EGI-InSPIRE

A NNUAL R EPORT ON EGI AND ITS E XTERNAL R ELATIONS A CTIVITY

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Abstract

This document reports on the external relations activity (NA2) for the EGI-InSPIRE project. It reviews the main activities completed during the third project year and the impact of these activities to date. The document covers the work of the dissemination/communications team, the strategic planning and policy support team, the technical outreach activities, EGI Champions team, activities of NGI International Liaisons Team and Virtual Teams, as well as the major events organised by the event teams in EGI.eu and the NGIs.

I. COPYRIGHT NOTICE

II. DELIVERY SLIP

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III. DOCUMENT LOG

Issue	Date	Comment	Author/Partner
1	25/04/2013	First complete draft ready for external review	Damir Marinovic, Catherine Gater , Gergely Sipos, Richard Mclennan, Sergio Andreozzi (EGI.eu)
2	08/05/2013	Updated based on comments from Steven Newhouse, Robert Lovas, Ladislav Hluchý, Daniele Cesini, Genevieve Romier	Damir Marinovic, Sergio Andreozzi, Gergely Sipos

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

Project year 3 (PY3) has seen a considerable impact from changes in direction of the activities within NA2 made in the second half of project year 2 (PY2) and at the beginning of PY3. The plans, based on the EC review recommendations, were fully implemented during this year.

Activities of the NGI International Liaisons and full implementation of EGI Champions Scheme provided a more effective focus around the non-operational activities within EGI-InSPIRE that had been achieved under the previous project structures. The NIL structure was 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. Virtual Teams which were able to engage resources within the NGIs used them to tackle issues of community importance.. The Virtual Teams have been 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.

Following the approval of the EGI strategy, the EGI balanced scorecard was revisited to better measure advancement in the strategic execution. The first edition of the EGI Compendium was published covering 2011, while the data collection about 2012 was launched. A number of policy papers have been created and approved by the Council in the area of federated resource allocation, pay-for-use models, and an EGI.eu transition plan to ERIC. Two virtual teams produced policy recommendations around an EGI scientific publications repository that led to a strategic collaboration with the OpenAIRE project and to a new proposed classification for scientific disciplines to be adopted by EGI tools. In the area of collaborations, agreements were signed with three new partners DANTE, PSNC for QosCosGrid software, UVACSE for Genesis-II. New policies in the area of security have been delivered as well as the liaison with EUGridPMA and IGTF continued. At EGI Community events, a dedicated track was managed to reinforce the communication and coordination around strategy and policy topics.

The PY3 has been very active for the communications and marketing team. The ground work for many of the dissemination channels was carried out in PY1 and PY2, and PY3 has now seen the maturing of several initiatives in the areas of social media, policy outreach, videos and the website. The plans for dissemination in PY3 were outlined in D2.15 *Marketing and Communication Plan.* 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 document also 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 2012 in September 2012 in Prague and the EGI Community Forum 2013 in April 2013 in Manchester.

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1 INTRODUCTION

This deliverable reports on the External Relations work package (NA2) in EGI-InSPIRE which includes activities in the areas of strategic planning and policy support, communications, technical outreach, user community support, EGI Champions Scheme, NGI International Liaisons and organising events. It reviews the main activities completed during the third year and the impact of these activities to date. The document covers the work of these funded teams, the Virtual Teams (VTs) that includes additional unfunded effort from within the community, as well as the major events organised by the event teams in EGI.eu and the NGIs. The target group for this deliverable should primarily consist of the people interested in EGI external relations activities, external partners of the EGI-InSPIRE project, EC officials, NILs, people involved in VT activities, people interested in communication and marketing in science and research and general public.

1.1 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, the Technical Forum and the Community Forum.

1.2 Strategic Planning and Policy Support

Strategic Planning and Policy Support is led by the EGI.eu Strategy and Policy Team (SPT) and is responsible for the support of the development of strategies and policies internal and external to EGI.eu relating to governance, standardisation and integration with other infrastructures, EGI strategic response and alignment to EU strategic and policy developments, 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 collaborate with other projects and organisations, including 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.

1.3 EGI Champions Scheme

The EGI Champions scheme is about creating a group of knowledgeable and highly motivated grid users with a mission to actively encourage and enthuse their peers into using the European Grid Infrastructure for their research. The EGI Champions are knowledgeable users of the infrastructure with an aptitude for conveying the potential and value of the EGI to fellow scientists and researchers. Champions may work in any discipline from astrophysics to ancient history, but it's their

communication skills that are of greatest importance to a role that involves providing hands-on support to small numbers of other researchers and talking to small or large groups of people, be they academics, the general public or even school children.

The scheme was launched on 17 September 2012 during the EGI Technical Forum in Prague. The Champion role offers a flexible and practical mechanism that can be used by EGI to create and support enthusiastic individuals who will act as ambassadors for the European Grid Infrastructure. Through their own technical knowledge and awareness of EGI's resources and services, these ambassadors help, assist, encourage and nurture both current and potential new users to employ the resources of the grid.

1.4 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 collecting and analysing e-infrastructure requirements of the new community, identifying which resources can be used within the production infrastructure to satisfy the use cases, ensuring the integration of new resources into EGI as required, porting applications to the EGI platforms, deploying new services to meet previously unforeseen needs, organising training and educational events, and so on. This task, led by the EGI.eu User Community Support Team provides related activities at the European level. The EGI.eu team works with the NGI International Liaisons (NILs) and with various projects of the EGI ecosystem to ensure that a coordinated, systematic and strategic approach is taken to this work.

In addition to the technical resources that can be accessed within the NGIs and community projects, there are further sources of technical expertise that this task coordinates:
- Operation and further development of the EGI Training marketplace (TMP)
- Operation and further development of the Application database (AppDB)
- Operation and further development of the Client Relationship Management system (CRM)

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

1.5 NGI International Liaisons and Virtual Teams

In 2011, the EGI-InSPIRE project revised its user engagement activities and defined a new structure for the NA2 work package within an updated Description of Work. The purpose of the restructuring was to improve the efficiency and flexibility of the interaction between the NGIs, EGI.eu and other organisations to achieve common goals in the field of "Engaging with New User Communities". The new structure consists of two key elements: virtual team framework and NGI International Liaisons.

2 COMMUNICATIONS & MARKETING

2.1 Communications Plan

The plans for dissemination in PY3 were outlined in D2.15 *Marketing and Communication Plan[1]* and MS228 *Dissemination Handbook[2]*, which were completed during PQ8 and PQ9 respectively. The activities carried out to meet the plan and to respond the first year review are outlined below.

2.2 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.** For a project of this size it is vital that NA2 partners maintain good communication channels.

- **Close collaboration with NA1 and the Strategic Planning and Policy Support team.** A close working relationship is essential to ensure messages are accurate and consistent across the whole project.

- **Build on the user community networks**. Use networks established through the user support activities to disseminate the project's messages as widely as possible and to foster new user communities. The communications and user community support teams, the NILs and EGI Champions must also coordinate their attendance at events in order to reinforce the impact of EGI's presence.

- **Clear internal communication of what NA2 requires from the other activities to achieve its aims.** Communicate what NA2 needs from the other activities to achieve success e.g. timely input of information, regular updates of project websites, leads to potential new users or scientific fields, suggestions for events to attend, early notification of press opportunities, details of key achievements such as scientific papers.

- **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, videos, and publicity materials.

- **Build a sense of community.** The communications activities should foster a sense of community among new and existing users and also between the activity partners.

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[1] https://documents.egi.eu/document/507
[2] https://documents.egi.eu/document/541

- **Reinforce realistic expectations of grid technology.** NA2 should communicate both the benefits of grid and DCI technology and also its current limitations.

In addition to these qualitative success factors, quantitative progress towards achieving the communications team's aims to reach out to its audiences has been measured through the quality metrics.

2.3   Means for dissemination

The project uses the following channels for communication.

2.3.1   Main website and wiki

The new website for EGI featuring new images, a new structure and enhanced social media interactivity was launched at the EGI Community Forum in March 2012 in Munich. The social media channels were also advertised at the event. The impact of the new website was assessed for MS231 *Review of the website* in PM28[3]. The document summarized some of the measures used to drive traffic to the website, including adding links to websites frequented by users, adding case studies across a range of disciplines, publicising the web on printed materials and integrating the website with the EGI blog and social media feeds.

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[3] https://documents.egi.eu/document/1259

Training on editing the EGI website was delivered in November 2012, and the website is also now fully documented. The EGI Champions scheme and the profiles of the first Champions have been added to the website[4] and the scheme has been promoted via EGI's communications channels, with a re-launch announced on 28 January. A number of use cases have been developed and made available on the website[5], including "Are comets born in asteroid collisions?", "Climate change and ozone", "Designing better antibiotics", "Cheaper biodegradable plastics", "Cracking Goldbach's Conjecture" and "Predicting the risk of dam failure". 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 2012 to 15 March 2013, the following web statistics have been gathered for the main EGI website, www.egi.eu using Google Analytics. Nearly 83,000 unique visitors visited the EGI.eu domain, compared to 67,000 in the previous 12 months, corresponding to 172,000 visits and 611,000 page views. Around 46% were new visitors as defined from IP addresses by Google Analytics, up from 40% the previous year, and 53% were returning visitors. The "stickiness" of the www.egi.eu website was quite high in that on average people viewed 3.6 pages per visit and spent an average of 5:21 minutes on the site. The bounce rate was slightly up to around 55%. The peak in visits was seen

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[4] http://www.egi.eu/community/egi_champions/index.html
[5] http://www.egi.eu/results/success_stories/

on during the week of 17 September, the week of the EGI Technical Forum in Prague, with around 1500 visits on per day that week. The most popular pages were the homepage, the timetables for the main events and the conference websites, followed by the request tracker, the SSO ID page, which gives access to EGI's management tools and staff page. The highest levels of traffic were from search engine traffic (45%), direct traffic (25%) and referrals (28%) from the EGI wiki site, mail, the EGI Helpdesk, the CERN wiki and repository. About 2.3% of referral traffic was from Facebook. Most people who found the site were searching for EGI or one of the events. Popular single search terms were 'virtual organisation', 'umd-1' and 'goldbach conjecture'.

The wiki site[6] has continued to provide the internal engine for the project, and is also important in driving traffic to the main .egi.eu domain and website.

2.3.2 Materials, press and publications

Three issues of the EGI *Inspired*[7] newsletter have been prepared during the third project year. The project team also produced Directors letters[8] on a monthly basis, which were distributed to the whole consortium. Articles about EGI were also published in the e-IRG Newsletter, *Public Service Review: European Science & Technology*, Supercomputing *Online*, *HPC in the Cloud*, *International Innovation*, *Public Service Review: European Union, International Innovation* and the CERN Bulletin. Articles about EGI were published *PanEuropeanNetworks: Science & Technology* and there were 23 EGI-related items in *iSGTW*, an increase from 15 items last year. A press release on the sonification of the CERN Higgs data released by DANTE, mentioning EGI, was picked up by a number of high profile publications, including Bloomberg BusinessWeek, Discovery News and Wired. Press cuttings are featured on the EGI website[9].

In PQ8, NA2.2 worked with Public Service Review to produce a dedicated 8-page booklet about EGI, which included an article about Big Data by John Higgins, Director-General of DIGITALEUROPE and a 4-page article on EGI.

The communications team also launched a new monthly publication called the 'NIL Dispatch', in response to feedback from the NIL communications session at the EGI Technical Forum 2012. The new publication is issued through Mailchimp[10] to the NILs list and features links to key events, materials and initiatives targeted at new users, which will be of direct use to the NILs. Brochures featuring case studies on health and earth sciences have also been produced for events, along with the EGI Annual Report 2012.

An EGI / iSGTW Writing Competition[11] was advertised on AlphaGalileo[12], Cordis[13], iSGTW[14] and to European journalists and closed in January 2013. Some articles were received but not enough to

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[6] Wiki.egi.eu

[7] http://www.egi.eu/news-and-media/newsletters/

[8] http://www.egi.eu/news-and-media/directors_letters/

[9] http://www.egi.eu/news-and-media/press/

[10] http://mailchimp.com/

[11] http://www.isgtw.org/spotlight/announcing-egi-writing-prize-2013-association-isgtw

form a shortlist. However the writers of the articles have been invited to publish their work on the EGI website and in iSGTW. There are also now 15 case studies published on the website, including case studies from astronomy and astrophysics, earth sciences, physics and climate change, life sciences, chemistry, mathematics and engineering.

EGI also featured in the winning FP7 success story from the WeNMR project in March 2013. WeNMR received a prize for 'Excellent Science' awarded at the European Commission annual e-Infrastructure Concertation meeting. The competition was organised to look back at, and recognise, the successes of the FP7 funding programme. Working with the e-ScienceTalk project the EC asked the leaders of all projects funded by FP7 to submit an abstract that highlighted what their greatest success was. The judges ranked the submissions to a winner and runner-up in each of three categories 'Better Society', 'Competitive Industries' and 'Excellent Science'. WeNMR was awarded the runner up place in the 'Excellent Science' category. WeNMR also featured in Episode 1 of the 'Stories from the Grid' series produced in PY2[15].

2.3.3 Social media and videos

The team has 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 2013, 192 blog posts have been contributed in total, with 80 added during PY3. The feed from the most recent blog posts features on the home page of the website.

Members of the dissemination team have also blogged for the GridCast blog[16] at events such the eChallenges and SciTech'12. A new social media strategy was developed in PQ7[17], 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. The main EGI Twitter account @Europeangrid now has over 500 followers, which is greater than the number of accounts that we follow, including Dell, GlobusOnline, SURFnet, Datanami and a number of European projects. CERN also follows EGI on Twitter, and has 760,000 followers. EGI has around 150 likes on Facebook and 2,800 views on Flickr, a four-fold increase since last year.

Traffic to the website from social media sites has also significantly increased as a result of the new social media strategy. Referrals from Facebook have increased by 90% and from Twitter by 30%. Traffic from iSGTW.org has increased by over 90% and from the e-ScienceTalk website by 190%. Traffic from Wikipedia is up by 80%, while traffic from LinkedIn has dropped slightly by 14%.

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[12] http://www.alphagalileo.org/

[13] https://cordis.europa.eu/wire/index.cfm

[14] www.isgtw.org

[15] http://www.youtube.com/watch?feature=player_embedded&v=1tWduGtNRYg

[16] www.gridcast.org

[17] www.egi.eu/news-and-media/newsletters/Inspired_Winter_2012/EGI_going_social.html

EGI has continued to work with a local film production company, Een van de Jongens, to produce further videos in the series "Stories from the grid" which was launched at the end of PY2. 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 anaesthetics[18]" was released on 29 February 2012 in collaboration with WeNMR. "Episode 2: Reviving the lost sounds of the epigonion"[19], published on 22 May 2012, shows how Domenico Vincinanza of DANTE recreated the sound of the epigonion using a technique called physical modelling, and with the help of grid computing resources from EGI. The epigonion's sounds can now be downloaded and played by any musician using a simple keyboard. "Episode 3: Hunting for the top quark in the Large Hadron Collider"[20] was launched on 8 June 2012, in advance of the announcement of the discovery of the Higgs by CERN. The EGI video features Marcel Vreeswijk and Hurng-Chun Lee from NIKHEF (the Dutch National Institute for Subatomic Physics) and their studies of the top quark created by the Large Hadron Collider (LHC). The fourth episode, "Episode 4: Main Belt Comets"[21], released on 18 March 2013, travels to Serbia, where Bojan Novakovic explains how grid computing helps astronomers to explain the origins of main belt comets.

By 22 March, the EGI YouTube channel has had 8600 views, a big increase compared to the 793 views seen by 12 April 2012, with episode 3 being the most popular video with nearly 3000 views. The EGI YouTube channel also has 72 subscribers. The highest source of traffic (30.8%) was from 'mobile apps and direct traffic.' (This includes views of unknown referrer on mobile apps and direct traffic on the YouTube watch and channel pages. Some possible origins of direct traffic include email and instant messaging clients or copying and pasting a URL into the browser.) Embedded players (such as those embedded in the EGI website) account for 24.2% of traffic. In total, 23.1% 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: www.egi.eu (4.4%), www.isgtw.org (1.7%) and Google (1.3%).

A communications workshop on the production of the videos is scheduled for the EGI Community Forum in Manchester on Friday 12 April, and will feature the director and film crew, as well as the participants in the videos. A further video on EGI itself will be filmed at the event.

2.3.4 Events and marketing to new users

Outreach at events is now focused on outreach to key target communities, such as life sciences, environmental sciences and digital heritage. In PQ9, EGI focused on the European Geosciences Union (EGU) General Assembly in Vienna and the HealthGrid/IWSG-Life 2012 event in Amsterdam, which was co-organised by the user community support team in EGI. The iPv6 World Launch Day took place on 6 June 2012, and EGI participated as a sponsor, providing a booth, contributing to the press release and providing materials relating to EGI and iPv6. In addition, EGI sent a booth to the exhibition at ISC2012, which was attended by more than 2,000 delegates in Hamburg, distributing materials advertising the next EGI Technical Forum in Prague. In PQ10, the Dutch NGI distributed EGI case study brochures on the life sciences at the European Conference on Computational Biology in Basel. EGI was on the agenda at Digital Research 2012, the UK All Hands Meeting and a presentation and poster were given on EGI at eChallenges in Lisbon in October. EGI was also presented at the EUDAT 1st Annual Meeting in Barcelona, and at the EUROMED'12 conference in Cyprus.

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[18] http://go.egi.eu/conco
[19] http://www.youtube.com/watch?v=S-AL3Z0GmlM
[20] http://www.youtube.com/watch?v=gEnXmGYM9Pk
[21] http://www.youtube.com/watch?v=lpKi8xGL4RU

PQ11 focused on the Supercomputing'12 event in Salt Lake City, which gathered over 9000 delegates. EGI hosted a booth and EGI also featured in two presentations given by Domenico Vicinanza at the NASA booth at the event, presenting sonified data from Voyager 1. As a result, Domenico was invited to write a long piece of music to be used at the AMES Space Centre in California. The piece is 18 min long and uses sonified data that is a collection of 4093 magnetic field measurements (1 year worth of data) captured at a distance of about 123 AU (15 billion miles) from Earth by Voyager 1. The article about the sonification of Voyager 1 for Supercomputing featured on the international Science Grid This Week[22] website, has featured on two NASA websites and it is one of their (only 18) feature stories of 2012.

EGI also hosted a booth at SciTech'12 in Brussels in November, an event targeted at policy makers. The Director delivered a masterclass to the delegates and participated in a discussion panel featuring Lord Robert Winston, media science communicator and Fellow of the Academy of Medical Sciences in the UK. This event was featured in a spotlight article in iSGTW[23]. EGI presented a demo on federated cloud activities at the CloudScape V event in Brussels, and participated in workshops at the 10th e-Infrastructure Concertation Meeting, also in Brussels. EGI has presentations at ISGC2012 in Taipei and contributed to the GridCast being held at the event.

Images of the events are available on the EGI Flickr account[24].

2.3.5 EGI Events Outreach

2.3.5.1 EGI Technical Forum 2012

The main focus for communications activities during PQ10 was the EGI Technical Forum that was held in Prague from 17 to 21 September. The event was attended by 415 participants and included over 300 contributions, 203 speakers and 42 session convenors. The communications team coordinated the outreach for the event through the social media channels, such as Twitter, Facebook and Flickr, and also produced the programme, badges and website. During the event, the team staffed and ran the EGI booth in the exhibitions area, and coordinated the media activities at the event. These included attendance by the iSGTW editor, the editor of HPCintheCloud and the GridCast team. During the event, there were over 500 microblog posts on Twitter from 60 users, more than twice the traffic from the previous year's event. Photos were tagged in Flickr and GridCast published 17 posts from 6 bloggers, including 9 webcasts and 2 demo videos. The Conference4Me app was downloaded by 190 users, nearly half the attendees. A number of articles were published in HPCintheCloud and iSGTW including "Grid Community Gathers in Prague[25]", HPC in the Cloud, 18 September, "Globus and Grid: Blazing Trails for Future Discovery[26]", HPC in the Cloud, 13 September and "Federating clouds to aid researchers[27]", iSGTW, 17 October 2012.

The team presented the EGI communications handbook to the NILs and ran a session on marketing and communication. A European version of Globus Online was launched on 20 September, and

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[22] http://www.isgtw.org/feature/where-no-musician-has-gone

[23] http://www.isgtw.org/spotlight/predicting-future-science-and-technology-europe

[24] http://www.flickr.com/photos/europeangrid

[25] http://www.hpcinthecloud.com/hpccloud/2012-09-18/grid_community_gathers_in_prague.html

[26] http://www.hpcinthecloud.com/hpccloud/2012-09-13/globus_and_grid:_blazing_trails_for_future_discovery.html?featured=top

[27] http://www.isgtw.org/feature/federating-clouds-aid-researchers

announced through a joint press release with Globus and IGE. An EC workshop on DCIs for e-Infrastructures was also held on 18 September bringing together key stakeholders from the commercial and academic spheres. From the feedback survey, 126 responses were received. The majority of delegates found the website useful and the online registration easy to use. Conference staff and EGI staff were deemed to be helpful and most delegates had no major problems with the logistics of attending the event. Nearly half the respondents accessed our Twitter account compared to 25% on Facebook, making Twitter the most popular social media channel. Over 35% read iSGTW, and about 25% visited the EGI and GridCast blogs.
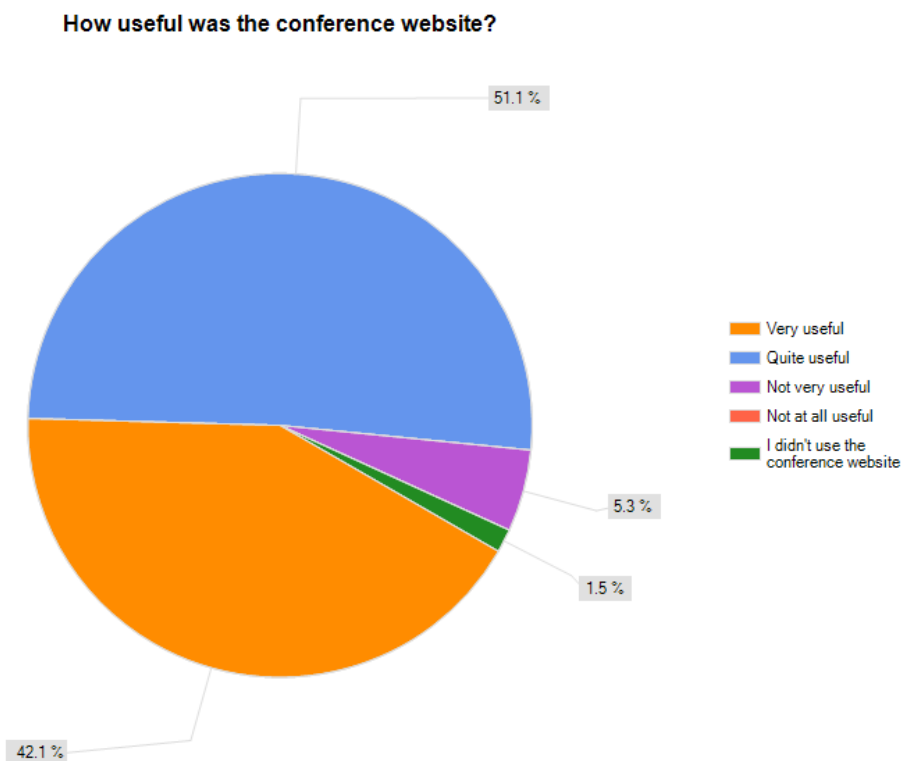
A feedback survey was launched at the end of the event and received 126 responses, a high response rate of 30%, compared to previous years at 15-17%. Over 90% of respondents found the conference website quite or very useful, although hit rates to the website were about 30% lower than for the Technical Forum in 2011. Around 90% found the registration process quite or very easy to use and around the 80% found the EGI staff helpful (with 17% responding 'I don't know'). Over 85% referred to the online programme for the event, and 62% found the short programme provided in the badges useful. Only 44% 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, 38% to iSGTW, 22% read the GridCast blog, 27% looked at the Facebook group (compared to 19% at the previous event) and 44% used Twitter.

2.3.5.2   EGI Community Forum 2013

The EGI Community Forum 2013[28] took place at the University Place conference centre in Manchester, United Kingdom between 8-12 April 2013. The event was hosted by EGI.eu and UK NGI,

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[28] http://cf2013.egi.eu/

a partnership between GridPP and the National e-Infrastructure Service (NES). The Community Forum was held in conjunction with the 3rd EMI Technical Conference and is co-located with the third annual meeting of the European Globus Community Forum (EGCF).

Materials have been prepared by the communications team for the Community Forum such as web banners, the sponsorship guide and the exhibition guide in addition to updates to the event website. The event has also been advertised in the November issue of the EGI-InSPIRED newsletter and promoted by our media partners' iSGTW, HPCwire, HPCinthecloud, and Datanami. An animated event banner also appears on the scienceomega.com website, on the homepage and the science solutions page. Journalists from Datanami and iSGTW attended the event, and e-ScienceTalk also run a major GridCast from the event, featuring videos, blog posts and live reporting via social media channels.

The summary table below shows that number of participants and contributions to EGI events is holding fairly steady, with a slight decrease in 2012/2013 possibly due to the financial crisis and decreases in local travel budgets.

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
EGI Technical Forum 2012	415	305	203	42
EGI Community Forum 2013	381	287	199	43

Table 1 – Table comparing figures for EGI events in PY1, PY2 and PY3

2.3.6 Collaboration with NGIs and other bodies

EGI is active in the e-Infrastructure dissemination landscape and is part of a communications working group run jointly by TERENA[29], DANTE (Delivery of Advanced Network Technology to Europe)[30] and EGI, and had regular meetings with the communication representative for the e-Infrastructure Reflection Group (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.

In collaboration with the NILs and NGIs, the communications team has also participated in the ENVRI VT, the Inter NGI usage VT, the Scientific publications VT and NGI Compendium VT. The dissemination team will help to publicise the new scientific publications repository and has edited

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[29] http://www.terena.org/
[30] http://www.dante.net/

the layout of the final version of the NGI Compendium. The communications team has also announced a call for joint collaborative use examples with EGI and XSEDE[31], which also featured as a workshop at the Community Forum in March.

NGIs also report their nationally focused EGI activities within the EGI-InSPIRE project through the quarterly milestone reports. The Irish NGI (NGI_IE/TCD) issued a news release in the wake of the Higgs boson results, highlighting its contribution to the search. The Grid-Ireland Operations Centre was mentioned in a subsequent article on mathematics and science in the leading Irish newspaper, the Irish Times. The Lithuanian NGI introduced grid infrastructure at a joint meeting of the VU MIF and Military Academy of Lithuania. The Latvian NGI (NGI.LT) was introduced at conference "Baltic Applied Astroinformatics and Space Processing", that was held on 6-7 May in Venspils, Latvia.

The Cyprus NGI has been active in organising conferences and workshops, including events on digital libraries and an ENISA/EC meeting on privacy issues. The Czech NGI (CESNET) was active in supporting the organisation and promotion of the EGI Technical Forum in Prague and planned presentations at a PRACE workshop and other workshops in November. The Finnish NGI team visited users at Finnish FGI sites, promoting grid use and distributing the EGI annual report for 2011. A seminar on High Performance Computational Nuclear/Particle Physics at CSC brought together experimentalists and theorists in Finland, who work in the areas of nuclear and particle physics. The French NGI also organised a user event on cloud and OpenMole. Ibergrid organised the 6th IBERGRID conference, which will be held in Lisbon in November 2012.

The Italian NGI (INFN) participated in the EGI Technical Forum with contributions in the areas of EMSO ESFRI projects data management, blood circulation, ANSYS licensed application, porting the NEMO oceanographic framework, and using TopHat to perform alignments of RNA-Seq reads to a genome. A new user community, the Institute for Atmospheric Science and Climate of the National Research Council ported an application to the grid. The Latvian NGI has been identifying new user communities and the Dutch NGI has been working in the area of life sciences and has given tutorials on grid use. The Slovakian NGI has run fire simulations and applications in the areas of chemistry, astrophysics and electronics. The Swiss NGI has been working with the earth sciences community. The UK held a successful Summer School for 30 early career researchers, a week long residential school aimed at increasing awareness of the variety of e-infrastructures available. Topics covered included HPC, grid computing, cloud computing, software, data and data curation.

2.4   Summary and Analysis

PY3 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 and PY3 has now 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 M123 Global Task Review.[32]

The plans for dissemination in year three were outlined in D2.15 *Marketing and Communication Plan[33].* The plan focused on what success in communicating to key target audiences for EGI would look like, and some plans for how to achieve this. The audiences covered in the plan included research communities, media and general public, collaborating projects and policy makers, NGIs and

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[31] http://www.egi.eu/news-and-media/newsfeed/news_2013_0010.html
[32] https://documents.egi.eu/document/1566
[33] https://documents.egi.eu/document/507

EIROS. The sections below include a brief summary and analysis of activities targeting these audiences in PY3. The final section covers the achievements related to the success factors outlined in Section 3.2.

2.4.1 Outreach to target communities

2.4.1.1 Research communities

One main indicator of success for the EGI communications team will not necessarily be the total number of users from a particular research community, but how many people investigate using grid as a tool in their research. EGI is uniquely placed to help researchers to find the solution that works for them. Continual communication of successful use cases helps to raise awareness and understanding of the grid, demonstrates how users in one field have solved a problem, which might also work in another field and keeps it in the minds of researchers as part of their research toolkit, either now or in the future. Indirect indicators of success can include a wider range of user communities participating in Community Forums to exchange common use cases, opinions and practices, or promoting EGI at their local events. Similarly, an indirect indicator of the success of communication to the research communities is when EGI is perceived as being important, respected, authoritative and adding value. This type of engagement is demonstrated for example by participation in the demo and poster competitions at the EGI Forums and the prestige attached to winning the competitions.

EGI has been successful in reaching out to the audience by "going to the user", engaging with them at their events such as the European Geophysics Union event, HealthGrid/IWSG-Life 2012, the European Conference on Computational Biology, CloudScape V, and project meetings for DCH-RP, ENVRI, BioMedBridges and CRISP, the ESFRI cluster projects.

The team organised an essay competition for early-career scientists who use the grid for their everyday work in collaboration with iSGTW. While the level of entries was too low to shortlist, EGI gained publicity in iSGTW and a source of more case studies for the website. The case study collection has continued to grow and have been made available as brochures, downloads, articles, blog posts and videos.

In order to promote and communicate the benefits, new features and improvements that are being made to the grid for existing users, communications has worked with the Technical Outreach the New Communities team to promote easy-to-use tools, portals and services suitable for non-expert users through sections on the website. A series of downloadable information sheets is planned.

EGI should engage the researcher on their terms. Outside computational chemistry and some physics areas, the use of command lines as user interfaces is more and more replaced by the use of graphical interfaces that are more user-friendly especially for new DCI users. EGI needs to work with the VRCs and projects supporting these research communities to help them to understand that encouraging researchers to use the grid is not effective if user friendly tools adapted to the way researchers work are not proposed. The team has achieved its target to attend 4 to 6 scientific meetings a year at which EGI has current users and case studies, but more penetration is still needed to widen usage to a larger user base (e.g., exploring opportunities in the 'long tail' of Europe's 1.8 million publicly funded researchers). This is where the engagement of EGI Champions in the various academic fields should widen EGI's influence at events in PY4.

2.4.1.2 Media and general public

Success for EGI lies in seeing more discussions and mentions of the research done on the grid outside our own channels. Getting our message to places outside our sphere of influence is a sign that other people have taken note of the work being done, such as being mentioned in a positive or neutral tone in the technology press, popular science press and the mainstream press, as well as through social media channels such as blog post comments.

One route to reaching out to the press has been through the judicious release of press releases, when this is relevant and interesting to the particular publication's audience, or the journalist involved. EGI has released 4 press releases through the AlphaGalileo service. "Announcing the EGI Writing Prize 2013 in association with iSGTW" (6/10/2012) was sent to 2,762 journalists and had 495 hits. "Globus Online Goes European" (20/09/2012) went to 3,989 journalists, and received 257 hits. "Stories from the Grid – The top quark: pointing the way to new physics" (22/06/2012) was issued to 3,530 journalists with 852 hits, and "Stories from the Grid – The epigonion: sounds from the Ancient world" (22/05/2012) went out to 3,777 journalists with 648 hits. Press releases related to the EGI videos have been the most successful during the year.

Building up relationships with individual journalists has also been important, for example through exclusive coverage via EGI events. Through its media partnerships with iSGTW and Tabor Communications, EGI has attracted journalists to report exclusively from the forums, leading to increased press coverage as described in the event section. The essay competition was also advertised to journalists through bodies such as the Association of British Science Writers, and the European journalism networks. Although this did not translate into the level of entries expected, the profile of EGI was raised with these bodies and EGI press releases may attract more attention in the future.

Social media postings together with institutions such as CERN, who have been highly successful in attracting media attention in the past, are also effective. CERN tweeted the link to the EGI video on high-energy physics, and this has been our most popular video on the YouTube channel, picking up on some of the publicity around the announcement of the discovery of the Higgs particle using grid computing in July 2012. Press coverage of Domenico Vicinanza's sonification work using the grid has also been high, including clippings in Discover magazine[34], Discovery News[35] and Wired[36]. The sonification of the Higgs data was also featured on the BBC website[37], although EGI itself was not mentioned.

2.4.1.3 Collaborating projects and policy makers

Success means open communications channels, ensuring that policy makers and collaborating projects listen to EGI, take what we do into account and broadly support us. In the process, EGI aims to incorporate their high-level vision and missions into its strategies.

EGI has developed high-level, high production value brochures and materials featuring EGI strategy and goals, such as the Annual Reports and 8-page Public Service Review brochure. The communications team has also worked with the Director and the policy team to publish opinion pieces in appropriate high circulation publications such as the Digital Agenda blog, Public Service

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[34] http://discovermagazine.com/2013/april/qa-domenico-vicinanza#.UUxwihymi8A
[35] http://news.discovery.com/space/listen-to-the-higgs-boson-120710.htm
[36] http://daily.wired.it/news/scienza/2012/07/10/musica-bosone-higgs-65247.html
[37] http://www.bbc.co.uk/news/science-environment-18785232

Review, PanEuropean Networks and the e-IRG newsletter. EGI has also continued to maintain a high profile attendance at policy-related events, such as eChallenges, SciTech Europe, CloudScape V, meetings of the Research Data Alliance, the Digital Agenda Assembly and the 10th e-Infrastructure Concertation event.

2.4.1.4 NGIs and EIROs

EGI aims to achieve an engaged community that is motivated to do its best for the benefit of the users. Participation in EGI events has remained steady, with a slight decrease in overall numbers of attendees due to reduced travel budgets, but an increase in the number of contributions and participation in social media during the events. NGIs have provided ideas for case studies, news items, newsletter features throughout PY3 and have participated actively in Virtual Teams. This shows that NGIs have continued to be keen to be promoted by EGI through its central channels. NGIs continue to request EGI materials for distribution at their events and to policy makers and requested to be sent further information about EGI through the NIL dispatch. Several EGI Champions candidates have also been proposed by the NGIs.

During PY3, EGI has provided international visibility for the NGIs through website, blogs, social media and newsletter. The central communications team has responded actively to requests for new forms of communications, such as the NGI dispatch and helped to produce the EGI compendium. Project and NGI successes have been reported through EGI's channels and EGI has supported local dissemination efforts by providing materials and publicising press cuttings in publications in local languages. Translated materials have not been requested by the NGIs.

Strategies that are effective in communicating to NGIs and EIROs include building personal relationships with NGI staff, in particular the NILs, for example by hosting community meetings about communications at the EGI Forums to provide opportunities to share successes, and failures, and to feed ideas into the central strategies.

2.4.2 Success factors

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 Strategic Planning and Policy Support 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, policy-oriented publications such as Public Service Review and the news, Twitter and Facebook feeds.

Build on the user community networks

Collaboration with user community team and Technical outreach to the new communities (TONC), particularly around events, has become more streamlined during PY3. Attendance at meeting is planned jointly, supported by the production of new materials as needed. As detailed above, EGI has maintained a high level presence at many community events, and provides materials for events attended by the NILs, for example the European Conference on Computational Chemistry attended by the Dutch NGI.

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

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. NA2.2 participated in the Virtual Team set up to compile an EGI compendium and will also publicise the Scientific Repository set up by another VT. 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. The NIL Bulletin and sessions at the Forums are designed to ensure that NGIs are better aware of the central EGI channels open to them.

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 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 attendance levels at the two EGI main events each year, despite falling travel budgets. The programme for these events features demos, presentations and posters, with several parallel tracks and co-located meetings. The events themselves are well attended and continue to attract good coverage in the trade press through our renewed 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, which has been the focus of the events strategy as outlined in Section 3.3.4. EGI has increased its presence on tools with large pre-existing user bases,

such as Twitter, Facebook, LinkedIn and YouTube, and has seen a good level of success in increasing followers and driving traffic to the EGI website.

Reinforce realistic expectations of grid technology

The realities of working with the grid are communicated through our use cases. Articles in iSGTW concentrate on the challenges that the work featured has addressed, including the challenges presented by the use of the infrastructure itself. 'How to' information is a top level link on the website and includes information on how to become an EGI user, how to join/start a community, how to join the infrastructure as a resource provider, add an application to AppDB, report an issue, get a certificate, get support and register EGI workflow.

Establish communications channels with NGIs

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

To summarise, the ground work established during PY1 and PY2 has provided an effective base for working with the user community support team, TONC, policy team and the NGIs to maintain a high profile presence at targeted 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.

3 STRATEGIC PLANNING AND POLICY SUPPORT

3.1 Strategic Planning

The Strategic Planning and Policy Support activity, led by the EGI.eu Strategy and Policy Team (SPT), analyses strategic themes and trends and produce documents and reports to inform the EGI management bodies and wider community to support the decision-making process.

One of the main objectives for the last year was to improve the way EGI can demonstrate its capabilities to enable excellent science in Europe. In order to pursue this objective, the SPT produced a number of policy briefs to support the EGI Council decision-making. "Demonstrating excellent European science on EGI's shared resources"[38] provided a framework and recommendations for the application process, scientific review process and resource allocation process of NGI resources through EGI.eu (either pooled or paid). "Exploring how researchers can pay for EGI resources"[39] set out the roles, responsibilities and possible models for providing EGI services as a pay-for-use; it also defined a thought experiment to be completed in PY4; this activity is performed in collaboration with JRA1 to align with their accounting and billing work plan; a survey among NGIs and a paper investigating taxation and legal issues were also developed[40]. "VT Scientific Repository Recommendations"[41] addressed the need to improve the processes and tools to track the scientific output of EGI and identified a number of recommendations that have been adopted by the EGI council and that are currently being implemented.

Concerning the allocation of federated resources to support excellent science, the SPT authored the Scientific Review Committee (SRC) Terms of Reference (ToR) that was presented and discussed at the workshop. The goal of this new committee would be to handle the scientific review of resource allocations on behalf of the NGIs contributing resources. The Scientific Review Process will be finalised when the EGI Operations team defined the related processes for resource allocation process. The two documents will be submitted for approval to the EGI.eu Executive Board.

The discussion relating to the adoption of the ERIC legal framework for EGI.eu, the "EGI.eu transition plan to ERIC"[42] continued from the context established during PY1. A paper covering "EGI for ERIC"[43] was authored by the SPT that served as a discussion document within the EGI Council. The SPT also supported the development of the " EGI.eu Transition Plan to ERIC", includes a detailed overview of the ERIC framework, a full draft statutes, revised governance model, and proposed timeline of activities. This document served as the basis for discussions within the EGI ERIC Working Group and for an EGI Council approval of the transition plan. A dedicated working group has supported the work with members of the EGI Council who provided feedback to a number of drafts discussed over dedicated teleconferences.[44] The plan has been discussed also within the EGI.eu Executive Board and EGI Council.

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[38] https://documents.egi.eu/document/1415
[39] https://documents.egi.eu/document/1391
[40] https://documents.egi.eu/document/1391
[41] https://documents.egi.eu/document/1369
[42] https://documents.egi.eu/document/1339
[43] https://documents.egi.eu/document/1301
[44] https://documents.egi.eu/document/1330

The SPT led the implementation of the EGI Balanced Scorecard by defining a balanced scorecard data dictionary[45] document that describes more clearly the various strategic metrics explaining the motivation of their usefulness in measuring the impact on the related strategic objective, clarifying how to measure it, how to interpret the value and possible actions to improve the targets. The contribution is included in the D1.11 Annual Report on Quality Status[46] of the D1.13 Quality Plan and Project Metrics.

During PY3, the SPT authored the first edition of the EGI Compendium referring to year 2011[47]. The questionnaire for the EGI Compendium 2012 was drafted and the data collection launched in March 2013. In addition, the SPT organised a meeting with TERENA representatives to discuss plans for a common Web tool to collect the data on a yearly basis for both EGI and TERENA Compendium. The goal of this collaboration is to leverage the long-term experience within the networking community and to exploit their work on tool development for compendium data collection and publications so to not duplicate effort and optimise public money spending.

The team was also involved in providing support for the revision of the EGI Strategy - D2.20 Sustainability Plan[48]. 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 four European Commission's surveys: "State of Play concerning ERA"[49], "DG Connect Stakeholder Survey"[50], "EC Survey on the right analysis for the best possible impact"[51] and "Survey on the use of Internet Protocol version 6 (IPv6) by research projects funded under the Framework Programme 7 (FP7)".

The SPT also analysed the Europe 2020 strategy[52], identified the relevant action to the EGI domain and defined possible contributions and indicators to measure the progress[53].

The SPT finalised data collection and submission for the ERINA+[54] impact assessment web tool, hence, the data provided to the ERINA+ collaboration has been refined to provide a more representative evaluation of the socio-economic impact of EGI-InSPIRE.

3.1.1 Participation in EGI Virtual Teams

The SPT managed three virtual team projects[55] related to change management in the following areas: improving the tracking of scientific output possible thanks to EGI and harmonising the scientific discipline classification across the various tools used in EGI. These virtual team projects are:

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[45] https://documents.egi.eu/document/1581

[46] https://documents.egi.eu/document/1587

[47] https://documents.egi.eu/document/1424

[48] https://documents.egi.eu/document/1570

[49] http://ec.europa.eu/research/era/survey2012_en.html

[50] http://ec.europa.eu/information_society/newsroom/cf/dae/itemdetail.cfm?item_id=8851

[51] https://ec.europa.eu/digital-agenda/en/help-us-improve-our-analysis-and-measurement

[52] http://ec.europa.eu/europe2020/index_en.htm

[53] https://wiki.egi.eu/wiki/Europe_2020_actions

[54] http://www.erinaplus.eu/

[55] https://wiki.egi.eu/wiki/Virtual_Team_Projects

- Scientific Publications Repository: a policy-oriented project to identify the gaps and provide a set of recommendations to improve the tracking of scientific output possible thanks to EGI; the recommendations have been adopted by the EGI Council and are being implemented; this project has been successfully completed.
- Scientific Publications Repository Implementation: an implementation project that involves OpenAIRE representatives to extend the OpenAIRE services to support the process of tracking and linking scientific output to research/e-infrastructures; this project will produce results in PY4.
- Scientific Disciplines Classification: a policy project to propose an harmonised classification of scientific disciplines and an analysis of needed changes to EGI tools to adopt it; this VT has interacted with external partners such as the US-funded XSEDE project and proposed a final report for adoption[56].

3.1.2 Workshops

The SPT supported the organisation, logistics, chairing, note taking and post-event reporting of the "Evolving EGI Workshop" (January 2013, Amsterdam) that was co-located with the final workshop of the e-FISCAL project[57]. The workshop discussed the pay-per-use and the use of federated resource for excellent science policies mentioned previously. A cost analysis of EGI Global Services was presented and the prioritisation of services discussed. During the workshop, the SPT delivered six presentations, run the workshop, took notes, captured feedback from the workshop and chaired most of the sessions.

The SPT also contributed to the organisation of the two community events (EGI Technical Forum 2012 in Prague and EGI Community Forum 2013 in Manchester) by participating in the program committees and leading the "Communication and Coordination" track. Concerning the EGI Technical Forum 2012, the SPT submitted four abstracts for the track covering integration of public and private clouds, sustainability of both technology providers and national infrastructures, and one for the scientific publication repository virtual team. In preparation for the NGI Sustainability session, the SPT, together with the EGI.eu Operations Team, crafted a targeted survey to gather information prior to the event. Overall, the SPT was in charge of the Communication and Coordination Track comprising of 11 different sessions of which 9 consisted of developing the programme agenda. In the area of preparing for the EGI Community Forum 2013, the Strategy and Policy Manager has contributed to the program committee activity by drafting the call for participation and by reviewing the submitted abstracts. The SPT submitted various abstracts and workshops that have been accepted. SPT members chaired 5 sessions and provided 8 presentations in total during the event.

3.2 Policy Support

3.2.1 EGI Policy Groups

During PY3, 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 website[58].

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[56] https://wiki.egi.eu/wiki/VT_Scientific_Discipline_Classification

[57] http://efiscal.eu/

[58] http://www.egi.eu/about/policy/groups/

The SPT recently provided a review and update of policy group ToRs (e.g. introduction of task forces) including an approved version of OMB and TCB ToR. The SPT also submitted a request for closing the OAT[59] and USAG[60] policy groups, following a request from the related chairs. The number of meetings held in the third year of the EGI-InSPIRE project varied from group to group (see *Table 2*).

Policy Group	Number of meetings Y3
SPG	2
SVG	*Ad-hoc*
SCG	2
OMB	14
OTAG	1
UCB	3
TCB	7
EGI CSIRT	*Ad-hoc*

Table 2 – Policy Group Meetings

3.2.2 Policy Development

The SPT supports the formulation and development of policies and procedures through the EGI policy groups (e.g. security, technology coordination, operations management). All policies and procedures created within EGI by any of the EGI Policy Groups have been approved under the agreed Policy Development Process (PDP)[61]. 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. The SPT provided its annual review of the PDP document.[62]

During PY3, the following policies and procedures[63] were approved via the PDP:
- Service Operations Security Policy
- Procedure for decommissioning of unsupported software
- Resource Center renaming procedure
- VO Registration procedure
- VO Deregistration procedure

The SPT drafted disclaimer for use across EGI channels that originated through the AppDB, as well as a drafted new license for SPG policies. The SPT developed Terms of Use and Privacy Policy for *.egi.eu websites that awaits approval. In addition, the SPT collected info on cookies used by EGI.eu

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[59] http://www.egi.eu/about/policy/groups/Operations_Automation_Team_OAT.html
[60] http://www.egi.eu/about/policy/groups/User_Services_Advisory_Group_USAG.html
[61] https://documents.egi.eu/document/169
[62] https://wiki.egi.eu/wiki/PDP
[63] http://www.egi.eu/about/policy/policies_procedures.html

website and EGI Cookie policy. Harmonisation of copyright licenses in EGI.eu/EGI-InSPIRE documents was also developed together with an IPR statement defined for the EGI policy groups and VTs.

Finally, the SPT supported the work on standardising common VT documents template and provided feedback on processes/procedures being defined for VTs. The SPT supported drafting of the GGUS Advisory Board ToR that will be finalized during PQ12. The SPT also finalised the first version of the EGI Glossary[64] and collaborated with the EGI.eu Marketing and Communications team to integrate the glossary on the main EGI website[65].

3.3 Collaboration with External Partners

The SPT establishes and coordinates agreements with projects, providers, organisations and communities for joint collaboration

3.3.1 Memorandum of Understanding

External collaborations[66] continued to be established during PY3 with 4 new signed MoUs[67] in the following categories:
- Technology providers: UVACSE (Genesis), PSNC
- Resource Providers: Academia Sinica Grid Computing Centre (ASGC)
- Other organisations: DANTE

Since the beginning of the EGI-InSPIRE project, a total of 27 MoUs were signed. One more MoU under active negotiation is with VERCE VRC. A Letter of Intent (LoI) for the Digital Cultural Heritage (DCH) community was also signed.

In terms of established MoUs, the progress about activities for existing MoUs have been regularly reviewed. The SPT compiled an annual report of its more than twenty agreements serving as an opportunity to monitor the progress of the individual milestones within the agreements and evaluate strategic impact moving forward.[68]

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. During PY3, a simplified MoU advancement dashboard was developed by SPT based on Google Docs[69].

3.3.2 External Policy Activities

EGI has actively participated in the work of e-IRG, the Open Grid Forum (OGF)[70], the EUGridPMA[71] and the International Grid Trust Federation or IGTF[72]. More detailed information about EGI external policy activities in IGTF and EUGridPMA are described in MS235 Security Activity in EGI[73].

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[64] https://wiki.egi.eu/wiki/Glossary_V1
[65] http://www.egi.eu/about/glossary/
[66] https://wiki.egi.eu/wiki/Agreements
[67] http://www.egi.eu/community/collaborations/
[68] https://documents.egi.eu/document/1273
[69] http://go.egi.eu/**mou-advancement**
[70] http://www.ogf.org
[71] http://www.eugridpma.org/
[72] http://www.igtf.net/

3.4 Communications

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, integrate the glossary on the main EGI website and refactoring the SPT wiki section[74]. The SPT regularly updated the list of policies and procedures on the EGI.eu.

External articles were published through the e-IRG newsletter: "The First Edition of the EGI Compendium is Out"[75] and "Demonstrate the Scientific Impact of Publicly-Funded Infrastructures"[76]. An article titled "EGI and Horizon 2020" was also published in the EuroFocus edition of International Innovation[77]. The SPT also authored a section on security for the e-IRG Blue Paper on Data Management[78]. In addition, EGI published paper for e-Challenges[79] and article European Grid Infrastructure – Strategy consultation was published on GEANT website.[80]

In terms of message delivery through the EGI blog, the SPT authored 8 blog posts[81]:
- New Scientific Discipline Classification for EGI – Open for Comments
- The RAMIRI Handbook
- Discussing prospects of common e-Infrastructures governance for digital research
- Addressing gender equality to enhance excellence in research and science
- Adding Pay-for-Use Models within EGI
- Broadening Horizons from Brussels
- The EGI Compendium 2011 is Out
- Strengthening the European Research Area
- The EGI Glossary
- Applying for Structural Funds

SPT regularly contributed to the EGI Inspired newsletter:
- Envisioning the future: Strategy plan and EGI's role in the ERA[82]
- Adding Pay-for-Use Models within EGI proof of concept[83]
- The cost of e-science - the price tag of ICT support for research[84]

In addition, the SPT published a news article about to inform about EGI and OpenAIRE collaboration[85]. The SPT also provided their contribution to NIL dispatch on regular basis.

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[73] https://documents.egi.eu/document/1520

[74] https://wiki.egi.eu/wiki/Policy

[75] http://www.e-irg.eu/images/stories/dissemination/e-irg_newsletter_4-2012.pdf

[76] http://e-irg.eu/images/stories/dissemination/4.e-irg_newsletter_1-2013.pdf

[77] http://www.egi.eu/export/sites/egi/news-and-media/press/Damir_Marinovic_International_Innovation.pdf

[78] http://www.e-irg.eu/publications/blue-papers.html

[79] http://openaire.cern.ch/record/1092/files/eChallenges_e2012_ref_16.pdf?version=1

[80] http://geant3.archive.geant.net/Media_Centre/connect/Pages/European-Grid-Infrastructure-%E2%80%93-Strategy-consultation.aspx

[81] http://www.egi.eu/blog/categories/policy/

[82] http://www.egi.eu/news-and-media/newsletters/Inspired_Spring_2012/envisioning_the_future.html

[83] http://www.egi.eu/news-and-media/newsletters/Inspired_Issue_10/pay-per-use_models.html

[84] http://www.egi.eu/news-and-media/newsletters/Inspired_Summer_2012/cost_e-science.html

[85] http://www.egi.eu/news-and-media/newsfeed/news_0177_OpenAIRE_and_EGI.html

An important component of the work that is carried out is also to communicate key pieces of information to the wider community. The SPT authored a scientific paper "EGI: an Open e-Infrastructure Ecosystem for the Digital European Research Area", which was submitted for the eChallenges workshop in Lisbon, Portugal, October 2012[86].

3.5 Participation in External Events

In terms of external events, the SPT attended several events listed in **Error! Reference source not ound.**.

Table 3 External Events attended by NA2.3 participants

Date	Location	Title	Participants	Outcome (Short report & Document Server URL to presentations made)
3-4 April 2013	Brussels, Belgium	RAMIRI Workshop		http://www.elettra.trieste.it/Conferences/2013/RAMIRI2FW/
March 11-13, 2013	Charlottesville, Virginia	OGF37		http://www.ogf.org/OGF37/
27-28 Feb 2013	Brussels, Belgium	Cloudscape V		http://www.cloudscapeseries.eu/Pages/Home.aspx
12-13 Feb 2013	Brussels, Belgium	2nd Workshop on Exchange of Experience and Best Practise "Sharing experience by ESFRI RIs"	60	https://indico.desy.de/conferenceDisplay.py?confId=6870
15-18 Jan 2013	Frascati, Rome, Italy	Helix Nebula Workshop	120	This event is organised by the Helix Nebula project with the General Assembly of the consortium and an open day; EGI.eu supported the discussion about interoperability of e-infrastructures with commercial cloud providers http://indico.cern.ch/conferenceDisplay.py?confId=216509

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[86] http://www.echallenges.org/e2012/

3-4 December 2012	Amsterdam, The Netherlands	e-IRG workshop	108	EGI.eu members attended to track the evolution of the discussion at strategic policy level among the e-Infrastructures http://www.e-irg.eu/e-irg-events/events-archive/2012/workshop-3-4-december.html
21/22 Nov 2012	Göttingen, Germany	OpenAIRE Conference	100	S. Andreozzi from EGI.eu presented the collaboration among EGI and OpenAIRE http://www.openaire.eu/en/programme
23 Nov 2012	Brussels, Belgium	SciTech Europe: Broadening Horizons – Creating a Single Market for Knowledge, Research and Innovation	200	Attended the event for networking and updates on high-level policies. Masterclass given. http://www.publicserviceevents.co.uk/227/scitech-europe-2012
14-16 Jan 2013	Rome, Italy	EUGridPMA		http://www.eugridpma.org/meetings/2013-01/ Attended this IGTF meeting to represent interests of EGI and WLCG as a Relying Party
16-17 Jan 2013	Rome, Italy	SCI meeting		http://indico.cern.ch/conferenceDisplay.py?confId=227273 I organised and chaired the meeting. Produced the final version 1 of the document describing the requirements and best practices and considered 3 self assessments against these criteria
17-18 Dec 2012	FNAL, Chicago, USA	WLCG Security Coordination Meeting		https://indico.cern.ch/conferenceDisplay.py?confId=221987 D. Kelsey organised and chaired this meeting which discussed all operational and policy issues for security and the coordination between EGI, OSG and NDGF
10 May 2012	Brussels, Belgium	"Removing barriers to Cloud Computing in Europe"		http://cordis.europa.eu/fp7/ict/ssai/study-cc-workshop_en.html
11,12 June 2012	Copenhagen, Denmark	e-IRG Workshop		http://www.e-irg.eu/e-irg-events/workshop-11-12-june-copenhagen.html
17 June 2012	Delft, The Netherlands	OGF35		http://www.ogf.org/OGF35/
October 8-10, 2012	Chicago, IL USA	OGF36		http://www.ogf.org/OGF36/
17-19 October	Lisbon, Portugal	e-Challenges Workshop		http://www.echallenges.org/e2012/files/eChallenges_e2012_FinalProgramme.pdf#

4 EGI CHAMPIONS SCHEME

The broad concept of establishing a cadre of 'ambassadors' who would act as enthusiastic and proactive promoters of EGI was launched under the banner of "EGI Champions" during the EGI Technical Forum in Prague in September 2012. Since then, the practical implementation of this concept has been set in place, firstly via the EGI Web site and Wiki pages which provided greater detail to the new initiative and subsequently through the recruitment and selection of the 1st cohort of six EGI Champions in November 2012 followed by a 2nd cohort of 3 in February 2013.

An initial 'induction' teleconference was conducted on 13 December 2012[87] during which EGI.eu Director and his staff managers provided advice and guidance on how the new EGI Champions would promote EGI's activities and services, and additionally, how EGI.eu would support the EGI Champions in their role. The Director undertook to underpin the EGI Champions in their attendance at future EGI Forums through a financial support allocation (underwriting the full costs of their attendance at the Forums). A routine of regular feedback teleconferences has been established to ensure regular and effective dialogue between the EGI headquarters and its EGI Champions; on 20 March 2013 a first formal training webinar88 was conducted in order to provide the new EGI Champions with a comprehensive overview of EGI's purpose and structure. This event also presented the right opportunity to provide specific direction to the EGI Champions with regards tasks they can undertake on behalf of EGI managers – 5 medium term tasks were assigned (focusing on supporting their own communities as detailed in the webinar final slide) and feedback will be expected during routine meetings and teleconferences.

EGI Champions participated extensively in the EGI Community Forum 2013 in Manchester over the period 8-12th April 2013. Six of the 9 EGI Champions attended the NIL meeting on the 1st day of the Forum and were thus given the platform to introduce themselves and meet the NILs, thus being able to integrate into this "extended EGI community". Later in the week, 8 of them participated in a double session dedicated to Champions with nearly 40 representatives from different programmes covering projects such as the IDGF-SP project (www.idgw-sp.eu) and countries such as USA and UK. On the 4th day of the Forum Dr Eleni Katragkou delivered a keynote speech titled "The importance of grid computing in the investigation of climate and its change" which was very well received by an audience of nearly 300.

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[87] https://indico.egi.eu/indico/conferenceDisplay.py?confId=1275
[88] https://indico.egi.eu/indico/conferenceDisplay.py?confId=1351

5 TECHNICAL OUTREACH TO NEW COMMUNITIES

5.1 Overview of activity groups

The User Community Support Team (UCST) runs the Technical Outreach to New Communities (TONC) task (Task 2.5) of EGI-InSPIRE since November 2011, when the NA2 activity has been restructured into its current form. The task provides services and support that help converting new user communities into active user communities (i.e. users of the EGI production infrastructure).

In PY3 the task was active in four areas (in no particular order):

1. Focussed projects: Setup and participate in short, focussed projects that reach out to new e-infrastructure communities and/or work with new communities on topics related to the use of EGI's production infrastructure.
2. Engagement with new communities: Represent EGI at various face-to-face and online events where new communities are present. Use these events to promote EGI services to these communities, and to identify leads, and technical areas for joint work.
3. Virtual Research Environments: Simplify the development and deployment of community-specific Virtual Research Environments on EGI's production infrastructure.
4. Technical services: Provide and extend the Applications Database, the Training Marketplace and the Client Relationship Management systems, in order to facilitate information sharing and structured interactions among the NGIs, technology projects and scientific groups inside and beyond EGI.

The next subsections provide details on the PY3 achievements and PY4 plans of these four activity areas.

5.2 Focussed projects

The EGI.eu TONC group was involved in several short, focussed projects that reach out to new communities and/or work with new communities on topics related to the use of EGI's production infrastructure. These projects therefore directly or indirectly help new communities become active in EGI's production infrastructure. Each project covered one or more of these work areas:

- Identify contact points in specific multi-national scientific groups or communities of interest. (The groups or communities have been discovered/linked to EGI prior to the focussed project). Identifying multiple contact points within the same community is necessary because scientific communities are often multi-national, their members are at different level of understanding of e-infrastructures, and may have different e-infrastructure use cases. Even though many scientific communities are grouped into ESFRI projects and/or ESFRI-cluster projects, experience shows that these groupings are loose and do not homogenise their members, do not always provide centralised entry points for EGI to talk to scientific communities about e-infrastructure needs, services, use cases.
- Collect and categorise e-infrastructure requirements from scientific communities. The activity requires a coordinated action in multiple countries and aims to gather specific requirements that technical experts and projects within EGI can address using existing application solutions, or through developing new ones.
- Identify and arrange existing solutions from EGI to address the requirements. The activity requires knowledge of existing applications, environments and other types of services across EGI and establishes dialogues between the new community and technical experts within EGI. The dialogs result in a plan, agreed by both parties, that – if executed – will address the e-infrastructure requirements of the new community.
- Kick-start focused development activities to implement new services that can address unique community requirements. The development activities require resources from both the new

community and from EGI's stakeholders (typically from specific projects, from NGIs, and from EGI.eu)

Focussed projects that run with TONC involvement during PY3 were:

- Virtual Team projects (See report about these in separate section of this document):
  - NGI – ELIXIR collaboration (To finish in PQ13)
  - Technology study for the Cherenkov Telescope Array (To finish in PQ14)
  - Speech on the grid (to finish in PQ14)
  - Towards a Chemistry; Molecular & Materials Science and Technology Virtual Research Community (To finish in PQ15)
  - Biodiversity and Environmental sciences (To finish in PQ15)
  - GPGPU (Finished in PQ12)
  - Science Gateway Primer (Finished in PQ12)
  - Fire and Smoke Simulation (Finished in PQ12)
  - MPI in EGI (Finished in PQ9)
- EGI-EUDAT-PRACE pilots
  - As an outcome of the EGI/EUDAT/PRACE workshop on 26-27- Nov 2012 at SARA/Amsterdam 4 pilot projects have been launched with the involvement of e-infrastructure providers (EGI, EUDAT, PRACE) and scientific communities (DRIHMS, MAPPER – VPH, VERCE). The pilots aim to support workflow use cases that are provided by the scientific communities and that need the joint use of at least two of the three e-infrastructures. EGI.eu UCST participates in two pilots that at the beginning in 2013 have been merged into one: "Data sharing and uniform data access across e-infrastructures and community centres"[89]. This pilot identifies common data access and transfer tools and protocols which can be provided by all three e-infrastructures and which are useful for the collaborating user communities' workflow use cases. The pilot will deliver solutions in PY4 directly for the VERCE (seismology) and VPH (life sciences) communities, but the pilot results are expected to be relevant and reusable also for other communities of the ERA. Discussions with the Computational Chemistry community about this are already ongoing (within the 'Towards a Chemistry; Molecular & Materials Science and Technology Virtual Research Community' Virtual Team project).
- ENVRI study case
  - In early 2013 a study case project[90] was set up under the ENVRI ESFRI cluster project to help ENVRI understand which needs of its ESFRI projects can be fulfilled by EGI. Within the study case project two ESFRIs (EISCAT-3D, EURO-ARGO) are involved besides EGI.eu. The two ESFRIs were selected because of their strong need for data processing. In cooperation with EISCAT-3D and EURO-ARGO representatives in ENVRI, EGI.eu will try to find best suitable solutions for data pre-processing of primary data and post-processing toward publishing. The study case project will deliver output during PY4.
- Mini-projects: The EGI.eu TONC team has been involved in the preparation of two mini-projects:
  - Evaluation of Liferay modules[91]: The mini-project will carry out a systematic evaluation of the Social Office and Sync Liferay modules of Liferay and will deliver its findings in a document that will include recommendations concerning the best ways to use the modules for the benefit of individual EGI stakeholders, as well as for the

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[89] EGI-EUDAT-PRACE pilot 1-2: https://confluence.csc.fi/display/EEP

[90] ENVRI study case with EISCAT-3D and EURO-ARGO: https://wiki.egi.eu/wiki/EGI_ENVRI

[91] Evaluation of Liferay modules mini-project: https://wiki.egi.eu/wiki/VT_Liferay

benefit of EGI as a community. Members of the project will use the document to extend their portals with new capabilities outside of the project.

- o Massive Open Online Course Development: Recent developments in platforms for 'Massive Open Online Courses' (MOOC) made the development and distribution of Educational content to wide audiences available for everyone. This project will develop a MOOC about a number of e-infrastructure topics and will make the content available for worldwide distribution on a MOOC platform to be identified within the project.

Because of the shift of focus of work in PY4, and because of the expected reduce of the size of the EGI.eu organisation during 2013, the EGI.eu TONC team moved out from both of these mini-projects at the end of April 2013. Further information about the motivations behind this step is given below in the section titled 'Plans for PY4'.

5.3 Engagement with new communities

The EGI.eu TONC team represented EGI at various face-to-face and online events where new communities were present. These occasions were used to promote EGI services to these communities, and to identify leads, and technical areas for joint work. The following activities were carried out:

- The team has organised a discussion session at the 'International Workshop on Science Gateways for Life Sciences (IWSG-Life)' in Amsterdam to brief the life sciences community about recent developments and directions in EGI, and to gather feedback from the community about these.
- Presented EGI for the astronomy community at the 'The Milky Way: Stars, Gas, Dust and Magnetic Fields in 3D' workshop. Started discussions with members of the domain about using EGI services for modelling the Milky Way. An FP7 proposal has been emerged from these discussions, but the project has not been invited for hearing.
- Attended the '4th Federated Identity Management' workshop and gave a presentation about federated identity management activities of EGI, including related VT (run in PY2). After the workshop EGI joint as an Identity provider (IdP) to the Grid Identity Pool federation with its Single Sign On system. Related workshops have been organized at the EGI Technical and Community Forums to identify ways forward in adopting federated identity solutions in the EGI production infrastructure. Due to the strong integration of X509 certificates with UMD services, and with the EGI Federated Cloud, there is little change of moving the infrastructure to federated identity based authentication (e.g. SAML). However, federated identity → X509 translator solutions are emerging, and some of the 'community platform services' (e.g. dCache) are working on releases of their software that would be able to directly participate in identity federations. The first releases of these are expected in PY4.
- The team organised teleconference with the DRIHM[92] project (hydrometeorology) to identify topics for joint technical work. Workflow development, sharing and execution have been identified as a topic with mutual interest. Representative of the DRIHM project attended the 'Workflow porting workshop' that was organised by the ER-flow project in London in March 2013. Since this event the DRIHM project works in close collaboration with the ER-flow[93], SCI-BUS[94] and the IGE projects on integrating hydrology and meteorology applications into workflows that are capable to utilise Globus sites in EGI. The first results are expected in PY4.

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[92] Distributed Research Infrastructure for Hydro-Meteorology (DRIHM): www.drihm.eu

[93] Building a European Research Community through Interoperable Workflows and Data (ER-flow): www.erflow.eu

[94] SCIence gateway Based User Support: www.sci-bus.eu

- The team organised teleconference with the delegated IT expert of ELI-HU. ELI-HU is a non-profit organisation that coordinates the setup of the Hungarian site of the Extreme Light Infrastructure ESFRI. The NIL of the Hungarian NGI was also in the call, not only because of their nationality, but also because of their involvement in the CRISP ESFRI Cluster project, which also includes ELI. During the meeting we learnt that ELI-HU is currently focused on the setup of its 'core laser' infrastructure, core office infrastructures, and experiment management. They are likely to proceed to 'research and analysis tools' later, and this is the stage when EGI's and the NGIs' could support ELI-HU.
- The team is involved in the setup of the EGI-EUDAT-PRACE data management workshop[95] (Amsterdam, 26-27th of November) that led to the kick-off the two pilot projects. (See information about the pilots in the previous section.)
- The team wrote and submitted two presentation abstracts to the European Geosciences Union (EGU) General Assembly 2013: One about the EGI Federated Cloud and one relating to the workflow services of EGI-InSPIRE and the ER-flow project. The abstracts have been accepted in the "ESSI2.8 Earth science on Cloud, HPC and Grid" workshop of the "Earth & Space Science Informatics" session. Because EGU was held at the same time (7-12 April, Vienna) as the EGI Community Forum, and because Austria is not in EGI, the abstracts were presented by a representative from MTA SZTAKI, member of the Hungarian NGI. MTA SZTAKI was an ideal candidate not only because of the location, but also because it provides a site in the EGI Federated Cloud testbed, and is involved in both the EGI-InSPIRE and the ER-flow project. The experiences and feedback from the event is still to be discussed with MTA SZTAKI and with the workshop organisers (who are involved in EGI-InSPIRE SA3). A face-to-face meeting will take place with them around the beginning of May 2013.
- The team was responsible for the setup of the 'Virtual Research Environments' track of the EGI Technical Forum in 2012, and of the EGI Community Forum in 2013. These tracks included:
    o A 2x90 minutes long session on Research Infrastructure – NGI collaborations
    o A 1x90 minutes long session about 'Software services for community building and support'
    o AAI/Federated Identity workshops, jointly organized with the Resource Infrastructure Services track.
    o 'Science Gateways: Harmonising Development and Provisioning' workshops
    o 'Workflow community' and 'Workflow collaboration' workshops (co-organised with the SHIWA and ER-flow projects)
    o Sessions with various Virtual Research Environment -related contributions from the community
    o Demonstrations of the Technical Services that are provided under the TNA2.5 task (See dedicated section about these services below)

The presented EGI slides about all these events are available in the EGI Document Database or in the EGI Indico system.

5.4 Virtual Research Environments

All the activities that have been described in the previous two subsections have strong focus on supporting the development of Virtual Research Environments within new communities. Besides those, the EGI.eu TONC team carried out the following activities for the benefit of VRE developers:

- Created short, focused presentation about support services and activities that exist in EGI for VRE developers of (new) communities. Presentations about 'Requirement management tools',

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[95] https://indico.egi.eu/indico/conferenceDisplay.py?ovw=True&confId=1228

'Science gateways', 'Workflows and workflow systems' and 'EGI services' (e.g. resource allocation, operation tools, etc.) have been created and shared with the community through the EGI Training Marketplace.

- Blog posts and articles in the Inspired newsletter have been written by the team on a regular basis to promote established VRE component/framework solutions.

- Setup a new section on the EGI website[96] for potential users of the EGI Federated Cloud. The site describes the concept and the benefits of the EGI Federated Cloud model, and provides practical information on getting access to the Federated Cloud testbed. The site will be extended during PY4 with practical information on using the testbed (VM preparation, contextualisation, roll-out & operation, etc.) The development of related support materials will be driven by a mini-project, with which EGI.eu TONC will work together (despite EGI.eu is formally not member of this mini-project)

- Members of the team worked with two user cases of the EGI Federated Cloud testbed: OpenModeller[97] (in collaboration with the Biovel and EUBrazilOpenBio projects) and with PeachNote[98]. The OpenModeller use case has been setup and was demonstrated at various events (e.g. Cloudscape V and the EGI Community Forum). The PeachNote use case did not become operational because the owner (external to EGI) had no time for the joint work with EGI.

- Collected, categorised and made visible in the EGI Applications Database and in the EGI Science Gateway Primer those reusable portal frameworks, tools and components that simplify VRE development.

- Performed tests with the European part of the Globus Online service[99] that has been released in September 2012. A summary about the tests has been presented to the EGI Technology Coordination Board in early November[100]. The presentation was found useful by the TCB, but the TCB agreed that the method suggested in the 'Globus Online Cookbook for EGI VOs' to interact with EGI Storage sites may lead to instability of those storage systems. Since November the EGI.eu TONC team carried out several discussions with various representatives of the SRM storage developer communities in order to find a reliable method for accessing those storages via Globus Online. The TONC team currently carries out tests to check that the new solutions work. If so, the Cookbook will be updated and then will be promoted to existing and to new communities. The communities involved in the EGI-EUDAT-PRACE pilots are of prime targets for this.

- In March 2013 the team has established the 'EGI Webinar Programme[101]', a forum for presentations and discussions around established and emerging solutions for VREs.

- Performed technology evaluations and/or helped the setup of 'catch-all' services based on these technologies to simplify the uptake of EGI's production infrastructure by new communities. Such services were Globus Online, EUDAT File Staging service and CKAN[102].

- In February 2013 the team kicked off a joint initiative with the EGI Operations team to setup Cookbooks (manuals) on how the services of the EGI Core Infrastructure Platform can be used by VRE developers and operators for the monitoring, accounting and registration of VRE services (e.g. portals, workflow engines). The initial findings show that some of the EGI core infrastructure services have limited reusability outside of the 'grid middleware', and additional development in

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[96] http://go.egi.eu/cloud

[97] OpenModeller use case: https://wiki.egi.eu/wiki/FedCloudOPENMODELLER

[98] https://wiki.egi.eu/wiki/Fedcloud-tf:FedCloudPeachnote

[99] http://www.globusonline.eu/

[100] http://go.egi.eu/tcb-14

[101] http://go.egi.eu/webinars

[102] CKAN – The Open Source Data Portal software: http://ckan.org/

these tools are required to make them attractive and valuable for VRE developers. Some, but not all of these developments are already scheduled for implementation within EGI-InSPIRE mini-projects. The findings will be documented in PY4.

5.5 EGI.eu UCST plans for PY4

The PY4 plan of the EGI.eu UCST follows up the main areas of work from PY3, but with more emphasis on two activities:

- Reaching out to the long tail of researchers and get them on board of the federated cloud or existing grid based infrastructure.
- Federate resources from large research communities through the core operational tools.

In this PY4 plan the TONC activities are grouped according to their priority (see table below):

'High priority' activities (1) directly relate to the above described two objectives, (2) are critical for demonstrating progress towards the objectives in the next 12 months, and (3) their successful execution depends largely (but not only) on the EGI.eu TONC team. For 'Low priority' activities at least one of these three statements does not hold. 'Un-resourced' activities include those that could not be staffed by EGI.eu UCST from the EGI-InSPIRE project.

Table 4. Prioritised TONC activity groups till Nov 2014.

High priority	Low priority	Un-resourced
1. Targeted projects: Establish and run focussed projects for the benefit of scientific groups in the ERA (existing and new VTs, mini-projects, pilots, case studies, etc.)	5. Core-VREs: Increase the uptake of EGI Core Infrastructure Platform by community-specific VREs. (e.g. Accounting, Monitoring, Information system, etc.)	8.Untargeted evaluations: Perform technology evaluations that have no identified beneficiaries in the ERA.
2. Cloud-VREs: Increase the uptake of the EGI Cloud Infrastructure platform by community-specific VREs and platforms (sharing tools, technical documentation, best practices)	6. Collaboration-VREs: Expand the EGI Collaboration Platform with new services that simplify the use of the EGI Production Infrastructure by communities and their VREs (e.g. adding DIRAC, SHIWA Portal to the EGI platform and increasing their uptake in community VREs.)	9.Untargeted dissemination: Contributing to dissemination events that have no specific target community in the ERA.
3.Community engagement: Technical engagement with new communities of the ERA by attending and contributing to their and to joint events (attend by NGIs and/or EGI.eu)	7. Untargeted projects: Establish and run projects (e.g. VT projects or pilots with the NGIs) that have no identified research group beneficiaries in the ERA.	
4. NILs and Champions: Maintain and develop the network of NILs and Champions. Coordinate their technical outreach to ESFRI project member institutes.		

Given the above prioritisation, the EGI.eu TONC team will work on the high priority areas (with most of its effort) and low priority areas (with less effort) in the next 18 months. The actual activities within these areas will be:

1. **Targeted projects:**

EGI.eu TONC team will continue to work in focussed, short-term projects ranging from management and supervision of all running VTs to support of active mini-projects and case studies (including ESFRI and ESFRI cluster study/pilot cases). However, there will be a shift in the scope of participation compared to the previous years: The TONC team will join new projects only if those projects have direct involvement of new communities from the beginning. In previous years the team also participated in projects that did not have a 'visible target group' from the start, and the experience was that these mostly ended up in developing services or manuals (or simply had discussions) that were later found to be irrelevant or unusable in practice by new communities. Most of these situations can be avoided if VTs have representatives of scientific communities who are actively engaged in those projects from the start until the end. Focusing only those types of projects that include well-identified stakeholders from scientific communities from the start will help the TONC team operate with fewer resources without noticeable output degradation.

2. **Cloud-VREs:**

The EGI.eu TONC team will continue supporting and facilitating the setup and use of Virtual Research Environments that are specific to different communities in the ERA. However, there will be two changes in the support compared to previous years:

1. The team will put more resources behind supporting VREs and VRE frameworks (e.g. science gateway frameworks) that target or are interoperable with the EGI Cloud Platform. Identifying and promoting such tools to new communities will be one task here. Working with mini-projects that make the EGI Federated Cloud more useable/user-friendly for new communities is another area of work here. Engaging with communities who can provide use cases and feedback on the EGI Cloud Platform will be the third focus here.

2. In April 2013 the EMI and IGE projects, the two most significant contributors of the Unified Middleware Distribution (UMD) end. The SA2 activity put in place a platform architecture that enables any types of services to be packaged and integrated with EGI's core and cloud platforms in the form of 'community platforms'. The TONC team will work with SA2 to identify and support the integration of community platforms that could cater for the 'long tail of researchers'. EMI's and IGE's distributions included a large number of services that very few communities required in bulk. In practice, most scientific collaborations and especially 'the long tail', requires a relatively basic service set. For example, one type of job execution service, one type of file storage services plus one or two additional services for group management and access control based on username and password (ideally federated username-password) instead of X509 certificates. TONC and SA2 need to facilitate the appearance of such 'simple-yet-powerful' platforms on EGI. The EGI Webinar programme, the recent and future further development of the EGI Applications Database (community repository, VMI support) will help us achieving this goal.

3. **Community engagement:**

EGI.eu TONC will continue representing EGI at various face-to-face and online events where new communities are present. Such events will be used to promote EGI services to these communities, and to identify leads and technical areas for joint work. The events may be online or face-to-face meetings organised by scientific communities or by EGI jointly with such communities.

4. NILs and EGI Champions:

As a new, dedicated activity for the remaining period of the EGI-InSPIRE project, the TONC team will work on strengthening and developing the networks of NILs and EGI Champions. The two networks provide the human capacity in EGI to reach out and support new communities in different countries (NILs), and within specific research disciplines (EGI Champions). Teleconferences are being organised for these two EGI groups during PY4 on a monthly routine (separately, but open conferences). The teleconferences will provide opportunity for the NILs and for the EGI Champions to report on recent activities and developments within their country/community, and to reflect on the changes and challenges of promoting and providing EGI services for new communities. Such events will also have an important educational purpose: they will enable EGI.eu staff to learn about the NGIs, the NGIs to learn about each other as well as about recent developments to be presented to them by EGI.eu staff. The events will cover topics that relate to the NA2 work package of EGI-InSPIRE, but most importantly topics that are relevant for the uptake of the EGI core, EGI cloud and EGI collaboration platforms, as well as of various community platforms by new communities. Specific focus will be given to technical outreach to academic institutes across Europe that are members of ESFRI projects. The CRM system will be an important tool for coordinating this activity.

5. Core-VREs:

EGI.eu TONC will continue promoting facilitating services of the Core Infrastructure Platform to VRE developers, and facilitating the integration of community specific VREs with these services. TONC recently kick-started a joint activity with SA1 on developing manuals for VRE developers on how the 'Monitoring system', the 'Accounting system' and the 'Information system' of the EGI Core Infrastructure platform can be used by an external services (e.g. a portal, a workflow system, a domain service, or anything that is operated outside of the 'EGI software stack'). This work will continue with SA1 and with related mini-project(s). Besides setting up manuals the team also plans to prepare leaflets (for NIL & Champion 'digital briefcases') and new Websites sections (www.egi.eu) for potential users (e.g. EUDAT, ESFRI projects), and to kick-start piloting activities with these users to implement integrations between their VREs' and EGI's core infrastructure services.

6. Collaboration-VREs:

The EGI Collaboration Platform complements the other platforms (core, cloud and community) and contributes to their efficient use. On the other hand they facilitate the uptake of the EGI production infrastructure and related resources (such as applications) by new research groups and new communities.

The EGI.eu User Community Support Team will establish a programme to increase the number of services in the platform, and to ensure high quality of services within the Collaboration Platform. The programme will invite service developers/providers from the EGI ecosystem to contribute to the EGI Collaboration Platform with Technical Collaboration services if those meet the criteria to be defined in this new programme.

The existing and the new services of the EGI Community Platform will be promoted to scientific communities, to research groups and to individual researchers for direct use, or for incorporation within community specific VREs.

7. Untargeted projects:

Only residual effort will be available from the EGI.eu TONC team to participate in projects that have no members and identified research beneficiaries from the ERA. For example the 'pay for use EGI' pilot activity is one of such projects at the moment with the leader of the TONC team being involved.

Un-resourced activities:

The EGI.eu TONC team will curtail its involvement in activities that fall into any of the 'Un-resourced' areas. Current activities that fall in this category include:

- Mini-project - Liferay evaluation: EGI.eu will hand over its tasks to one of the other project members (SZTAKI, INFN, CESNET). The project can therefore continue with the same, or maybe with a slightly changed/limited scope.
- Mini-project - MOOC development: EGI.eu will delegate its tasks to SURFsara, the other member and coordinator of this mini-project. If they want they can involve other members of the NGI community in the mini-project, or they can reduce the scope of the project.

5.6 Technical services

5.6.1 Applications Database

5.6.1.1 Activity during PY3

- API for third party integration: A REST API[103] has been developed for AppDB that supports authenticated writes and updates of the database. Third party application providers can make use of the API by forwarding their users' EGI SSO credentials, or by creating an AppDB system account to act on behalf of their users, in order to modify content and to read content that is not open to the general public.
- New content quality control tools:
  - A broken link notification subsystem, which automatically sends out e-mail notifications and reminders to application owners, if broken link is found. With the new system the number of broken links has been kept under acceptable limit (around 20 / month).
  - A mechanism that identifies application entries that have not been updated for a period of over 12 months. Such applications are tagged with a small emblem that notifies users about the possibly of a not fully up to date entry. Users can exclude such entries from the hit list in searches. The owners of not up to date items are invited by the system to update the entries (or confirm that it is still up to date).
- A mechanism that enables the community to classify the registered software items into various high level categories. Besides the existing 'Tools' and 'Applications' categories 'Science Gateways' and 'Workflows' have been added.
- A dissemination/outreach tool, which allows those who hold 'manager' role in the system to send out e-mail messages from the portal to certain group of users. This can be useful e.g. to the EGI.eu teams to inform certain users about new services or changes in EGI.
- The front-end of the Applications Database portal has been redesigned. Besides many other changes, the new interface displays the most recent and the most popular items based on rating and visitor statistics. The FAQ section became editable by members of UCST.
- Various smaller changes, for example history and rollback for software content editors, RSS subscription possibility for each registered items, caching of search results and more intelligent ordering of search hits.
- In PQ12 the team has extended with repository functions, mainly to support 'Community Technology Providers', a specific type of middleware developers who will become part of EGI after April 2013, after the end of the EMI and IGE projects. Community Technology Providers will not provide strong quality guarantees on their software (such as SLA or MoU). They will simply upload their software packages into the Applications Database, where potential user

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[103] https://wiki.egi.eu/wiki/EGI_AppDB_REST_API_v1.0

communities (primarily platform integrators from those communities) can access the packages and can integrate into Community Platforms.

- With the support of the EGI.eu UCST, the AppDB developer team in Greece (at IASA) promoted the service to the EGI community in blog posts, the NIL dispatch, and via demos and presentations at the EGI Forums.

5.6.1.2   Plans for PY4

A focus for the AppDB team in PY4 will be to extend the service with support for Virtual Machine Images (VMI) that could be used on the EGI Federated Cloud infrastructure. The related services would enable developers to make their VMIs visible in the database, as part of an existing profile (application, tool, workflow, scientific gateway), or as a new entry. Those sites that want to support software that is available in the form of VMIs could receive automatic notifications about new or updated images, could contextualise the images to their local system, and would indicate in AppDB that they became supporters of the VMI. User of VMI software could browse VMIs and start them on EGI sites that support their chosen images. After these extensions are in place AppDB would become a central place for software developers and software consumers in EGI independent from how the software is provided (wrapped into a scientific gateway, made available for client or server side installation), and where the software sits in the EGI ecosystem (scientific code, middleware component, service prepared in VMI).

Besides further developing the technical service, the team will engage with research infrastructure providers who could benefit from a dedicated Applications Database service to support their software developer and software consumer communities. A diversified customer base would provide additional income sources for the developer team in Greece, which currently relies on community funding as an EGI Global Task. Engagements with new customers could be formalised e.g. in Horizon-2020 projects. The first steps towards engaging with new communities have been made in April, when the team attended the 'SciencePAD Software Registries and Metadata Workshop'[104].

5.6.1.3   Uptake

From the end of PY2 to the end of PY3 (22 April 2013) the number of registered items increased as:

- Applications: 366 → 385
- Tools: 54 → 69
- Contact profiles: 669 → 717

Two new software domains have been established, with the following number of entries:

- Science Gateways: 50
- Workflows: 26

The web visitor statistics show the dominance of visits from Greece (developers) and the Netherlands (heaviest users of the content), and balanced statistics from the rest of the European countries. The AppDB gadget has 10 known instances[105] deployed in websites across EGI, one more than one year ago.

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[104] https://indico.cern.ch/conferenceDisplay.py?ovw=True&confId=239810

[105] Known AppDB gadget instance deployments:
https://wiki.egi.eu/wiki/AppDB_Gadget_Editor#Success_Stories

5.6.2 Training Marketplace

5.6.2.1 Activity during PY3

- The behaviour of existing gadgets have been improved to allow correct resizing of an events calendar within the iframe environment and the ability to include a calendar alongside a list displaying details of the events.
- Functionality of existing gadgets have been improved with includes filters to allow the user to display local NGI based events by default, whilst maintaining links to the full database. The gadget now provides a customisable appearance so the user can embed it into a website, matching colours, fonts and styles.
- The functionality of the marketplace has been extended with various new items, e.g. permalinks to event entries; Sending out invitation emails to report the number of attendees to UCST after the event took place; Writing documentation to UCST about content management.
- The Training Market Place (TMP) instance used in the EGI Website has been improved with writing a description of the different content types for users, adding key word tagging, and matching the colour schema with the new design of the EGI website.
- During PQ9 a large number of spam started to appear as comments on events that are registered in the Training Marketplace. Later the spams started to spread as fake event registrations. The team first deployed a CAPTCHA[106], then later a ReCAPTCHA module into the tool in order to protect the content from spammers. Unfortunately none of these solutions could stop spammers, so in PQ12 the comments had to be turned into 'moderation' mode, meaning that new comments become visible only after approval by a UCST member. (New events were in such mode since the beginning.) At the end of PY3 the system still attracts spams (around 3/day), but these are not approved by UCST.
- Developed a script to monitor usage of Training Marketplace gadgets and to differentiate website hits from the main and gadget interfaces.
- Promotion of the Training Marketplace tool in the UK, at the Digital Research 2012 Conference, at the Research Council (EPSRC) meeting, and at the National Service for Computational Chemistry Software (NSCCS) User Meeting (with representatives of NCSS and HeCTOR, UK's HPC facility) and most recently at the e-Infrastructure Academic User Community Forum. The sustainability of core tools and services, such as training, have been discussed and debated about at these events. HeCTOR and NSCCS expressed an interest in using a customised version of the Training Marketplace that could show events relevant to their community. The requested features are exactly the same that were developed by STFC in PQ12.
- With the support of the EGI.eu UCST the STFC team promoted the service to the EGI community in a webinar presentation (PQ9), in blog posts, the NIL dispatch, and via demos and presentations at the EGI Forums. Also at the EGI Community Forum a video demo[107] was produced and featured on the GridCast site.
- During PQ11 and PQ12 the main development was focussed on increasing the functionality of the TMP event display gadget by increasing the number of filters that can be applied to it. This was demonstrated at the EGI Community Forum 2013, and went into production after that. The gadget can create a training marketplace instance that displays results filtered by location, project and/or research community.

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[106] CAPTCHA is a type of challenge-response test used in computing as an attempt to ensure that the response is generated by a human being. The acronym stands for "Completely Automated Public Turing test to tell Computers and Humans Apart". Source: Wikipedia.
[107] http://gridtalk-project.blogspot.co.uk/2013/04/tom-morrison-from-stfc-egi-training.html

5.6.2.2 Uptake

A growing number of new training providers have been attracted to using the Training Marketplace for their events, such as NSCCS in the UK. Interestingly, more events are being advertised in the Training Marketplace (approximately 75 per annum) than were advertised during the final year of the EGEE-III project (under 50 per annum), despite there being no direct funding for training during EGI compared to a large training activity in EGEE-III. In PY3 there were 3476 training days advertised in the Training Marketplace by NGIs, and a further 220 advertised by NGIs and EGI and held at the EGI Forums.

Whilst the services of the Training Marketplace that enable exchanging information about 'Online Training', 'Training Resources' and 'University Courses' have fewer entries that those for events, behind many entries and links and information pointing to additional catalogues of training materials.

5.6.2.3 The Web visitor statistics show a continuous increase of visits from quarter to quarter (with big jump from 1835 to 3571 unique visits from PQ9 to PQ12. Plans for PY4

STFC has been asked at the Research Council (EPSRC) meeting in 2012 to lead on a proposal for the Research Council to take to a governmental advisory committee to consider the long term funding of a UK Training Marketplace, which would allow the UK to continue offering the EGI a Training Marketplace post EGI-InSPIRE. Currently the Research Council is making a case to government for funding of training and we have been successful in including a Training Marketplace activity in this case. STFC will continue to work with the Research Council in PY4 to obtain funding to develop the activity towards sustainability.

The recently finished event gadget enables a more flexible and customisable use of the TMP in scientific community and in project websites. The STFC team will promote the gadget to projects and to scientific communities in and beyond EGI. The purpose of these two outreach activities would be to the diversification of the customer base of the tool, so these customers could become additional sources of income for the developer team in the UK, which currently relies on community funding as an EGI Global Task.

Technical developments planned in PY4 include a revamp of the appearance of the Training Marketplace gadget and options for providing calendar or list views for events and webinars. We will give gadget users options for customising their marketplace appearance to better match that of their own website, increasing uptake. A new content type is being added, webinars, to reflect the increase in occurrence of this type of training method. Another mechanism to increase uptake and to enable the content of the Training Marketplace to become more useful for specific communities and projects is the addition of tags that users can add. In this way relevant content can be highlighted for a specific audience and displayed via their own gadget.

5.6.3 Client Relationship Management system

5.6.3.1 Activity during PY3

The work in PQ9 focused on increasing the usability and robustness of the CRM service after its introduction as a production service in the beginning of April 2012. The first 3 months operating the service as a production product showed that it needs continue customisation to cope with constant emerging requests from the EGI community. While some of the requirements could be addressed with the vTiger version of the time, others could only be solved in a more recent version (5.4.0). The team therefore upgraded the system in PQ10 and implemented all the requested changes/fixes/further developments during PQ10 and PQ11 with gradual updates.

A key new feature in the system is the monitoring and reporting functionalities implemented on top of the vTiger ModTracker Module, and exposed via a metrics web portal[108]. The web portal provides the changes, new additions and deletions made on items stored within the system during a customizable time period. The results are broken down per NGI, so both the NILs and the outreach coordination team of EGI.eu can monitor progress and uptake of the CRM itself. Moreover, a monthly snapshot of the results is captured and stored in a reports repository [109], and distributed to the NILs via NIL dispatch.

During PQ12, a strong effort was put on addressing important usability issues focused on the CRM User interface. The Main enhancements were:

- The introduction of a section for messages and informative tabs.
- The implementation of different web forms to address / support information from different types of institutions.
- The implementation of content quality control rules to guarantee the correct execution of the internal workflows.
- A customizable user home page with graphical views regarding the number of different objects assigned to the user's NGI (group), the percentage of objects with incomplete / missing information, and the top-5 NGI (groups) with the higher number of assigned objects.

The Wiki based EGI CRM documentation was reviewed and updated several times to follow the evolution of the service.

The CRM team from LIP and CSIC, with the support of the EGI.eu UCST, promoted the service to the EGI community and especially to the NGI International Liaisons through the NIL dispatch, presentations and trainings at the EGI Forums.

5.6.3.2 Uptake

After a slow start the CRM is getting more and more NILs using the system. The Cyprian, French, Italian, Portuguese, Slovakian, Spanish and Turkish NILs, as well as a couple of EGI.eu teams already entered institutes and personal contacts into the system, and added information about the 'Potential for EGI use' and 'Interest in e-infrastructures' to some of these leads. The data that came together in this way about ESFRI projects within the CRM (until 23 April 2013) is often uninformative, and is still not enough to make any detailed e-infrastructure offering to these ESFRI projects.

Currently, the EGI CRM system has information about 837 organizations (52 ESFRI Projects, 4 ESFRI-Cluster Projects, 26 INFRA Projects, 2 National Projects, 2 Other International Projects, 743 Research Institutions and 6 companies) and 46 Person Contacts. The available information is just start-up information that should be completed by the national contacts (NILs) to which the individual records are assigned to.

5.6.3.3 Plans for PY4

The UCST will work more closely with the NILs and with the Champions in PY4. These two groups are exactly the users targeted by the CRM system. The main focus of the CRM team in PY4 will be to coordinate and push the NILs and the Champions to correct and extend data in the CRM about the 'Potential for EGI use' and 'Interest in e-infrastructures' fields of ESFRI project leads. The monthly teleconferences to be organised by UCST with the NILs and Champions will provide a forum to review the status of this work, as well as to collect and discuss any issues with using the CRM.

Any development on the CRM system itself will focus on dealing with issues that the NILs, Champions and the UCST reports as a blocking issue to record and aggregate information about ESFRI projects and ESFRI project members.

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[108] CRM Reports: https://crm.egi.eu/Metrics/
[109] CRM Reports: https://crm.egi.eu/Reports/

Among the foreseen developments we highlight the email monthly reports sent to each NILs with a list of pending tasks, and an easier mapping of organizations and contacts at the User Interface level.

6   NGI INTERNATIONAL LIAISONS AND VIRTUAL TEAMS

6.1   Context

In 2011 the EGI-InSPIRE project revised its user engagement activities and defined a new structure for the NA2 work package within an updated Description of Work. The purpose of the restructuring was to improve the efficiency and flexibility of the interaction between the NGIs, EGI.eu and other organisations to achieve common goals in the field of "Engaging with New User Communities". The new structure consists of two key elements:

- **Virtual Team framework**: The Virtual Team (VT) framework (see source document[110]) enables NGI and EGI.eu staff to initiate and participate in short-lived projects (known as VT projects) that focus on well-defined, non-operational activities relevant to the production infrastructure. These activities cover areas such as marketing & communication, strategic planning and policy support, community outreach and events for new users, technical outreach and support to new communities. VT projects focus around new communities and/or sustainability. The framework allows the EGI community to plan all related activities in conjunction and collaboration with the NGIs. The VT project framework was developed within the NA2 activity of the EGI-InSPIRE project, but it is also open to NGIs, countries and regions that are not involved in NA2 or in EGI-InSPIRE. These entities can join existing VTs or propose new VTs.

- **NGI International Liaisons**: The interaction between the NGI teams and EGI.eu on non-operational activities is undertaken through an "NGI International Liaisons" (NILs in short), who are responsible within the NGIs for the delivery and interaction of non-operational tasks. Non-operational activities cover areas such as marketing & communication, strategic planning and policy support, community outreach and events for new users, technical outreach and support to new communities. The role of the NIL recognises the complexity and diversity of each NGIs yet the need for these NGIs to be involved in the pan-European, coordinated, non-technical activities of EGI. It is not necessarily the NILs who undertake any of the non-technical activities, but instead they make sure the appropriate individuals or teams within the NGIs respond to any particular activity or issue that arises. These activities and issues arise within the VT framework, typically as requests to join a new VT or to react to some issue identified by a VT.

6.2   Setting up the Virtual Teams

Requests to form a VT can come from any NGI or even from internal to EGI.eu management. Such requests are reviewed by the NA2 task-leaders of EGI-InSPIRE for purpose and potential value to the EGI, clarity, resource requirements, completeness and achievability.

After a project is accepted it gets an entry in the "Active Virtual Teams" section of the EGI Wiki site and a request to join the project is sent to the NILs. They in turn ensure that the NGI as a whole or appropriate individuals or teams within the NGIs respond to the participation request. Some NILs may decide on their own on participation, others may need approval from NGI Coordinator or from NGI members. Note that because Virtual Teams have a relatively short lifetime (up to six month), the window of opportunity for NGIs to respond is expected to be short too.

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[110] https://www.egi.eu/indico/getFile.py/access?resId=0&materialId=paper&confId=659

A positive answer from at least two NGIs is enough to establish a VT. Teams with only one NGI cannot be active within the EGI-InSPIRE VT framework. The leader of a VT must be an individual from an NGI or from EGI.eu. If the team is lead by an NGI member then an "EGI.eu buddy" is provided for the team to facilitate the integration into the EGI ecosystem.

EGI.eu TONC provides consultancy for and supervision of the VTs and supports them with a range of tools for teleconferencing, meeting planning and information dissemination through the EGI Webex, INDICO, Wiki and Webpages. Additionally, template documents have been generated to assist team leaders in starting up and completing their projects such as a template Project Initiation Document (PID) and a template Final Project Report. These try to capture and present best practice and have already proven useful in setting up a number of new VTs. The EGI Wiki[111] is a useful repository of information for the VTs.

Success of the VT framework that was initially established for unfunded work has led to the scheme's expansion in early 2013. This resulted in the approval of a number of similar but funded "mini-projects" and lessons learned from the unfunded VTs has been transferred to the funded mini projects, particularly in the setting up of the dedicated Wiki overview page[112] and template Wiki page[113]

6.3   Working with the NGI International Liaisons

Working with NILs over the first year of the scheme's existence has brought improvements in cooperation and coordination and it is largely through the NILs that the VT scheme has been successful in identifying the correct points of contact to involve in project teams. But experience has brought about proactive initiatives from many individuals and the implementation of such initiatives has in turn brought valuable Lessons Learned – and these need to be acted upon over the coming months. For example, one step forwards was to gather data on the effort and work done by the NILs via EGI's PPT system. Analysis of the data once a sufficiently large sample had been compiled revealed that PPT inputs were inconsistent. Issues were addressed with the NILs during EGI CF13 and management actions to bring consistency and value to the effort reporting procedures will be established over the following months.

6.4   Status of the Virtual Teams

Nearly 15 VT projects were undertaken and completed in 2012. At the time of preparing this report, a further 4 have been completed and 4 more are under way. The status of the projects is presented via the EGI VT Wiki[114] pages and weekly progress reporting is compiled and provided to the EGI.eu Director.

Most projects have been very successful but even where projects have not come to a complete and resounding conclusion, the results have been very valuable. One example of this has been the "Science Gateway Primer", a project that sought to generate a guidebook for best practice on building Science Gateways. Amongst many potential Science Gateway solutions for the EGI community as a whole, there are 2 that are emerging at the forefront of this area of work. The "Primer" that evolved from this VT project is a very substantial document and is thus a valuable step forwards but it did not gain universal support because it lacked balance. The final report has been

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[111] https://wiki.egi.eu/wiki/Virtual_teams
[112] https://wiki.egi.eu/wiki/Overview_of_Funded_Virtual_Team_projects
[113] https://wiki.egi.eu/wiki/VT_Template_Wiki_page
[114] https://wiki.egi.eu/wiki/Virtual_Team_Projects

accepted but a further project will be established to build on this good start and bring the other half of the picture so as to present a full and well-balanced final "Primer".

The current status of projects is summarised in the Table that follows:

Virtual Team Projects Status Summary

Project title	Project status	Start Date	End Date	Project leader	Project website
SPEEch on the griD (SPEED)	Running	7/3/12	in course of closure	Ing. Milan Rusko <milan.rusko@savba.sk>, IISAS, Slovakia	VT SPEED
Environmental & Biodiversity	Running (NGIs can still join)	1/10/12	Running	Yannick Legre (Idgrilles)	VT E and B
Collaboration between EGI/NGIs and large ESFRI project ELIXIR	Running (NGIs can still join)	1/10/12	Running	Pavel Fibich - NGI_CZ, <pavel.fibich@prf.jcu.cz>	VT ELIXIR
Scientific Discipline Classification	Running	12/12/12	Running	Sy Holsinger (EGI.eu)	VT Scientific Discipline Classification
Technology study for CTA (Cherenkov Telescope Array)	Running	7/1/13	Running	Claudio Vuerli (INAF)	VT Technology study for CTA
Towards a Chemistry, Molecular & Materials Science and Technology (CMMST) Virtual Research Community (VRC)	Running	19/2/13	Running	Antonio Lagana (University of Perugia)	Towards a CMMST VRC
GPGPU requirements (General-Purpose computation on Graphics Processing Units)	Finished	21/5/12	31/11/12	John Walsh (TCD, Ireland)	VT GPGPU
Inter NGI Usage Report (second phase)	Finished	30/5/12	5/4/13	Kostas Koumamtaros (GRNET) and Sara Coelho (EGI.eu)	VT Inter-Usage Report, part II
Science gateway primer	Finished	16/5/12	31/12/12	Robert Lovas (NGI_HU)	VT Science Gateway Primer
Scientific Publications Repository	Finished	20/6/12	18/10/12	Sergio Andreozzi (EGI.eu)	VT Scientific Publications Repository
Fire and Smoke	Finished	31/1/12	30/06/12	Ladislav Hluchý	VT Fire

Simulation			(report published in 9/12)	<hluchy.ui@savba.sk>, IISAS, Slovakia	Simulation
EGI Champions - establish the process for creating a network of EGI champions.	Finished	21/5/12	11/9/12	Steve Brewer (EGI.eu)	VT EGI Champions
DCH-EGI Integration	Finished	1/2/12	10/7/12	Steve Brewer (EGI.eu)	DCH-EGI_Integration
MPI within EGI	Finished	10/11/11	27/7/12	Alvaro Simon (CESGA) and Zdenek Sustr (CESNET)	VT MPI within EGI
Assessing the adoption of Federated Identity Providers within the EGI Community	Finished	10/11/11	12/7/12	Daniel Kouril (CESNET), Gergely Sipos (EGI.eu)	VT Federated Identity Providers Assessment

6.5   Summary and plans for PY4

The VT framework has proved to be a very effective method for undertaking small projects for the benefit of the EGI ecosystem but the effort expended has been unfunded. This means that to a large extent, VT projects have been run on a 'best effort' basis. In most cases this has imposed significant burdens on some participants while others participants have been unable to contribute as much (if any) as they had initially intended. EGI.eu's TONC team has already seen steady improvement in the structuring and management of new VTs, mainly as a result of initiatives to provide project management consultancy and assistance through the project start-up phase and in planning and conduct of project progress meeting. This approach will continue to be developed through PY4 with Lessons Learned being fed back into the VT process – template project documents, procedures, assistance in the use of available tools (e.g. Webex teleconferencing) and advice. Tighter management with better assistance from the very start of projects through to their conclusion will help ensure VTs are more able to focus on what needs to be done and by who.

For PY4 there will be a shift towards 'funded mini-projects' that are being started as of April 2013. At this stage there are 11 approved 'funded mini-projects' which are already being formed using the VT framework – the EGI "Funded Virtual Team project" Wiki pages[115] have been established and guidance on reporting procedures and available support was issued during a dedicated session at the EGI Community Forum 2013 in Manchester.

6.6   Summary of Virtual Team Participation

The impressive results of the VT project scheme as summarised above is testament to the positive and proactive approach of all those involved, taking these short lived 6 month projects from no more than an embryonic requirement or idea through to the delivery of real and practical results. The NGIs, their NILs and all those who participate and contribute in these projects are therefore to be highly commended for finding the resources to dedicate to the necessary work. Nevertheless, it

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[115] https://wiki.egi.eu/wiki/Overview_of_Funded_Virtual_Team_projects

would be wrong to conclude that VT participation is equally good in all areas and it is important to note that in almost every one of the VTs, there are participants who genuinely dedicate considerable effort to the project, and there are bystanders who do little more than wait for results. It is clear that real effort comes from the participants with a vested interest in the project. On the other hand, the projects that have struggled to make progress are those where the goals have been hard to understand and break down into achievable sub tasks. This in turn highlights the management challenge within the VT projects, where goals and tasks need to be clearly recognised, even more clearly enunciated and then assigned to people who properly understand what is required of them and how their contribution will be important to overall success.

7 CONCLUSION

PY3 has seen a considerable impact from changes in direction of the activities within NA2 made in the second half of PY2 and at the beginning of PY3. The plans, based on the EC review recommendations, were fully implemented during PY3.

Activities of the NGI International Liaisons and full implementation of EGI Champions Scheme provided a more effective focus around the non-operational activities within EGI-InSPIRE that had been achieved under the previous project structures. The NIL structure was 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.

Virtual Teams that were able to engage resources within the NGIs used them to tackle issues of community importance. The Virtual Teams were 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.

Following the approval of the EGI strategy, the EGI balanced scorecard was revisited to better measure advancement in the strategic execution. The first edition of the EGI Compendium was published covering 2011, while the data collection about 2012 was launched. A number of policy papers have been created and approved by the Council in the area of federated resource allocation, pay-for-use models, and an EGI.eu transition plan to ERIC. Two virtual teams produced policy recommendations around an EGI scientific publications repository that led to a strategic collaboration with the OpenAIRE project and to a new proposed classification for scientific disciplines to be adopted by EGI tools. In the area of collaborations, agreements were signed with three new partners DANTE, PSNC for QosCosGrid software, UVACSE for Genesis-II. New policies in the area of security have been delivered as well as the liaison with EUGridPMA and IGTF continued. At EGI Community events, a dedicated track was managed to reinforce the communication and coordination around strategy and policy topics.

The PY3 has been very active for the communications and marketing team. The ground work for many of the dissemination channels was carried out in PY1 and PY2, and PY3 has now seen the maturing of several initiatives in the areas of social media, policy outreach, videos and the website. The plans for dissemination in PY3 were outlined in D2.15 Marketing and Communication Plan.