This transitional year was described in D2.8 Annual Report on EGI and its External Activities⁶⁰. During PY2, the Strategy and Policy Team (SPT) has supported the EGI policy groups activities and continued to provide dedicated secretarial support for the groups. The purpose, definition and the way EGI policy groups work is described on the EGI website⁶¹. Some ToR was revised to include the possibility for groups to appoint a task force (e.g., based on this, the TCB has created the EGI Federated Clouds Task Force⁶²)

The number of meetings held in the second year of the EGI-InSPIRE project varied from group to group (see **Table 2**). In the second year of the project, the EGI Policy groups intensified their policy activities so the number of meetings considerably increased if compared to the first year.

Policy Group	Number of meetings Y2	Number of meetings Y1
SPG	7	2
SVG	<i>Ad-hoc</i>	<i>Ad-hoc</i>
SCG	3	2
OMB	11	9
OTAG	4	3
OAT	0	2
UCB	7	2
USAG	1	2
TCB	5	5
EGI CSIRT	<i>Ad-hoc</i>	<i>Ad-hoc</i>

Table 2 – Policy Group Meetings

4.2.2 Policy Development

Since January 2011, all policies and procedures created within EGI by any of the EGI Policy Groups have been approved under the agreed Policy Development Process (PDP)⁶³. This process has ensured that all relevant parties, especially those affected by specific policies, have the opportunity to be part of policy discussions, review draft proposals and provide their input during the policy making process.

During the second year, the following policies and procedures were approved:

⁶⁰ <https://documents.egi.eu/document/377>

⁶¹ <http://www.egi.eu/policy/groups/>

⁶² <https://wiki.egi.eu/wiki/Fedcloud-tf:FederatedCloudsTaskForce>

⁶³ <https://documents.egi.eu/document/169>

- SPG "Service Operations Security Policy"⁶⁴
- SPG "Endorsement and Operation of Virtual Machine Images"⁶⁵
- OMB Resource Centre Registration and Certification⁶⁶
- OMB Procedure for the re-computation of SAM results and availability/reliability⁶⁷
- OMB Resource Centre decommissioning procedure⁶⁸
- OMB Production Service Decommissioning Procedure⁶⁹
- TCB Requirements management process⁷⁰
- SVG: The Software Vulnerability Issue handling procedure⁷¹

In addition, the SPT has provided a draft escalation section for the Operation Level Agreements (OLAs) and aligned appropriate copyright statements.

4.2.3 Glossary Coordination Groups

During PY2, the common EGI Glossary draft has been slightly updated with contributions from the EGI Strategic document and from the User Community Support team. The plan is to release the official version by the end of PY2⁷².

4.3 Collaboration with External Partners

4.3.1 Memorandum of Understanding

External collaborations⁷³ continued to be established during PY2 with 16 MoUs were signed⁷⁴: CHAIN (Project), DECIDE (Project), e-ScienceTalk (Project), gSLM (Project), LSGC (VRC), MAPPER (Project), ScalaLife (Project), SIENA (Project), CSIR MERAKA (Resource Infrastructure Provider), HMRC (VRC), EDGI (Project), e.nventory (Project), SHIWA (Project), BCC/Ukraine (Resource Infrastructure Provider) the WLCG (VRC) and SCI-BUS (Project) (see table 3). Since the beginning of the EGI-InSPIRE project, a total of 25 MoUs were signed. Four more MoUs are under active negotiation: DANTE (Organisation), UVACSE (Technology Provider), DC-NET/DHC, Comp Chemistry and Astronomy/Astrophysics (VRC).

Category	PY1	PY2
Virtual Research Communities	2	3
Projects	2	11
Technology Providers	4	0
Resource Infrastructure Providers	1	2

Table 3 – MoUs categories and aggregated numbers

⁶⁴ <https://documents.egi.eu/document/669>

⁶⁵ <https://documents.egi.eu/document/771>

⁶⁶ <https://wiki.egi.eu/wiki/PROC09>

⁶⁷ <https://wiki.egi.eu/wiki/PROC10>

⁶⁸ <https://wiki.egi.eu/wiki/PROC11>

⁶⁹ <https://wiki.egi.eu/wiki/PROC12>

⁷⁰ <https://documents.egi.eu/document/440>

⁷¹ <https://documents.egi.eu/document/717>

⁷² https://wiki.egi.eu/wiki/Glossary_V1

⁷³ <https://wiki.egi.eu/wiki/Agreements>

⁷⁴ <http://www.egi.eu/community/collaborations/>

The progress of activities within the current MoUs are monitored through established milestones direct engagement with the partners and the progress is recorded and accessible for the partners while all the reports are stored in the EGI document repository.

4.3.2 External policy activities

EGI has actively participated in the work of the e-Infrastructure Reflection Group (e-IRG)⁷⁵, the Open Grid Forum (OGF)⁷⁶, the EUGridPMA⁷⁷ and the International Grid Trust Federation or IGTF⁷⁸. Overall, EGI representatives attended the three OGF meetings, one e-IRG workshop and one EUGridPMA meeting. More detailed information about EGI external policy activities in IGTF and EUGridPMA are described in MS224 Security Activity in EGI⁷⁹.

4.3.3 External events

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
24/11/2011	Brussels	SciTech Europe	305	Steven Newhouse presented in a masterclass on EGI: linking computers across Europe for European Science ⁸⁰ EGI was also one of the sponsors of the event
30/01/2012	Brussels	ERA Conference 2012	400	Post-event article produced ⁸¹ Event page ⁸²
20/02/2012	Brussels	Workshop Development of impact measures for e-Infrastructures	30	Sergio Andreozzi gave presentation about EGI view on the survey ⁸³
23-24/02/2012	Brussels	CloudScape IV	70	Steven Newhouse gave presentation ⁸⁴

⁷⁵ <http://www.e-irg.eu/>

⁷⁶ <http://www.ogf.org>

⁷⁷ <http://www.eugridpma.org/>

⁷⁸ <http://www.igtf.net/>

⁷⁹ <https://documents.egi.eu/document/965>

⁸⁰ <http://www.publicserviceevents.co.uk/masterclass-client/187/scitech-europe/3639>

⁸¹ http://www.egi.eu/results/newsletters/Inspired_Winter_2012/ERA_conference_report.html

⁸² http://ec.europa.eu/research/era/consultation/era-wrap-up-event_en.htm

⁸³ <https://documents.egi.eu/document/1012>

⁸⁴ http://www.sienainitiative.eu/Pages/SelectedDocument.aspx?id_documento=1aadb66f-a201-4655-8b2a-b71e4716c112



4.4 Website and Wiki

The website and wiki of EGI have been regularly updated to reflect the SPT's activities by creating dedicated collaboration pages for each of collaborating partners, noting the progress on the EU2020 actions list, revising the description of the EGI services⁸⁵ and refactoring the SPT wiki section⁸⁶.

⁸⁵ <https://wiki.eGI.eu/wiki/EGI-InSPIRE-Tasks>

⁸⁶ <https://wiki.eGI.eu/wiki/Policy>

5 COMMUNITY OUTREACH

Outreach to communities occurs through a number of channels. Virtual Research Communities (VRCs) are identified, supported and encouraged where necessary. The big bi-annual EGI Forums bring together many users and developers and provide a rich opportunity for training, workshops and other support activities. Thirdly, EGI attends, participates in and proactively supports events organised by our partners and complimentary groups.

5.1 Restructuring User Community Support to Community Outreach

User Community Support, the day to day support activity within the NGIs which previously was coordinated from within NA3 has, since November 2011 been part of the Operations (SA1) activity. The role of Community Outreach is investigating and pursuing relevant research groups, teams and projects to ensure that wherever appropriate they are integrated with EGI. Where possible these investigations need to be conducted in conjunction with the NGIs though the Virtual Team (VT) model established from PM18 in NA2. The VTs bring together various elements of the EGI community and this approach is gaining traction as a mechanism for extending and strengthening the user community engagement within EGI. The progress appears to be as a result of clear and bold date-dependent targets associated with the VT projects, coupled with the direct involvement of NGIs and highly the visible reporting.

The User Community Support Team works to support the users of the infrastructure through the twin channels of the NGIs and the VRCs. The combination of the national partners and the self-organised discipline-based user communities effectively creates a matrix or net of support mechanisms to aid researchers in all areas. The focus, therefore, of this support is to create applications, tools, knowledge and events that can be adapted and adopted by the NGIs and the VRCs, both large and small, and tailored to their own particular needs and specialisms.

A second, but equally important aspect of this approach is the bi-directional nature of the communication. Not only do these services support users, but also they feed important information about the needs of the users back into the operations, planning and development of the infrastructure at all levels. All of this is achieved through a number of different types of services. These include events, including forums, workshops and meetings, technical services, applications and tools, task forces, projects and virtual teams and finally through the accumulation of valuable contact data and requirements.

5.2 Virtual Research Communities

From the start of the EGI-InSPIRE project EGI.eu has worked to identify self-organising Virtual Research Communities (VRCs) and work with them to support users. At the beginning of the project this started with the Heavy User Communities inherited from the EGEE era. This included: High Energy Physics, Astronomy, Life Sciences, Earth Sciences, Computational Chemistry and Fusion.

Throughout PY1 much effort was spent in identifying and encouraging new and emerging communities to form VRCs. There were some notable successes here, such as WeNMR, which became the first formal VRC. The other communities participated in UCB but were unable to form a suitable organisational structure to formalise their relationship with EGI.

During the second year of the project this relationship building paid-off with four more Memoranda of Understanding contracts being signed with the Life Sciences Grid Community (LSGC), Hydro



Meteorology Research Community (HMRC), worldwide LHC Computing Grid (wLCG) and finally, with the Humanities, a Letter of Understanding between CLARIN, DARIAH and EGI. The Auger astronomy group and other communities were unable to acquire sufficient resources to make the commitment to becoming a VRC. This inability to marshal resources was problematic for the research groups as well as EGI. Nevertheless these other communities which operated as active Virtual Organisations, such as Astronomy, Auger, Computational Chemistry and Fusion all continued to participate in UCB and maintained a useful and practical relationship with EGI.

As a result of these lessons learnt, there was a concerted emphasis on ensuring that the technical and support services provided by EGI could be adapted by smaller or at least more specialised communities to use these resources to build their own support channels for their users thus lowering the barriers for communities to come to the grid. A good example of this is within the Astronomy discipline. The original Astronomy and Astrophysics VRC led by Claudio Vuerli represented a number of sub-disciplines but was not representative of the whole Astro community. The coverage of this group was reviewed at a well-publicised meeting in Paris⁸⁷ to coincide with the major event for this community the Astronomical Data Analysis Software and Systems (ADASS) in November 2011. However, this grouping was further extended with the addition of representation from the GAIA project (<http://www.esa.int>) joining the UCB with a view to forming a VRC in the near future. The same process has been repeated for the LOFAR/SKA radio telescope community.

The ESFRI projects have also been a major target for increased involvement from the user support perspective. We have operated a twin track approach with top down and bottom up plans to establishing working relationships with these projects. From the bottom up, two VT team projects have been run to identify and manage the key contact points within the grid-related ESFRI projects on a country by country basis in conjunction with the NILs. With respect to the top down approach EGI has sought out the main contact points with some of the most relevant ESFRI projects as well as all of the four cluster projects. This has been an inevitably slow process as it involves informing others of the benefits of EGI and also allowing them to prepare their own resources and services. During PY2, in depth discussions have taken place with Sally Chambers of the University of Göttingen, Centre for Digital Humanities, who is the Secretary General of the DARIAH ESFRI project. These talks complimented the discussions that have also taken place over a longer period of time with CLARIN through Martin Wynne at Oxford who recently attended the Sustainability workshop in Amsterdam. The current situation with DARIAH is that they are planning to establish four Virtual Competency Centre (VCCs) of which the e-Infrastructures one will be most closely aligned with the work of EGI. The next meeting has been arranged to take place after the first DARIAH all hands meeting in the spring after which the project will be ready to interact more fully with EGI.

The WeNMR VRC that we have been supporting for some time has now become part of the INSTRUCT ESFRI project and we shall be supporting this activity in terms of coordination of contact points across partners and other operational needs where applicable.

5.3 Event Coordination and Participation

In addition to the two EGI Forums described below, the Community Outreach team has participated in a number of events in conjunction with partners and has also participated in the planning process for HealthGrid 2012 coupled with International Science Gateways for Life Sciences (IWSG-Life 2012) to be held in Amsterdam in May. IWSG-Life is a good example of where a collaborative approach is the optimum solution for all parties. EGI.eu will facilitate a structured discussion on the Thursday

⁸⁷ <http://twiki.oats.inaf.it/twiki/bin/view/AstroVRC/AstroVRCWorkshop>

afternoon with the declared goal of initiating a roadmap for science gateways for the Life Sciences community based on the existing work in this area. The presence of a number of key individuals in this area should ensure a productive session.

The Scientific Workflow workshop held in Budapest in February⁸⁸ brought together SHIWA developers and various workflow users.

5.3.1 EGI Technical Forum 2011, Lyon (19-23rd September)

The overall goal for the event was to drive forward progress toward the adoption of a federated virtualised infrastructure for European researchers. This approach is seen as the optimum path towards diversification of the user community. The event was organised by EGI.eu in conjunction with the French NGI (through CNRS, the local organisers) and CC-IN2P3. One of the valuable secondary benefits of the EGI Forums is the opportunity to collocate related events. In this instance these included the 9th e-Infrastructure Concertation Meeting, OGF31, Grid2011 in addition to the first French Grid Day and the first GlobusEUROPE event which was organised by the IGE project. Other EU-funded projects such as SIENA also organised workshops under this umbrella.

The forum comprised many sessions running in parallel tracks, plenary keynote talks first thing each morning together with posters and demonstrations running in the exhibition area. The sessions themselves typically consisted of a small number of discrete presentations and/or discussions. Meals, coffee breaks and a reception provided opportunities for interactions between the attendees all of the above. Further and more formal interaction was facilitated by the exchange of keynote speakers between sessions organised by the various projects.

5.3.2 EGI Community Forum 2012, Munich (26th – 30th March)

The goal for this event was to showcase the role that EGI plays in enabling innovation across the European Research Area by highlighting the services, technologies and tools available to and also provided by scientific communities to better support their research. The event was held in conjunction with the 2nd EMI Technical Conference and co-located with the 2nd Annual European Globus Community Forum (26 March). In addition to the sessions comprising presentations, workshops and meetings there was an exhibition space containing posters, booths and demonstrations.

For the submission process a Programme Committee was convened bringing together the Work Package leaders from EGI-InSPIRE, the leaders of EMI together with representatives from the User Community Board and also from partner projects with which EGI has signed MoUs. A call for submissions was put out with the following track descriptions to guide applicants:

- Users and communities
- Software services for users and communities
- Middleware services
- Operational services and infrastructure
- Coordination and Communication

These themes were chosen to tie in with the cloud model which underpins the transition towards a virtualised infrastructure. In this sense Software services for users and communities relates to Software as a Service (SaaS), Middleware services relates to Platform as a Service (PaaS) and

⁸⁸ <https://www.egi.eu/indico/conferenceDisplay.py?confId=656>



Operational services and infrastructure relates to Infrastructure as a Service (IaaS). Whilst not treated as a straightjacket, this framework did guide participants towards the new model and its full implications and benefits. The colocation of meetings from a number of projects helped to contribute to the alignment of roadmaps and other project management planning objectives.

As a follow up to the 2012 Community Forum, participants have been invited to submit full papers which will be considered for publication in time for the next forum to be held in Prague in the autumn.

6 TECHNICAL OUTREACH TO NEW COMMUNITIES

6.1 *Project Restructuring*

The User Community Support Team (UCST) operated as a single unit until the end of October 2011, when it was restructured into two subgroups:

- One being focused on community outreach through organising and participating at community events (2 persons), and reported about in Section 5.
- One being focused on community outreach through the development, support and coordination of technical services for new communities (3 persons, called Technical Outreach to New Communities, TONC group), and reported about in this section. This second group – through its partners within Greece, Portugal, Spain and the UK is also responsible for the further development and provisioning of technical services for outreach and support.

The TONC group worked in close collaboration with the event organisation group of UCST, as well as with other functional groups of EGI.eu. The focus of the two UCST subgroups is slightly different than it was in the NA3 activity: it is directed at reaching and engaging with new user communities, instead of supporting the use of existing user groups. Consequently, a number of services that were under the responsibility of UCST and were serving established user communities have been transferred to SA1. These transferred services include:

- Approval and management of VO registrations
- Operating technical services for VOs (primarily VO-specific monitoring infrastructures)

6.2 *Overview of Activities*

The main progress, achievements and issues with technical activities within UCST during PY2 was:

- Supporting the developers of the technical services in defining workplans based on feedback and requirements from user communities and their representatives. A 6 months-long plan was prepared for each service for 2011 and a second plan has been prepared for 2012 for AppDB and Training Marketplace. The 2011 work plans have been successfully implemented, and the services evolved as defined in the plans. There were minor delays in some of the items due to new, high priority requests that arrived from the community.
- Topical workshops have been organised by EGI.eu at the Technical Forum (Data Management; Portal/portlet/widget technologies) and in the Hungarian NGI (E-science workflows). These featured presentations from various NGIs, user communities, existing and possible technology providers, followed by discussions that clarified EGI.eu, NGI, VRC/VO/community roles in the further development and adoption of the technologies and influenced strategies in technical outreach.
- A dedicated section⁸⁹ on the EGI website has been setup to inform the community about EGI-related web gadgets and about knowledge that is available within community to support the development of additional gadgets. By the Technical Forum gadgets were available about AppDB, Training Marketplace, Requirements Tracker and these enable the integration of the centrally provided technical services into NGI, VRC, VO, institutional, personal or any other types of web pages. The next gadget is expected from the Grell service developer team from SA3 in PQ8, while extensions to the AppDB and Training Marketplace gadgets are planned for 2012.

⁸⁹ EGI web gadgets: <http://www.egi.eu/user-support/gadgets>

- The team supported the AppDB provider team to improve the quality of entries in the database, particularly (1) remove orphan entries whose owners/supporters no longer want to contribute, (2) merge entries that are about the same application but by different VOs, countries or support teams and (3) identify and update entries that include broken links in their references to publications, science gateways, download packages or any other online resources. Although the number of entries decreased as the result of the (1) and (2) actions, this decrease was lower than the number of additions in PY2, so the overall number of items stored in AppDB increased.
- The EGI.eu User and Community Support Team – in collaboration with technology providers in TCB – finalised the processes around communicating and managing requirements between user communities and product teams. The process has been documented and a succinct summary of the whole requirement workflow has been made available alongside with open and solved user requirements through the EGI webpage⁹⁰. During PY2, 31 user requirements⁹¹ were resolved by this process. These include 3 MPI and 2 high-level topics that were flagged as priority by the User Community Board. 22 additional requirements⁹² are still in the TCB process, at various stages:
 - The delivery of “documentation about WMS recommended configuration” (a topic considered as priority by the UCB in 2010) was already delayed twice, and it is now promised to come as part of EMI-2 release.
 - 3 requirements (1 of them is a UCB priority topic) are under evaluation by the TCB since February 2012.
 - 3 UCB topics and 1 “normal” requirement were endorsed by TCB and are waiting for technology providers to accept as item they want to implement.
 - 1 UCB topic and 3 “normal” requirements will be submitted to the next TCB to be held in April.
 - 6 requirements have been identified as bugs through the EGI Helpdesk, Technology providers are currently assessing the cost of fixing these in future releases.
 - 4 other requirement are still under investigation by the helpdesk support, to decide whether these relate to bugs, or missing features.
- UCST spent considerable time with investigations and the setup of structured wiki pages about middleware services APIs; command line clients for non-Linux platforms; and MPI capabilities (API⁹³, CLI⁹⁴, MPI⁹⁵). These extend and make the documentations provided by external technology providers or EGI-InSPIRE teams (e.g. MPI SA3) more consumable by user communities.
- The EGI Blog has been used extensively by the team to report about activities, achievements. 25 blog posts have been written by EGI.eu UCST members, and 2 by providers of Technical Services (used to be TNA3.4, now TNA2.5). While the team hoped to receive feedback from the community through these blog entries, this has not happened and the blog remained a one-directional communication channel towards the community.
- The team is involved in six, already active Virtual Team projects (Intelligence Collection; ESFRI Contact List; MPI; Federated Identity Providers Assessment, Fire and smoke simulation; Speech Processing on the Grid) and helped NGIs formulate additional VTs (Application

⁹⁰ User requirements and process: http://www.egi.eu/user-support/getting_help/

⁹¹ Solved user requirements: https://wiki.egi.eu/wiki/Solved_user_requirements

⁹² Open user requirements at TCB: 3230 (UCB topic), 926, 1778 (UCB topic), 1780 (UCB topic), 2731 (UCB topic), 1626, 2733, 924, 910, 1777 (UCB topic).

⁹³ Table of EGI middleware APIs (not final at the time of writing): https://wiki.egi.eu/wiki/Service_APIs

⁹⁴ Command line user interfaces for EGI middleware services: https://wiki.egi.eu/wiki/User_Interfaces

⁹⁵ MPI User Guide for EGI users: https://wiki.egi.eu/wiki/MPI_User_Guide

Porting Howto Guide; ESFRI Demonstrators; Top applications and their user communities). In case of enough interest from the NGIs, these projects will start in PY3.

- Together with the owners of “robot certificates” the TONC team started to establish a process that could help EGI assess the size of user communities who access the infrastructure through applications and portals that use robot certificates, and therefore are invisible by the current statistics. The full picture will be visible only in the next few months, however based on the initial findings these 50-55 robots currently serve around 200 users, which is still insignificant compared to the number of people who use personal certificates to access EGI. (around 21K)
- Collaborations with the ScalaLife⁹⁶ project cross-referenced user support web pages, training materials and on the identification of EGI users who could benefit from the application support that ScalaLife can provide for GROMACS and DALTON users.
- Established a “portal community” within EGI to provide a forum for those developers, operators and users who work or are interested in activities related to web based science gateway and portal frameworks/components. Through this community TONC started to pull together information about science gateways and portal frameworks/components that exist within the community and could be offered or recommended as reusable technologies for new communities. The gathered information together with processes to keep it up to date is expected to be ready by the Community Forum and announced widely there.
- In late November an email list has been established for those EGI members, who are interested in and/or who already use the MATLAB software on NGI resources. The list has ~20 members and aimed to be used for information exchange between these partners, and as a discussion forum where the details of possible need for wider, more harmonised MATLAB access in EGI can be clarified. Such request has not emerged from the email list yet.
- Collaboration with SA1 and JRA1 on correcting the methods and tools by which the number of EGI users is counted took place. Particularly: those VOs that were inactive in the last 12 months have been suspended (so their users do not appear in statistics); Requirements in the further development of the Operations Portal have been captured for JRA1.
- Contributed to the development of the EGI Strategy through internal discussions in EGI.eu, as well as public discussions at the EGI Sustainability Workshop. These will continue and conclude in the forthcoming months.
- Joint work with SA1 has begun on defining a monitoring framework with documentations within the EGI service monitoring system that can be used by projects of the EGI ecosystem that provide user level software services. The development continues and expected to conclude in the forthcoming months, after the major release of the EGI monitoring system.

6.3 Applications Database

The activities during PY2 for the Applications Database⁹⁷ have been primarily focused on the following key areas: Architecture (revise codebase and RDBMS), Quality of information, Information retrieval, Notification & Dissemination, Cross-browser compatibility.

6.3.1 Architecture

More specifically one of the first tasks that the AppDB development team dealt with during PY2 was the migration of the AppDB DBMS system to PostgreSQL. The previous RDBMS of choice, namely MySQL with an InnoDB engine, suffered from limits with regards to scalability, performance, and query language expressiveness. On the other hand, a more advanced, yet open RDBMS such as

⁹⁶ <http://www.scalalife.eu/>

⁹⁷ <http://appdb.egi.eu/>

PostgreSQL, now seems to be more suitable for the project's needs. Its superior query language expressiveness, paired with better performance and advanced features can deliver greater data transformation abilities inside the data tier. This automatically translates to better optimized code within the existing codebase architecture, and thus a better overall performance in general.

Service wide, the existing REST API has been extended with more resources, and now exposes everything that is needed in order to build a web site, or even an application based on it; there is no need for server-side access. Furthermore, the REST API has been also extended with authenticated access, in order to suppress sensitive data such as email addresses in anonymous calls, and to provide information about the authenticated user's permissions.

6.3.2 Quality of information

One of the main activities of the EGI Applications Database during the PY2 was to improve the quality of information stored within the database. This was achieved by adding a set of new functions to AppDB that support the community as well as the EGI.eu and AppDB teams in order to improve the accuracy of the stored information and to be able to maintain this high quality in the future:

- Entry Problem Reporting System: There have been several cases, where a certain application entry raised disputes concerning the ownership of the referenced application, related logos or names. Users are therefore provided with the ability to report problematic entries with a short text about the type of infringement, so that appropriate actions can be taken to correct the problem. EGI.eu User Community Support Team and the owner(s) of the entry are notified via e-mail about such reports.
- Broken Link Detection Notification System: A mechanism that is capable of detecting entries with broken URLs within their references section is part of AppDB. The system helps entry owners as well as the central content management team maintain the high quality and accuracy of the stored information. The broken link detection system scans the database periodically. In case a broken reference found the system sends email to the owner(s) of the entry as well as to EGI.eu. Extra mechanisms have been developed to monitor and remove invalid or non-existing references from application's extended information, such as publication links and external URLs.
- Application Revocation Mechanism: In case a problematic entry is not / cannot be corrected, then users who own "Management" role within the system can revoke these applications from public visibility. Revoked entries do not appear in index pages, search results and are not included in future statistics or export functionalities, etc. The entries still remain in the back-end database and can be restored.
- User Comment/Ranking System: Quality of information can be a sensitive subject in large data stores. A module has been developed to help ensure content quality is the provision of quality related metrics, such as comments and rankings. These metrics are provided by authenticated end users and are visible by everyone.
- Merging duplicated/overlapping entries: Mechanisms have been developed for supporting the process of merging multiple instances (flavours) of the same application into a single one, thus avoiding confusion in the community about the authenticity and ownership of these applications. Applications can now be related to more than one discipline and sub-discipline, so that they may cover all of their possible uses. For maintaining the quality of information, each application's name is forced to be unique during registration and while editing an application.
- Specifying people's relationship to entries: Scientific contacts can be tagged as experts on individual fields, such as a specific middleware or virtual organization, so that users may be led to the right person for further information.

6.3.3 Information Retrieval

As the number of entries stored in the system grows, finding one, or a set of applications or tools for a specific purpose becomes a non-trivial task. Despite the powerful filtering mechanism finding a search term that provides all the entries of the set is sometimes impossible. Tagging and tag based searches provide better mechanisms, allowing the community to create custom sets from the entries stored in the AppDB. Corresponding developments have been completed during PY2 of the project, thus providing a set of predefined tags attributed automatically by the system to certain entry types (e.g. in order to distinguish between native entries, and entries imported by other similar systems), as well as free-string tags which can be attributed by the users on demand.

- ***Notification & Dissemination:*** A notification mechanism has been also integrated into the system. Users can now subscribe to mailing lists or RSS/Atom news feeds, so that they get informed about changes in AppDB's context. The mentioned mechanism is flexible enough to allow users to customize and constrain the amount and type of context they wish to be notified about.
- ***Cross-browser compatibility:*** A significant effort has been made toward improving the user experience. The user interface has been also revised with a more content oriented approach, and information acquisition has been enhanced with a very powerful and flexible searching mechanism. The portal can now operate in all major web browsers (firefox, chrome, safari and IE9). Portal navigation is more direct and clear to help users focus on the group of applications they are searching for.

6.3.4 Uptake

On the 14th of March 2012 the database includes the registration of 359 applications, 42 tools and 655 person profiles. This means an increase of 17 for applications, 2 for tools, 37 people in relative sense since May 2011. However, due to the merges (11 apps.) and removal (5 apps and 2 persons) of outdated entries, the real increase for applications and people is higher: 33 new applications and 39 persons got registered since May 2011. This is roughly the third of what have been registered in PY1, which is not a surprise as the first year – because of the start-up of EGI and strong promotion of AppDB – was special.

During PY2 there were 21 releases⁹⁸ of the AppDB services, including one major, five minor and fifteen small updates.

6.3.5 Plans for PY3

Work in PY2 was strongly focused on features that enable the community to improve the stored content and to build “interest groups” around individual applications/tools or clusters of applications/tools. (through tagging, notifications, merges). These features will be promoted and used in PY3. Earlier this year a written plan⁹⁹ has been prepared for the further development of the system in this calendar year. Before the Community Forum the AppDB will be extended with a few more community-oriented capabilities in order to motivate users to participate in the information maintenance and to enhance the communication with the rest of the community in more direct ways. For example, this will be achieved by extending the existing direct user inter-communication mechanism, so that users may instantly and easily request an application's entry owner for their inclusion in the development/support team.

⁹⁸ <http://appdb.egi.eu/?p=about:changelog>

⁹⁹ AppDB 2012 workplan: <https://documents.egi.eu/document/1060>

There are plans for further growth in the interconnection of information by integrating information of external sources into the AppDB system by extending the REST API with access. The team will investigate possible alignment of AppDB with the Platform and cloud based EGI architecture, particularly adding features like repositories to host the applications and tools source code, packages or even Virtual Machines.

6.4 Training Marketplace

The Training Marketplace is a tool to view and advertise training events, resources and requirements. It is aimed at supporting cooperation between trainers and users in different localities and projects by connecting the groups through the activities that are established within the NGIs and scientific clusters. The goal is to enable users to achieve better scientific performance when using EGI and guide the establishment of self-sustainable user communities. Among the provided services include training events list, which allows trainers to advertise their training events and to be made aware of other training events being run within the community, a map of these training events, a repository of training materials and other resources and a web gadget that can be used to embed customised instances of these services into different websites.

6.4.1 Activity during PY2

During PY2 the Training Marketplace had several releases, some of these based on replacement of Drupal modules, resulting richer functionality and/or more intuitive interfaces to enhance the user experience.

Early in PQ5 version 2 of the EGI Training Marketplace was developed, tested and then released on June 7th. Version 2 of the Training Marketplace has a significantly new look and feel to version 1. It contained significant increased functionality which included a map view of NGI training events, a training wish list (a web form is available for users to specify their needs and publish a list view of these requirements), the ability to advertise expertise and ideas e.g., training resources (a web input form is available for people to advertise their expertise, ideas and resources and publish a list view of these) and a form to advertise relevant MSc, PhD and other taught courses. Version 2 also fully integrated approximately 9000 items of legacy material from the Digital Library training repository with Apache Solr as a search engine. As a consequence of this, there is now seamless search functionality across all objects in the Training Marketplace. For example a search on the term 'gLite' would retrieve both events and resources (e.g. materials, infrastructures, VOs) relating to the term.

For the remainder of PQ5 work continued on development of V3 of the Training Marketplace. The development process was rapid as known functionality was implemented into successive iterations whilst a reliable version was available as production service. The most significant development task for v3 was the creation of a web gadget (in fact three or four separate gadgets) that allow other projects to embed the Training Marketplace into their own websites and for the gadget to be customisable. This customisation mainly applies to the browse gadget and it takes the effect of showing a default view of the local region. Another feature included in V3 is the ability to report inappropriate comments (through the user feedback channel) for the UCST to investigate and remove. Once a number of wishes/requests have been added to the database a tag cloud will be included.

All feature and functionality requests for the Training Marketplace are now managed through EGI's Requirement Tracker system. The Training Marketplace was regularly reviewed and new and refined requirements provided to the team in the UK. In order to promote the Training Marketplace it was decided that a brochure was not essential at this time as it is largely self-explanatory and intuitive to use. A bookmark was thought to be a more efficient promotional tool and a Training Marketplace

bookmark has been prepared for the Technical Forum. The V3 major release was timed before the EGI Technical Forum in September 2011 and involved the development and the release of the Training Marketplace gadget.

Another release in PQ6 provided admin interfaces to allow TM administrators (STFC and EGI.eu) to see events waiting for approval in a central place and to identify when admin need to login to view restricted parts of the website.

Since these releases development has focussed on integrating new Drupal modules into the TM website. These vastly improved the display of training events and allow greater modifications in future. Another new module has been investigated to capture user input when advertising, and a new resource type "Online resources" has been added to the development server ready for production in PQ7. Other significant improvements have been made to the user interface in PQ7 too.

These include

- Updates to the calendar display to support multiday events as single, clickable units.
- The calendar was made the default display option when browsing for events, enabled by using a new module.
- Bugs in the map integration (using the open-source Ammap tool) into the new module were fixed.
- When the cursor hovers over a country a pop-up displays past events as well as future events - five each by default and a 'More' button to view fuller content.
- More coherent and rationalised usage of 'Go Back' buttons across the different sections.
- A number of routine and security updates have been applied to Drupal modules.
- The Cookie Law has been extensively investigated for its impact on websites using Google Analytics (incl. www.egi.eu). Until a Drupal module is developed to enable full compliance the TM is adopting EGIs policy wrt Cookie Law.

6.4.2 Uptake

Despite the continuous evolution of the Training Marketplace the number of unique visitors captured by Google Analytics on the site dropped significantly since May 2011. (PQ5-425; PQ6-324; PQ7-197). The number of training days delivered by the NGIs has not dropped, so this trend cannot be explained with having fewer events.

The developer team is trying to reverse this trend in 2012 by planning new functionalities for the Marketplace that could make the system and content stored within it more customisable and reusable for individual countries, projects, groups and use cases (e.g. through improved web gadgets; through tagging of stored items). Because Google Analytics is unable to capture the traffic through the gadgets, the negative trend in visitors of the central instance may be compensated by higher traffic on gadget instances. The team will need to put sufficient mechanisms in place to capture the traffic through gadgets. The open source Piwik service which is already used by the AppDB team can be such a tool.

6.4.3 Plans for PY3

Earlier this year a written plan has been prepared for the further development of the system in this calendar year. In PQ8 development are focussing on improvements to the search functionality and display following feedback from one of our large communities. The search results have been cleaned and superfluous search display options have been removed. The results display has been weighted to show newer results first. There have been further improvements to the results display. Legacy items

from the “EGEE Digital Library” training marketplace regularly had missing fields or lacked URLs or data other than a title. With thousands of such entries it was impossible to go through each one individually and remove bad results. Instead the search functionality now checks for missing fields and URLs automatically and does not display results that fail to meet a minimum criteria (i.e. bad results).

To improve the legacy EGEE Digital Library data we are investigating adding tag fields to entries, to allow users and administrators to either tag an entry with relevant keywords, categorise it into one of the TM entry types (e.g., event, online training) or mark it as obsolete which will hide it from display.

The other development in PQ8 is to produce customised events calendars for the different NGIs. In the way that the gadget generator currently defaults to a region on a map we wish to provide NGIs with an events calendar and list which filters the entire EGI database and displays entries relevant to their NGI only.

Longer term the sustainability model for the TM will be developed. Currently the UK NGI is looking into attracting non-HEI training providers including commercial providers to user the TM as a long term sustainability option.

6.5 VO Services

Until October 2011 “VO Services” belonged to the NA3 activity (TNA3.3). Since November the same group (Ibergrid in Portugal and Spain) provides a Client Relationship Management (CRM) system for EGI from the TNA2.5 task. This section of the report provides information about the achievements of the VO Services task between May-October 2011.

The technical instantiation of a user community within the infrastructure is a VO. Setting up and operating a VO is a complex task that requires an important effort. Although various technical services are available to collect availability, accounting and monitoring information, as well as information that will improve operation of the VO, procedures are neither easily available nor complete. The EGI VO Services task aimed at supporting VOs in the whole process of start-up, management and operation, pointing out to tools, services, documentation and guidelines to maximize the usage of the resources and bridging the VO community with the infrastructure they need. The activities performed by the team between May-October 2011 are documented elsewhere¹⁰⁰:

- Collaboration with SAM developers on providing a basic, Nagios-based, VO-specific and VO-centric testing and monitoring system for VRCs, and on extending this service with additional components and capabilities as the communities’ needs evolve. The VO SAM is now a flavour officially supported by SAM, and will continue to be enhanced with the introduction of a new component, the Profile Management Database (POEM) substituting the Metric Description Database (MDD), allowing higher flexibility to describe existing metrics and group them in order to run dedicated tests. The team also operated VO SAM services for phys.vo.ibergrid.eu, life.vo.ibergrid.eu, ict.vo.ibergrid.eu and fusion, and provided consultancy for We-NMR and HealthGrid (on behalf of the Life-Science Grid Community VRC).
- Development of specific tools that can address VO requirements focused on easy access to information and on the mitigation of data management issues namely the VO Admin Dashboard,

¹⁰⁰ https://wiki.egi.eu/wiki/Services_and_Tools_Portfolio

a highly configurable integrator dashboard for project and VO tools, and the LFCBrowseSE, a tool to improve file catalogue views, currently in its third version, and extensively used by the LSGC VRC for SE decommission.

- Identify, evaluate and test third-party tools and services that emerging VOs can use or deploy. Document those services through white papers and manuals for VRCs who wish to operate such services themselves.
- Produce a summary of the relevant policies for VOs.
- Produce the first draft version for the removal of obsolete VOs from the infrastructure, including workflows and communication details among main actors.
- Produce a work plan for the VO operational portal including feedback from JRA1 and the Life Sciences Grid Community. The VO Operations portal is a tool foreseen to empower VOs with a service necessary to deliver the best possible availability for end users. The proposal is to make it accessible as a module of the EGI Operations Portal, with a central instance with an entry point per VO. The development for this portal has started on October 2011, and a first release of the tool is already available and under test by the communities which request it.

At the same time when NA2 and NA3 merged, the VO Services task with a limited focus (operation, with limited further development) was migrated under SA1 and since then is by the NGI Operations community.

6.6 Client Relationship Management system (CRM)

The merger of the NA2-NA3 activities was driven by the need to give more focus and resources to outreach to new user communities. A coordinated outreach activity needs a tool where NGIs and EGI.eu can record contacts, leads, conversations. It was decided to setup a Client Relationship Management (CRM) system for this purpose, using the effort previously used for VO Services. This section of the report describes the achievements of the CRM task since November and its plans for PY3.

6.6.1 Activity during PY2

The first task for the team was to identify a CRM tool (among the several available open source sets) that could fit EGI use cases and context. Two different use cases were identified:

1. NGI International Liaisons should be able to record information about known projects involving their national institutes, record information about the individual contacts in each institution and track discussions held with those contacts. NGI staff must be able to cross-check experiences and observe what other NGI members did differently to bring on board a new user community.
2. EGI.eu members should be able to feed the system with new initiatives and contacts that they obtained through other top mechanisms. Simultaneous, EGI.eu members should be able to assess and track the progress made by the different NGI approaching their user community leads.

The team identified and installed¹⁰¹ vTiger, a highly customisable well-known LAMP open source CRM technology at the Laboratório de Instrumentação e Física de Partículas. Lisbon, Portugal. The details of the above two use cases were further elaborated by members of the “Intelligence Collection & Analysis” and the “ESFRI Contact list” Virtual Team projects and were used by the team to fine tune the configuration of the vTiger installation. One should note that given the commercial

¹⁰¹ <http://crm.egi.eu>

nature of CRM tools, this was not an easy job, and that some of the functionalities do not really map to EGI use cases. The main effort was delivered in the definition of the data models (structures and entities), in the implementation of new modules, in the customisation of the Web User interface and of the reporting module (creation of dashboards, creation of automatic reports, etc). Finally, the vtiger user authentication mechanism was tested and successfully integrated with the Single Sign-On (SSO) EGI authentication mechanism.

A pilot instance was presented and demonstrated to EGI.eu and to NGI International Liaisons on the 13th February 2012, followed by a period where users could use and test the system functionalities, and by some fine-tuning of the system. A number of NILs provided feedback during the test period to the providers. The system is finalised before the Community Forum and will be announced and promoted to the NGIs during and after the event.

6.6.2 Plans for PY3

The tasks for the further development and support of the tool will largely depend on the feedback to be received from the NGIs after the first release. Some of the items that the CRM team already considers for PY3:

- Because of the complexity of the tool the team was unable to understand all the possibilities of vTiger. Future learning of this and adaptation of this knowledge to address NGIs requests is the highest priority activity in PY3.
- A new vtiger version scheduled for release in May 2012. Some of the drawback of the currently used version is promised to be solved in this new release. The team will migrate to the new release if the migration does not jeopardise the ongoing outreach activity.
- Some of the already known requests will not be addressed before the Community Forum. These are scheduled to be dealt with later. (e.g. issue with single templates impacting service entities through the customisation of the SMARTY templates.)
- Provide a reliable production environment taking into account failover strategies for the service.

7 NGI INTERNATIONAL LIAISONS AND VIRTUAL TEAMS

7.1 *Setting up the Virtual Teams*

As described in section 1, the Virtual Teams were instigated at the start of PQ7 after the merger of NA2 and NA3. The concept of the Virtual Team was presented to the new network of NGI International Liaisons (NILs) at a workshop in November 2011 in Amsterdam, together with suggestions for initial projects. The process for proposing and setting up a Virtual Team is outlined on the wiki site¹⁰². Currently, there are 2 Virtual Teams that have concluded, 9 teams in progress, and a further 7 proposed Virtual Teams in the process of being set up.

7.2 *Working with the NGI International Liaisons*

The network of NGI International Liaisons is now well established, and all communication with NGIs around non-operational issues is routed through this network. There is an active core of around 26 NGIs who participate regularly in Virtual Teams. Effort is reported into the Virtual Teams through TNA2.1N if the staff members are NILs or Deputy NILs, and through TNA2.6 if they are not NILs but instead members of the NGI. The TNA2.6 task corresponds to the NGI Competency Centre described in Section 2.6. Staff members in NGIs reporting effort within the Virtual Teams, who are not NILs or Deputy NILs are therefore contributing to the NGI Competency Centre within the project.

7.3 *Status of the Virtual Teams*

The status of the Virtual Teams as of the end of March 2012 is summarised below.

7.3.1 *Intelligence Collection & Analysis Process*

Main purpose

EGI needs a process to capture and analyse conversations that NGIs have with scientific communities. This process can help EGI to know who we talk to as a community. For example:

- What is the “big picture” of the collaborations between NGIs and scientific communities?
- What are the commonalities in the requested support and services?

Steps taken

A VT¹⁰³ was established in PQ7 to define this process. The VT is led by EGI.eu and has active members from Finland, France, Germany, Hungary, Lithuania, Poland, Portugal, Slovakia, Spain, Switzerland and the United Kingdom. Activities so far include:

1. Defined what we (an NGI, or as a community) would like to know about the conversations of NGIs and scientific communities.
2. Provided instructions and feedback to the Ibergrid team in TNA2.5 Global task on how to setup and configure the “Customer Relationship Management” system which is envisaged as the tool that will underpin the intelligence gathering process within the community.
3. Attended a webinar¹⁰⁴ delivered by Ibergrid and EGI.eu about the CRM system, the implemented use cases.

Outcome

¹⁰² https://wiki.egi.eu/wiki/Virtual_team

¹⁰³ Intelligence Collection VT: https://wiki.egi.eu/wiki/VT_Intelligence_Collection

¹⁰⁴ EGI CRM Webinar: <https://www.egi.eu/indico/conferenceDisplay.py?confId=818>

VT members, members of the ESFRI Contact list VT, the NILs and other NGI contacts were invited to try the CRM system and provide feedback on its processes and configuration. The system will be presented at the Community Forum, which will mark the opening of the CRM system for the whole EGI community and the end of the Virtual Team project.

7.3.2 ESFRI Contact List

Main purpose

The ultimate goal of this Virtual Team is to gather and distribute within EGI-InSPIRE a comprehensive list of relevant ESFRI project contact points. This will build upon the initial information gathered earlier in 2011 by UCST. That investigation provided comprehensive information about ESFRI projects, the sites associated with these projects and the countries involved at that point in time. Not all sites are connected to NGIs in a particular country.

Steps taken

The aim now is to define a two-step process: firstly to establish and confirm the sites associated with relevant (i.e. DCI-dependent) ESFRI projects and secondly to identify EGI/NGI appropriate contact points for those sites as well as appropriate and useful contact points for the ESFRI projects at a higher/international level.

Outcome

The participants of this VT will act as the guinea pigs to test this data gathering process and then act as the reviewers to improve the process. The refined process will then be circulated to all of the NILs in order to complete the data gathering exercise across EGI. This project is running in parallel with the Intelligence Collection & Analysis Process VT project which is also responsible for the implementation of the CRM system. The two projects are coupled in such a way that the data collected on contacts will be fed into the CRM and then the system will be evaluated by the team after the closure of the VT in February 2012.

7.3.3 MPI in EGI

Main purpose

MPI within EGI virtual team was created in November 2011. The aim of this virtual team is to collaborate with MPI user communities and enhance MPI experience and support for EGI users. The first steps of this new virtual team were to identify the current MPI deficiencies within EGI and to get in contact with the different NGIs and MPI groups to know their success stories and feedback.

Steps taken

The first month was created a new wiki space dedicated to the new MPI VT¹⁰⁵ and a new SSO group (vt-mpi) plus a mailing list (vt-mpi@mailman.egi.eu). During the last months six tasks were created to track the effort of the different MPI members.

One of the initial problems was located in MPI documentation, which was fragmented between different sources. The MPI documentation was restructured to be merged in a single wiki page. Now this documentation includes a MPI administrator guide as well as new sections to clarify other MPI issues¹⁰⁶.

¹⁰⁵ https://wiki.egi.eu/wiki/VT_MPI_within_EGI

¹⁰⁶ <https://wiki.egi.eu/wiki/MAN03>

The MPI monitoring system uses the SAM MPI Nagios probes. These do not currently check all the MPI features and do not really detect if a site is providing a good MPI service or not. MPI VT has discussed about the need to develop a new set of MPI probes to improve MPI reliability and availability statistics. This task is still in progress, a new set of requirements are being written by MPI members to include the new probes to be developed by SA3 members. Meanwhile a new VO was created to include and support MPI sites (VO MPI-Kickstart). This VO was created to test and help MPI support within MPI, several sites are already included and the new VOMS configuration is available to be used by the different NGIs¹⁰⁷ a new web page was created to registry the new VO members¹⁰⁸.

Outcome

MPI VT has just started its work and some tasks still need to be defined, such as accounting for MPI jobs and the information system enhancements. The roadmap for the next months is oriented to these tasks:

- Continue to collect feedback from NGIs and users: NGIs are preparing different surveys for MPI VT working group. These surveys are devoted to identify the current status of the computational resources made available by those sites that are part of the National as well as EGI infrastructure, focusing the attention on the resources devoted for parallel calculations.
- Study the usage records of the different batch systems and collaborate with JRA1.4 members to provide a complete accounting system in EGI.
- Nagios probes: MPI VT has requested to include a new GOCDB service (MPI)¹⁰⁹, at this moment this requirement is on hold status, waiting for the MPI VT tests and Nagios development before its implementation.
- Add new sites from different NGIs to support MPI-Kickstart VO.
- Include a new user documentation section into EGI MPI wiki page.
- Information system: MPI VT group will continue working to detect information system gaps or issues about the information published by the MPI sites.

7.3.4 The adoption of Federated Identity Providers within the EGI Community

Main purpose

The goal of the VT¹¹⁰ is to explore the current coverage of NGIs with identity federations and their potential for within EGI.

Steps taken

The VT started in the middle of December 2011 and consists of representatives from seven NGIs (Czech Republic, France, Greece, Ireland, Italy, Germany, and Switzerland). In order to assess the readiness of the NGIs in adopting of the Terena Certificate Service, a questionnaire has been developed and thoroughly discussed.

Outcome

Most of the participating NGIs has collected the results and filled in the questionnaire. The results so far have revealed a large difference between the NGIs in terms of the support and availability of the TCS in the NGIs. Proposing alternative ways of utilizing of the identity federations and their assessment will be the main task of the VT in the next months.

¹⁰⁷ <https://www.metacentrum.cz/en/VO/MPI/index.html>

¹⁰⁸ https://egee.cesnet.cz/mpi/registration/prihlaska_priprav.php

¹⁰⁹ <https://rt.egi.eu/rt/Ticket/Display.html?id=3396>

¹¹⁰ https://wiki.egi.eu/wiki/VT_Federated_Identity_Providers_Assessment

7.3.5 EGI Compendium

Main purpose

The Virtual Team project "EGI Compendium"¹¹¹ has been established 5th December 2001 to meet the need of EGI for a structured collection of information describing NGIs/EIROs and their relationships to the user communities. The goal is to:

1. Increase the visibility of NGI structures.
2. Support better strategic making process.
3. Provide an essential body of information for the various stakeholders.

Steps taken

The Virtual Team has been established and is led by EGI.eu's Strategy and Policy Team and has active representatives from the Irish and Moldovan NGIs. The activity has been structured in terms of the following tasks:

1. Agree and define a set of standardised information.
2. Define the tools necessary to collect/publish the data.
3. Define how to present the data online.
4. Perform the first iteration of information gathering from the NGIs/EIROs.
5. Provide guidelines to the EGI Marketing and Communication team on own to aggregate/present the information.
6. Collect feedback and refine the process.

The team progressed according to plan and during PQ7 performed the following activities:

1. Through a number of VT meetings a number of related works have been analysed (i.e. EGI Design Study knowledge base, e-IRG knowledge base, TERENA Compendium, OSIRIS Study).
2. Define a set of standardised information has been defined and organised into categories.
3. Has selected a tool for the first year data collection.

Outcome

In PQ8 the VT will:

1. to prepare the online survey for data collection.
2. to launch a public comment phase and invite few NGIs for a pre-test phase to validate the structure.
3. to launch the data collection; 4) to present preliminary results at the EGI Community Forum.
4. discuss with the EGI Marketing and Communication team a possible structure for annual report based on the collected data.

7.3.6 EGI at the 2012 European Geosciences Union (EGU) General Assembly

Main purpose

The aim of this VT project¹¹² is to organise a high impact presence for EGI at the 2012 European Geosciences Union (EGU) General Assembly in Vienna at the end of April.

Steps taken

The virtual team should involve:

- hosting a stand to promote EGI and its partners,

¹¹¹ https://wiki.egi.eu/wiki/VT_EGI_Compendium

¹¹² https://wiki.egi.eu/wiki/VT_EGU-GA-2012

- disseminating material to this community which describes how EGI can support them and how existing researchers are utilising grid technology;
- participating in the session on Grid and Cloud computing and finally;
- identifying in advance of the meeting sub-communities within Geoscience/Earth Sciences (especially those connected with ESFRI projects and/or connected to the NGIs).

The expected outcomes of this project are: a successful stand and presence at the event; increased awareness of the role of EGI and its benefits for this community; the identification of new sub-communities with Earth Sciences that have needs that EGI can potentially satisfy.

Outcome

The project has made good progress: a stand has been booked (which also supports two guests from EGI.eu at the event); a suitable proposal to present an abstract by EGI.eu was submitted and has recently been accepted. A request has been circulated to the NILs asking that those with an interest in supporting researchers engaged in the Earth Sciences participate. The wiki page will be maintained with details of NILs interested in participating.

7.3.7 Digital Cultural Heritage – EGI integration

Main purpose

The purpose of this VT project¹¹³ is to establish a permanent bridge from EGI to digital cultural heritage resources in a manner that is both easy to use, extensible and furthermore exploits the full benefits of grid technology.

Steps taken

This project builds upon the prototyping work that has already been achieved within the INDICATE project and the international coordination that is being achieved through the DC-NET initiative. The INDICATE project has already delivered two pilot applications which are available through the e-Culture Science Gateway which enables access to resources hosted on EGI sites. There are two strands to this VT project: firstly to migrate the two INDICATE pilot applications to a more secure footing through the support of EGI partners and secondly to host the e-Culture Science Gateway in a more permanent environment after the end of the INDICATE project.

Of the two existing INDICATE pilot applications, the first will benefit from the continued development of the cloud approach currently underway. EC2 is being used now but the intention is to either extend or migrate this to one or other of the EGI solutions being developed within the EGI Federated Cloud Taskforce. The second pilot involves access control and rights management to provide secure access to two e-collaborative repositories. Again full integration within EGI will benefit the wider e-culture community.

Outcome

The expected outputs of this project are:

- Establish a gateway to Digital Cultural Heritage resources for users. This will stand as a clear pathway to EGI-supported resources for researchers within the Cultural Heritage sector as well as other researchers requiring access to such data and resources. In addition to the gateway

¹¹³ https://wiki.egi.eu/wiki/DCH-EGI_Integration

itself, dissemination and support material will be provided to maximise the impact and benefit of these fully integrated resources.

- Simplify and expand the process of adding DCH resources and services to the infrastructure. The INDICATE project already has storage resources on EGI sites but through the implementation of virtual machines greater flexibility will be demonstrated

The proposed duration for this project is 6 months: from mid-January (to coincide with a planned DC-NET/INDICATE joint activities planning meeting) to mid-July (to coincide with the final INDICATE conference to be held in Cairo). Much of the work is already being done so the new effort is mostly in coordinating this work across EGI partners, ensuring that appropriate guidance and support is available for prospective new users and disseminating news about the new facilities. The Gateway already exists but will need to be integrated with EGI resources. The cloud services are already being developed within INDICATE and the EGI prototype could be implemented within the EGI Federated Cloud Task Force.

The project has established connections with the DC-NET and INDICATE groups and joint activities are being planned. Others involved in this work have also now been involved in the planning. As with the other VT projects, the wiki page will be kept up to date with progress.

7.3.8 Website Content - COMPLETED

The aim of the EGI website is to showcase the services EGI offers (our added value) and reach out to new users and provide the information they require to consider our service. The Website Content VT¹¹⁴ was set up to coordinate the input of website content from the NGIs. The expected outputs of this project were an updated website with a new structure and new content, improved navigation and information that is more accessible to newcomers. Input from the NGIs was requested using a form, which included basic contact details, the mission and goals, organisation and governance, resources and users, events and publications and the logo. Out of 36 NGIs and 23 declared NILs, the team received 13 inputs of NGI related material (36%). By the 1st of February deadline received replies (complete with logos) from: Czech Republic, Germany, Spain, France, Greece, Hungary, Ireland, Israel, Italy, the Netherlands, Portugal, Serbia and Slovakia. In conclusion, the VT mechanism worked well for this specific project and provided a focus for the work reflected through the wiki pages.

7.3.9 Inter NGI Usage Report - COMPLETED

The NGI Usage Report" VT¹¹⁵ was aimed at providing a template for a regular (probably annual) report giving an overview of the usage of EGI resources focusing on the cross-NGI usage. The VT started on 10 Nov 2011 and completed its task by providing the template at the end of January 2012.

The VT-team consisted of members from various NGIs (DE, HR, ES, GR, IT, UK) and EGI.eu. Work on the report template started by collecting input from the various members on the VT's wiki page. Once enough material was there, a F2F-meeting of the VT-team took place, which was used to organise the material and come up with the table of contents for the usage report.

¹¹⁴ https://wiki.egi.eu/wiki/VT_Website_Content

¹¹⁵ https://wiki.egi.eu/wiki/VT_Inter_NGI_Usage_Report

This VT should be followed up by a VT assessing the availability of the data needed for the report and making suggestions for adaptations of the tools needed to get the missing data. This VT would ideally have participation from the developers of the respective tools.

7.4 Summary and plans for PY3

The establishment of the Virtual Teams has broadly been a success, with the ad hoc teams generally delivering the aims of the teams as defined at the outset, within the timeframe predicted. As described above, these have included outcomes such as support to events, content for the website, outreach to VRCs, and tools and services of benefit to the EGI community as a whole. Some Virtual Teams have led to proposals for new Virtual Teams designed to build on their results. Generally the NGIs have been fully engaged with the teams, with a core of highly active teams, and some NGIs participating in fewer teams in a more focused manner. Occasionally, NGIs have not been able to fulfil the commitments originally planned, but this is the exception rather than the rule. Lack of engagement has been reported back to the NGIs concerned, and improvements in these areas are anticipated. Progress of the teams has been effectively tracked through weekly reports by the Virtual Team leaders and through weekly meetings of the NA2 task leaders at EGI.eu, with special reports from NILs or Virtual Team leaders to the meeting as required.

A number of VTs are proposed for PY3, outlined below. VTs have been proposed by EGI.eu and NCI throughout the year. An ESFRI cluster projects workshop was held at the EGI Community Forum on 27 March to capture short and medium term needs for the ESFRI communities¹¹⁶. These requirements will be fed into a series of Virtual Teams during PY3, which will build ESFRI demonstrators designed to show integration of ESFRI applications with EGI.

Project title	Status	Project leader	Start date
Fire and smoke simulation	Proposed	Ladislav Hluchy, IISAS	March 2012
Speech on the grid	Proposed	Milan Rusko, IISAS	March 2012
EGI Champions	Proposed	Steve Brewer, EGI.eu	May 2012
Top applications and their user communities	Planned	TBC	May 2012
Scientific publications repository	Planned	Sergio Andreozzi, EGI.eu	May 2012
Inter NCI usage report	Planned	Kostas Koumamtaros, GRNET	June 2012
ESFRI Demonstrators	Proposed	Gergely Sipos, EGI.eu	As needed

Further proposals for future virtual team projects are listed on the wiki page¹¹⁷.

¹¹⁶ <https://indico.egi.eu/indico/sessionDisplay.py?sessionId=8&confId=679#20120327>

¹¹⁷ https://wiki.egi.eu/wiki/Virtual_Team_Projects

7.5 Summary of Virtual Team Participation

	VT Intelligence Collection	VT ESFRI Contact List	VT MPI within EGI	VT Federated Identity Providers Assessment	VT EGI Compendium	VT EGU-GA- 2012	DCH-EGI Integration	VT Fire Simulation	VT SPEED	VT Inter NGI Usage Report	VT Website Content
ES	1	1	1				1	1		1	1
UK	1	1	1						1	1	1
IE			1	1	1	1			1		1
IT		1	1	1		1	1			1	1
CH	1	1		1		1			1	1	
CZ		1	1	1							1
FR	1			1		1					1
PT			1					1			1
DE	1			1		1				1	1
GR			1	1						1	1
HU	1	1				1	1				1
SK	1		1					1	1		1
LT	1	1								1	
NL	1	1	1								1
BE							1				
FI	1										
MD					1						
RS											1
IL											1
HR			1							1	
PL	1	1					1				
SE							1				
TR		1									
TW											
DK											
GE											
LV											
RO											
RU											

8 NGI OUTREACH AND USER SUPPORT TEAMS

This section provides information about the activities that were carried out by the NGIs outside of the Virtual Teams, but contributed to the outreach and support for new user communities.

- **Armenia:** The Armenian NGI User Support Team besides the standard operation of user support services improved the existing support services and develops new tools and services to reach out and serve new communities. Regular meetings with ARMNGI potential user communities in meteorology, physics and life sciences have taken place and new scientific software packages (NAMD, SAGE, CROMACS, WRF) have been integrated to the computing sites.
- **Bulgaria:** During PY2 the Bulgarian NGI leveraged the increased storage capacity to deploy and use more storage intensive applications from diverse scientific areas, especially environmental security and environmental protection. The high-performance Grid clusters that form the majority of the Bulgarian Grid resources facilitated the usage of advanced parallel applications that follow the MPI standard. In the last few months we added new nodes equipped with state-of-the-art NVIDIA M2090 cards for GPGPU processing and we have initial success in porting applications from computational physics and computational chemistry achieving high power and cost efficiency. The results, achieved on the Grid, were presented at high-ranked scientific conferences, relevant to the respective communities, as well as on workshops that we have organized specifically to foster the collaboration of Grid users. Recently the Bulgarian NGI had a 10th year anniversary meeting, where representatives from the member universities and research institutes discussed the next directions for expanding the user base and facilitate the access for scientists and Ph.D. students to advanced Grid resources. We expect that a concerted effort to improve the curricula of Grid and related subjects for master and Ph.D. students should contribute to bring on board new user communities from domains like bioinformatics and national heritage. The current hardware resources of Bulgarian NGI are state-of-the-art and adequate for the needs of our current Bulgarian and international users. Our focus for the next period is to improve the utilization of the facilities and to promote the take-up of new technologies like GPGPU, cloud, etc. as part of our Grid applications.
- **Croatia:** Since October 2011 the team started publishing monthly reports to keep the national grid community updated with status, activities and usage of the national grid infrastructure. Reports are written in Croatian language and contain important operations actions and usage statistics per institute in a given period. In December 2011 CRO NGI organized the annual meeting of the Croatian grid community – The Third CRO NGI Day. At the meeting grid community members presented their use cases, experiences and challenges with grid technology.
- **Cyprus:** During PY2 CyGRID user support team had worked with users from the Statistical and Mathematical community that were interested in running the R project for statistical computing on grid. R is a language and environment for statistical computing and graphics. We have installed R in two Cyprian clusters: CY-01-KIMON and CY-03-INTERCOLLEGE. A number of dedicated training sessions took place for these users. CYGRID, has continued user support for the current running applications R project, SimpleScalar Simulator, Scheduler Sim, and NS2 for new users from the local scientific community. Standard support for Alice, Atlas, LHCb and Biomed VOs continued. Users from the Cyprus Institute are interested in using the following applications: MPI and OpenMP (LQCD calculations), LTools, UCNS3D (CFD Software),

Metis/ParaMetis/ParMGridGen on both EGI and PRACE. The team aims to address this requirement in PY3.

- **Czech Republic:** The user support team supported the VOs: ATLAS, ALICE, AUGER, BELLE, VOCE, MPI, MetaCentrum and disseminated their experiences to potential new users. VO Auger, the biggest non LHC grid CPU time consumer, continues to use CESNET servers for central services. The high amount of simulated data requires constant maintenance but also attracts more users. Recently we demonstrated usage of software for electronic structure calculations of solids on the VO VOCE infrastructure. Individual users and small team outside big international communities are also supported. After several months of negotiations with the Czech local ELIXIR site (institute of Organic Chemistry and Biochemistry of the ASCR, Prague) there was agreed that CESNET would support the local ELIXIR's site integration to the whole ELIXIR infrastructure by providing a starting computing and necessary network equipment. A MoU was signed between CESNET and Institute of Organic Chemistry and Biochemistry of the ASCR in November 2011. In March has formed a National Council with aim to build an official ELIXIR node in the Czech Republic, with participation of other institutions (CESNET, CEITEC, CERIT-SC, IT4I,...). NGI user support team also gained a new user community from RECETOX centre (integrated to the large infrastructure project CETOCOHEN), their special application software, (WRFWeather Research & Forecasting Model) has been installed and tested for Grid usage. Concerning outreach to new users in the future: the team will organise a 3 day long Auger workshop in June and a Rexetox workshop in April or May 2012, and CESNET conference in April. Additional workshops for new user communities may be organised. Participation on the proposal for a new grid data management system for the VO AUGER continues.
- **Denmark:** We have started a project to approach the Danish geophysical science environment in order to clarify which users and subjects are most likely to be potential users of GRID resources. Institutes we have started to contact include mainly heavy satellite data users e.g. geodesy, geomagnetism, and oceanography. A secondary approach will target more broadly and also include other aspects of 'geophysics' such as e.g. life-sciences. Our main goal in addressing the geophysics environment is to enhance the awareness of the GRID community and the available services, in order to nourish a growing demand for utilizing GRID resources. Present achievements have been a promising contact to the geodetic environment, where a GRID – enabled method for Choleski factorization for equation solving, is under preparation.
- **France:** The EGITF11 co-organized the EGITF11 with the EGI.eu team and the first France Grilles scientific grid day co-located are the main events of the year. Ten presentations, ten posters and several demonstrations based on work done by the French research teams were presented during the France Grilles scientific grid day. The France Grilles web site has been completely renewed in order to be more attractive for new user communities. Development of English pages are ongoing and will be finished in PY3. The France Grilles publications collection set up during 2011 is continuously growing and sums up to 182 articles and 278 references of publications now (74 for 2011 and 4 for 2012). This work will continue and statistics will be published soon. The CEFE laboratory that is the largest French research centre in Biodiversity is currently porting its first application on the grid. The BEDOFIH project that was selected within the framework of the "Excellence facilities" program launched by the French government aims to create a European intraday financial database. Its data will be stored in the France Grilles infrastructure (at the LPSC laboratory). CNRS, through Institut des Grilles et du Cloud and the LPSC laboratory is one of the BEDOFIH partners. France Grilles prepares now its Advisory committee meeting (April) and the France Grilles Day second edition. Several contacts with potential users are ongoing.

- **Georgia:** Currently two groups are using grid infrastructure in Georgia:
 - Meteorology: Investigation of Advanced Research WRF (ARW) modelling system for weather research and forecasting – Meteorology Department.
 - Biophysical Chemistry: Modelling of some biochemical processes with the purpose of realization of their thin and purposeful synthesis – Tbilisi State University and Sokhumi State University.

NGI-GE supports users to adapt these applications from EGI AppDB to the national grid infrastructure and to make them aware about software upgrades. Regular assessment of research groups at universities and research institutes interested in participation GRI activities. GRENA together with research groups in Meteorology, Biophysical Chemistry, High Energy Physics and Plasma Physics are preparing project under the National Science Foundation for the development of grid infrastructure in Georgia.

- **Hungary:** NGI_HU has launched the e-Science Café Roadshow event, which was held in November addressing topics such as Grids, Desktop Grids, Clouds, GPGPU and HPC. The Grid Application Support Centre team ported 4 new applications (KOPI, JChem, GATE, Conformer Generator), and one to Desktop Grid infrastructure is underway (Biome-BGC). Training activities such as DCI summer school 2011, portal tutorials. New releases of WS-PGRADE/gUSE Portal (the latest is 3.4.1), with new features such as submitter monitoring, BOINC support in the submitter, uniform submission service (DCI Bridge) and statistics portlet on usage. Extending EGI infrastructure with Desktop Grids middleware is in good progress, almost finished. The integration is conducted by the EDGI project team. The EDGI production infrastructure with more than 130k CPUs will be offered as a service for EGI and NGI user communities, thus enabling and exploiting the possibilities lying within volunteer and institutional desktop grid computing for a wider scientific user community. In PY3 the team aims to reach out to national ESFRI project leads and promote these existing services.
- **Ireland:** Grid-Ireland as the Irish NGI has continued to work with existing grid users particularly in mathematics and astronomy, and incorporating research in making GPU resources available to users. Grid-Ireland continues to provide a support helpdesk for Irish grid users. Grid-Ireland has begun deployment of web portals (general purpose and application specific, e.g. for solar physics users) to replace a number of under-used command-line user interface services.
- **Italy:** During the PY2 the NGI_IT user support activities have been reorganized and it now reflects the schema that is now in place in EGI-InSPIRE since PQ7. Outreach activities at a national level focused on organizing meetings with various communities in order to understand if their involvement in the national and European grid is possible. These communities cover numerous scientific institutes and projects, such as
 - The National Council of Research (CNR) about the D4Science and iMarine projects
 - Italian Institute for Geophysics and Volcanology (INGV) about the ESFRI projects EMSO and EPOS
 - Various bioinformatics groups connected to ESFRI projects ELIXIR, LIFEWATCH and BIOVEL
 - The INFN experiments GERDA and ICARUS
 - The Technological Transfer institute Mario Boella (New Generation Sequencing)
 - Pharmacological institute Mario Negri (marionegri.it) (Matlab, OPENFOAM, R)
 - LHCf experiment (the smallest of the six official LHC experiments)

- Astra Project (a the Science Gateway for the project was developed)
- INFN SPES experiment (porting and license handling of ANSYS packages)
- National Institute of Astrophysics (porting of VISIVO system)
- SPACI consortium and the ELETTRA synchrotron

The NGI_IT user support unit collaborated with other NGI_IT units in order to analyze the issues and improve the MPI and parallel jobs support of the Italian infrastructure, in particular the interest is in having a HTC/HPC integration as transparent as possible to the user. Dissemination activities were focused on reviewing and updating dissemination material and various events. The COMCHEM VO with NGI_IT support has setup an electronic magazine (ISSN enabled) on which the VO Grid activities can be advertised.

- **Latvia:** During PY2 Latvian NGI has actively participated in helping user communities to migrate workflows from gLite to ARC middleware. Initial effort was concentrated on creating middleware-agnostic workflows based on Condor job submission software, since Condor would be able to submit and manage jobs both in grid environment (ARC, Unicore), as well as local cluster and user workstation levels. Due to several limitations of Condor, it is currently used only for some user front-end needs, and due to lack of accounting interoperability with ARC is removed as a LRMS back-end from IMCS UL site. Currently IMCS UL is evaluating use of SLURM LRMS. During PY3 both major sites in Latvian NGI plan to finally procure new hardware for increased computing resources. To harmonize middleware within Latvian NGI and NDGF_NGI, as well as allow easier use of national cluster resources, all sites in Latvia are migrating not only to ARC, but also to SLURM LRMS.
- **Lithuania:** The team was very active in PY2. We took part in several scientific festivals where we reached out to new communities. We delivered courses on grid computing for students and provided consultancy to potential users. Leaflets, user guides about the national grid have been prepared. We would also appreciate more user guides solving common often repeating problem on grids and would have new materials for teaching and training. It will be preferable to have some „teaching standard“. Difficulties that the NGI would like to solve in PY3 with support from EGI:
 - Problem with a license policy of commercial software on grid
 - Very small user communities with different task and programs, so we have to find NGI that have similar user request to enlarge the specific user community.
- **Poland:** During PJ2 majority of the efforts in NGI_PL have been devoted to establish close cooperation between NGI and Cherenkov Telescope Array (CTA) ESFRI. Teams joined several CTA workshops and conferences, both national (Warsaw, Lodz) and international (Annecy, Madrid, Rome, Amsterdam). The cooperation with CTA focused mainly on design of Scientific Gateway and Portal for CTA community. In close collaboration with the CTA community, we have designed and developed two experiments. The first one allows for testing the parameters of a mirror array while the second for analysis of, already available, pre-computed CTA data sets. For both experiments CTA *simtel_array* package and accompanying tools have been ported to the EGI grid infrastructure and updated several times during PJ2. For better users' satisfaction both experiments have been implemented within InSilicoLab environment allowing CTA users seamless execution of the batches of jobs on CTA data. Close cooperation with CTA ESFRI resulted in the membership of CTA Consortium for ACC Cyfronet AGH (Madrid, December 2011) InSilicoLab is also available for Computational Chemistry and Molecular and Material Science VRC. During PJ2 chemical part of InSilicoLab has gathered much attention among users, as it



allows access to commercial computational chemistry packages Gaussian and Turbomole. We have seen increase in No. of users (gaussian VO), mainly coming from Italy, Latvia and Turkey. Polish users run their computations usually via national VO vo.plgrid.pl.

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- **Portugal and Spain (Ibergrid):** The Portuguese NGI User Support Team reinforced the bond with the Spanish User Support Team through the establishment of a unique user support model serving both NGIs. The support model defines user support shifts strategies, common documentation and policies, and establishes the deployment of a central regional helpdesk serving users from both countries. Along the second year of the project, the Portuguese NGI User Support Team built submission frameworks for Portuguese researchers from Life Sciences (following research lines in comparative genomics and using Next Generation Sequencing techniques), and for a local community running an open source parser from Stanford University over English soap operas retrieved from the Gunterberg project. Simultaneously, it received a request from e-NRM VRC to enable access to the Portuguese infrastructure. Among the major second year highlights, we emphasize the IBERCLOUD initiative kick-off, aimed to provide a cloud infrastructure for IBERGRID users. In Spain the major contributions to the kick-off in the usage of the infrastructure in early 2012 in the general physics VO comes from two areas: astrophysics and simulations of Complex Systems, in particular spin glass simulations, both new users to the infrastructure. The Astrophysics users are studying the collisions between different isotopes of hydrogen in the atmosphere, and which are considered essential in the evolution of planetary atmospheres and interstellar areas. Currently they are submitting about 2000 computations per week, each of about 200 minutes duration. International VO users of Spain are major contributors to the areas of Computational Chemistry Fusion and Auger VOs. In this respect we want to remark the very positive experience of the Users Meeting that took place in Madrid in January 2012 the yearly IBERGRID conference, held in Santander, Spain; and the release of IBERGRID 2011 report.
- **Romania:** The RO-01-ICI site has deployed Matlab with Distributed Computing Server toolkit for 16 workers in a private cluster and it is testing its integration with the grid middleware. RoGRID-NGI portal was improved and is used to disseminate information regarding events involving grid community and to support users. The operation team provides support for national resources like gridmosi.ici.ro VO and regional resources available in seegrid and see VOs. Besides the HEP community, there are users of the EnviroGrids VO, and there is interest for the Globus middleware. For PY3 we plan to test Globus in addition of gLite middleware.
- **Serbia:** Due to strong advertisement of AEGIS and EGI to the user communities in Serbia, a significant increase of AEGIS VO members (more than 20%) was recorded during PY2. The total number of members reached 112. Support to the Serbian chemistry community is continued in usage of NAMD, Firefly, and Gaussian applications. Software stack available at NGI_AEGIS grid sites is enriched with new chemistry, engineering, and mathematical software. AutoDock Vina application has been deployed on the request of our chemistry community, while the OpenFOAM (Open Field Operation and Manipulation) framework is ported by Serbian engineering community. In addition, in collaboration with the Mathematical Institute of the Serbian Academy of Sciences and Arts, ILOG CPLEX optimizer code has been ported to the AEGIS infrastructure. NGI_AEGIS Helpdesk and NGI_AEGIS website have been regularly updated. EGI Training Marketplace gadget was included to AEGIS website in order to help Serbian Grid users to find training material and events that meet their needs in a more efficient way. Beside these activities, central NGI_AEGIS user interface machine has been upgraded to Intel Xeon machine

with 8 cores and 16 GB of RAM. In PY3 NGI_AEGIS will focus on organization of training events and improving of level of support to scientific communities. Plans for porting and deployment of new scientific applications to Serbian Grid infrastructure were already made with the Serbian researchers.

- **Slovakia:** The team continued to support users concerned with the simulations of the spread of fire in tunnels, where the FDS (Fire Dynamics Simulator) model is applied (combined MPI with OpenMP and Parametric) using EMI-1 middleware functionality. Also users of WRF (Weather Research and Forecasting) system, chemical DIRAC application (Atomic and Molecular Direct Iterative Relativistic All-electron Calculations) and application from the electronics domain were supported. We started to collect user requirements in domain "Fire simulation" and "Speech in the grid" through the setup of related Virtual Team projects. We organized the "7th International Workshop on Grid Computing for Complex Problems" in Bratislava. Tutorial on Cloud computing was organized in the scope of GCCP2011.
- **Turkey:** the team has been providing direct support to the national user communities from different disciplines for data transfer, software and tools installation, job submission and documentation through the common communication channels (e-mail, wiki and blog). The new user community settlements were also supported by presenting EGI infrastructure and abilities and providing grid certificates. The current situation could be understood that the national user communities need to be strongly oriented to the ESFRI applications. After the expansion of user community related to ESFRI applications, the community will support the integration, testing or usage of the applications to the EGI infrastructure. Regarding this NGI_TR will in PY3 support user communities who deal with ESFRI applications. The leaflet indicating ESFRI applications and the efforts for the EGI infrastructure integration will be prepared and distributed through the national users to increase the awareness level. Dedicated slot for relation between ESFRI applications and EGI will be provided within the content of "National Grid and High Performance Computing Conference" that will be organized in 12-14 April 2012 Ankara-Turkey.
- **UK:** The UK has led a strong program of community engagement and outreach during PY2. We held two one day workshops with our stakeholders, the community projects such as the ESFRIs and our members, the UK's HEIs. These workshops were to gather requirements for shaping and driving the UK's Technical Roadmap. We held a further two workshops during a review by our funders that continued this process, the outcome of which is anticipated soon. The UK's SeIUCCR program of community engagement through its champion networks started in April 2011 and we ran a highly successful training school for early career scientists in August. The residential one week school was very popular (120 applicants for 30 places) and covered usage of distributed computing infrastructures from local resources through to grids, clouds and HPC; software sustainability; and it introduced students to the NGI and EGI. SeIUCCR held a one day networking event at the UK's All Hands Meeting where it brought together community outreach activity from SeIUCCR, NGS, GridPP, SSI, XSEDE and EGI to learn from each other and share best practice. It is funding champions to attend the SSI's Collaborations Workshop in April 2012 and will hold a breakout session of new community engagement. The UK runs an effective support activity, receiving and answering approximately 600 user queries annually through its helpdesks. Excluding site issues, authentication/certificate issues are still the most predominant support request, followed by general queries, applications, using the UK's NGS cloud, and Authorisation/VOMS. The UK has managed to improve its user's experience with managing access to resources and reduce the burden on its support team in a number of ways during the past year. The SARoNGS (Shibboleth) access route has been implemented at more NGI resource



centres, enabling users access via their institutional logon and shielding certificate management from the user. It has developed its Certificate Wizard allowing a browser independent way of applying for and managing certificates. It has further improved its website instructions for grid authentication and authorisation. Together these measures have seen a dramatic fall in the number of user queries the helpdesks have received.

9 CONCLUSION AND FUTURE PLANS

PY2 has seen a considerable change in structure and direction of the activities within NA2. The impact during the first half of the project year of the EC review recommendations was minimal while plans were being made for the changes that were introduced at the start of PM19.

Restructuring the merged NA2 and NA3 around the NGI International Liaisons has, from the experience over the last 6 months, provided a more effective focus around the non-operational activities within EGI-InSPIRE that had been achieved under the previous project structures. It has provided a structure that allows the lightweight creation and operation of short-duration Virtual Teams that are able to engage resources within the NGIs to tackle issues of community importance. This system has been used to establish contact points with ESFRI projects across the NGIs, collect information for the revised website, and to engage NGIs with various user communities. The Virtual Teams are supported by the Strategic Planning and Policy Support, Marketing and Communication, Community Outreach and Technical Outreach to New Communities teams based at EGI.eu, and the providers of the Training Marketplace, Apps DB and CRM services in the NGIs.

The NIL structure will be evolved in PY3 to improve the focus of the EGI community of reaching out through the NGIs to new user communities through events, outreach, marketing and direct technical engagement. The contribution of the communications, strategy and policy and user community teams and NILs to the PY3 and PY4 strategy for EGI is described in more detail in D2.30 Strategic Plan [R49], D2.31 EGI Technical Roadmap [R50], D2.18 Evolving the EGI Business Model [R51] and D2.15 Marketing and Communications Plan [R52].

10 REFERENCES

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R 2	D1.1 Quality Plan and Metrics https://documents.egi.eu/document/55
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R 4	Policy part of EGI website http://www.egi.eu/policy
R 5	Policy Development Process (PDP) https://documents.egi.eu/document/169
R 6	Technology Coordination Board (TCB) https://documents.egi.eu/document/109
R 7	Operations Management Board (OMB) https://documents.egi.eu/document/117
R 8	Operational Tools Advisory Group (OTAG) https://documents.egi.eu/document/103
R 9	Operations Automation Team (OAT) https://documents.egi.eu/document/123
R 10	User Community Board (UCB) https://documents.egi.eu/document/120
R 11	User Services Advisory Group (USAG) https://documents.egi.eu/document/121
R 12	Security Policy Group (SPG) https://documents.egi.eu/document/64
R 13	Software Vulnerability Group (SVG) https://documents.egi.eu/document/108
R 15	Security Coordination Group (SCG) https://documents.egi.eu/document/119
R 16	EGI Computer Security and Incident Response Team (EGI CSIRT) https://documents.egi.eu/document/385
R 17	MS214 Security Activity within EGI https://documents.egi.eu/document/307
R 18	MS108 Global Task Review https://documents.egi.eu/document/314
R 19	MS109 NGI International Task Review https://documents.egi.eu/document/315
R 20	TCB wiki page https://wiki.egi.eu/wiki/TCB
R 21	D3.2 Annual Report on the status of EGI's User Services and Community Coordination https://documents.egi.eu/document/386
R 22	RT for Policy Development Process http://go.egi.eu/pdp-queue
R 23	Glossary Coordination Group (GCG) wiki page https://wiki.egi.eu/wiki/GCG
R 24	Memorandum of Understanding (MoU) template https://documents.egi.eu/document/87
R 25	MS212 Alignment of EGI.eu with the ERIC organisational model https://documents.egi.eu/document/244
R 26	D2.7 EGI Sustainability Plan https://documents.egi.eu/document/313
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R 31	EGI Workshop: Defining a roadmap for a federated virtualised Infrastructure http://go.egi.eu/jngxd
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R 34	EGI Policy Page http://www.egi.eu/policy
R 35	EGI Policy Wiki pages https://wiki.egi.eu/wiki/TNA2.3_Policy_Development
R 36	Initiative for Globus in Europe http://www.ige-project.eu/
R 37	European Middleware Initiative http://www.eu-emi.eu/
R 38	StratusLab http://stratuslab.eu/doku.php/start
R 39	Venus-C http://www.venus-c.eu
R 40	European Desktop Grid Initiative http://edgi-project.eu/
R 41	Open Grid Forum (OGF) http://www.gridforum.org/
R 42	e-Infrastructure Reflection Group (e-IRG) http://www.e-irg.eu/
R 43	European e-Infrastructures Forum (EEF) http://www.einfrastructure-forum.eu/
R 44	Infrastructure Policy Group (IPG) http://forge.gridforum.org/sf/wiki/do/viewPage/projects.ipg/wiki/HomePage
R 45	European Policy Management Authority for Grid Authentication http://www.eugridpma.org/
R 46	The International Grid Trust Federation (IGTF) http://www.igtf.net/
R 47	List of EGI policies and procedures https://wiki.egi.eu/wiki/PDT:PDT:Policies_and_procedures
R 48	EICTA White Paper on Standardisation and Interoperability - http://www.eicta.org/fileadmin/user_upload/document/document1166544474.pdf
R 49	D2.30 EGI Strategic Plan https://documents.egi.eu/document/1098
R 50	D2.31 EGI Technical Roadmap https://documents.egi.eu/document/1094
R 51	D2.18 Evolving the EGI Business Model https://documents.egi.eu/document/1040
R 52	D2.15 Marketing and Communication Plan https://documents.egi.eu/document/1070