



EGi-Engage

Communications, Dissemination and Engagement Report and Updated Strategy

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Abstract

This document presents the results of communication, dissemination and engagement activities for the EGI-Engage project in the first year of the project and outlining the updated plan for the remaining part. It includes communication channels and material, analysis of expected project results and their target audience with dissemination and exploitation models as well as planned engagement activities that aim at ensuring growth of EGI.

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TERMINOLOGY

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

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Executive summary

Communications, Dissemination and Engagement are three interlinked activities directly related with the human dimension of the EGI-Engage project. These activities transcend the EGI-Engage project itself and exist in the context of the overarching goal to serve the EGI federation.

The **Communications** activity manages the communication between the members of the consortium and corporate (external) image of the EGI-Engage project and EGI as a whole. The internal communication activities aim to strengthen the ties between the EGI-Engage stakeholders as a way to promote synergies and build a sense of appreciation for the community itself. The external communications focus on supporting the Engagement and Dissemination activities by opening the successes and outputs of the project to potential new stakeholders, such as new user communities, new resource infrastructure providers or new industry partners.

During the first year of EGI-Engage, the Communications Team has continued to explore the opportunity to use external publications for dissemination & communications through direct contacts and press releases. The Communications Team has planned to increase the output of case studies, to build on the successes of the published material: a high number of visitors to the case studies section and excellent feedback received by the Case Studies brochure. The original plan of EGI-Engage Communications did not include effort spent on website (re)design. With the publication of the EGI Strategy 2015-2020, it became clear that the EGI website is not being used to maximum capacity. The Communications task of EGI-Engage, which looks after the communication channels of EGI, is currently working on a plan to renovate the website, taking into account target audiences, design and content goals.

Dissemination concerns the activities related to the public disclosure of the project results within their intended audiences. The results are grouped into five categories: Technical input to standards, Policy & procedure developments, Software & service innovation, Business model innovation, and Know-how.

The work packages in EGI-Engage are generating a number of new products, processes, algorithms, software and services, and they are improving existing items. EGI-Engage has expanded activities including the evolution of the EGI governance, development of the EGI Solutions and their dissemination, the analysis of business models for an increasing sustainability of the EGI Community, the definition of the strategy for the accomplishment of the Open Science Commons, the analysis of the policies aspects for a coordinated procurement and provisioning of services between EGI and RIs on the ESFRI roadmap.

The collaborative activity with industry within EGI-Engage is also producing outputs around (Big) Open Data, in particular in sectors with high economic and social impact such as agriculture and food. The activity includes a better understanding of the market and a field for experiment in the new open data platform in which key actors of the value chain are involved: data providers, data enablers and future data exploiters. The experience gained in specific sectors, or the flagship initiatives created in the most successful cases is expected to provide models for benchmarking.

Engagement concerns the technical outreach to potential new communities and supporting them to become active and self-sufficient users of EGI solutions. Engagement is a key activity in EGI-Engage. EGI's sustainability plans have become increasingly coupled with its long-term strategy: connect researchers from all fields of science with the reliable and innovative ICT services from EGI that they need to undertake their research. Evolving these services according to researchers' needs is part of the continuous improvement process, to increase the value for research and science in Europe. Engagement is a key activity in EGI to achieve these goals. EGI Engagement activities have: 1) Identified scientific communities from academy and industry that could break current scientific barriers with the use of EGI services and solutions; 2) Reached out to, and carried out discussions with these communities about ICT technologies to understand and capture details of their e-infrastructure use cases and requirements; 3) Helped user communities tackle scientific challenges with the use of existing EGI solutions and by new solutions brought into, or developed within EGI as required; 4) Supported scientific communities during the whole process they need to go through to become active and self-sufficient users of EGI services and tools; 5) Acted as a meeting point for research communities, a community of communities, where information and experiences relating to e-infrastructure application and adaptation can be shared.

1 Introduction

EGI-Engage aims to accelerate the implementation of the Open Science Commons by expanding the capabilities of a European backbone of federated services for compute, storage, data, communication, knowledge and expertise, complementing community-specific capabilities.

EGI-Engage provides coordination and carries out strategic activities to stimulate the advancement in policy, innovation of technical platforms and user engagement of EGI towards many sectors of the scientific community: researchers within the long-tail of science, domain-specific research communities, research infrastructures within the ESFRI roadmap, as well as the industrial sector and SMEs.

1.1 Scope statement

EGI-Engage will be able to consistently improve the services to its current consumers and new research communities through targeted developments. The uptake of EGI's services will have diversified and the usage increased alongside new co-developed technical innovations and related service capabilities (by bringing research communities, service providers and technology experts together) will have emerged and been brought into production to meet the new research challenges in the open compute and data infrastructure community.

Coordination is provided to the whole EGI Community, including the partners of the EGI-Engage consortium, the EGI.eu participants in the EGI Council, and the other e-Infrastructures that are part of the EGI federation relying of the EGI central services and engaged through collaboration agreements.

1.2 Project goals

In order to accomplish its mission of accelerating the implementation of the Open Science Commons, EGI-Engage aims at achieving five objectives.

- **Objective 1:** Ensure the continued coordination of the EGI Community in strategy and policy development, engagement, technical user support and operations of the federated infrastructure in Europe and worldwide.

This goal is being achieved by coordination in the area of

- Strategy, policy and business development, to continue and expand activities including the evolution of the EGI governance, development of the EGI Solutions and their dissemination, the analysis of business models for an increasing sustainability of the EGI Community, the definition of the strategy for the accomplishment of the Open Science Commons, the analysis of the policies aspects for a coordinated procurement and provisioning of services between EGI and RIs on the ESFRI roadmap.
- The core EGI activities necessary for the federated operations of a highly available and secure infrastructure and implementing the e-Infrastructure Commons of EGI. These include operational tools, the distributed accounting and monitoring infrastructure, security operations coordination and security incident management, EGI services for the long-tail of science, software validation and provisioning, technical support to users and operators.
- Engagement with commercial service providers for the development of a common service marketplace, and with new user groups including education, industry and SMEs, to promote the commercial adoption of state-of-the-art technology and services and increase their potential for innovation.
- Support to the long-tail of science and the technical support to RIs through a network of community-specific EGI-Engage Competence Centres.
- Training for a coordinated technical support within the EGI Community and among e-Infrastructures.

- **Objective 2:** Evolve the EGI Solutions, related business models and access policies for different target groups aiming at an increased sustainability of these outside of project funding. The solutions will be offered to large and medium size RIs, small research communities, the long-tail of science, education, industry and SMEs. In order to achieve this objective, EGI is:
 - Extending the Federated Cloud and the Federated Operations solution to include additional IaaS services and to provide PaaS and SaaS services to host community-support services, services for education and the implementation of the European Open Big Data Value.
 - Tailoring the solutions to the needs of specific user groups: the solutions are being adapted to the requirements of the RIs and of the long-tail of research. A solution for the long-tail of science will be offered at a European-level to provide simplified access policies across different countries in Europe, and a dedicated facility of grid, cloud and data services of general widespread usage. Access policies such as free transnational access, open access with scientific review, and the related business models ensuring long-term sustainability are being analysed.

- **Objective 3:** Offer and expand an e-Infrastructure Commons solution. The solution will be adapted to support the e-Infrastructure Commons roadmap defined by e-IRG. For this objective, the e-Infrastructure Commons solution is being extended to
 - Adapt the current capabilities of the existing core infrastructure services of EGI to the needs of new user communities and research infrastructures and to ensure interoperability. This solution is operated in collaboration with and other relevant e-Infrastructures where applicable, or provided to them as a service.
 - Offer services for identity management in a federated environment, authentication and authorisation, accounting and monitoring, identification of permanent digital objects.
 - Prototype the EGI Service Registry, a new service catalogue and marketplace aimed directly at end-users.

- **Objective 4:** Prototype an open data platform and contribute to the implementation of the European Big Data Value. This objective is being achieved through the following actions:
 - Prototype a platform integrating data and execution services to support the data continuum.
 - Prototype an environment in which open research data (externally archived or produced after processing in EGI) can be stored and analysed.
 - SME engagement activities, to support the mission of the European Big Data Value, whose mission is to “foster commercial and social added value based on the intelligent use, management and reuse of data sources in Europe, through a combination of Research and Innovation, legislative and deployment actions”.

- **Objective 5:** Promote the adoption of the current EGI services and extend them with new capabilities through user co-development.

To contribute to the ERA with excellent science, research communities need access to services that meet their different requirements supported by an e-Infrastructure capacity (including storage, computing and networking) that allows them to work in large or small collaborations, or individually. To achieve this objective, EGI is:

 - Providing ad hoc technical support, training and application porting to some of the flagship RIs through the direct involvement of experts based at the National Grid Initiatives and research communities.
 - Supporting a large network of distributed Competence Centres (CC) in collaboration with ESFRI Research Infrastructures and with the participation of partners from the United States and the Asia-Pacific region.

This deliverable provides a detailed description of the results of communication, dissemination and engagement activities in the first half of the project and outlining the updated plan for the second half. The document is structured in a number of sections: after an overview of the proposed motivating EGI-Engage project and its impact strategy (section 1), the main exploitable results of the project are presented. Section 3 presents an overview of the communication activities and section 4 reports on the engagement activities.

2 Report on exploitable project outputs

2.1 Intended Targets and dissemination approach

This section provides the reader with a project overview resuming the planned project outcomes and the dissemination activities. The results are grouped into five categories that can be linked to intended targets, or audiences, as detailed in the following table.

Result category	Definition of outputs	Intended targets
Technical input to standards	Technical specifications or extensions to standards adopted within the project	Standardisation bodies, Funding agencies and decision/policy makers, industry and SMEs
Policy & procedure developments	Technical procedures directed at users, service and infrastructure providers (for example to govern access and allocation to resources), policy reports and recommendations, and strategic analysis	Funding agencies and decision/policy makers, RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, standardisation bodies
Software & service innovation	Software developments (e.g.: workflows, Virtual Machines, applications), new software services deployed for the direct benefit of researchers (e.g.: web portals, gateways), e-Infrastructure Commons such as accounting, AAI, and the Federated Cloud platform and the Open Data platform, demonstrators and prototypes.	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies and decision/policy makers, Standardisation bodies
Business model innovation	Business and sustainability-related outputs (the EGI Service Marketplace concept, the contribution to the Innovation space for the big data value chain, sustainability plans, pay-for-use models)	RIs, international research collaborations and the long-tail of science, Industry/SMEs, service providers, Funding agencies and decision/policy makers
Know-how	Includes all results from fact-finding activities (e.g. surveys, requirement gathering), but also the results from internal exercises (e.g. security challenges) and outputs that can be used for knowledge transfer as training materials.	All

2.2 Technical input to standards

EGI has a long and successful history in driving and supporting open standards in its production infrastructure (e.g. OGF Usage Record, OGF GLUE). The EGI production infrastructure is designed as a modular set of platforms¹ using open standards to define the respective internal and external interfaces. For some of these platforms, EGI is an early adopter of standards specifications, thus being able to both collaborate in standards

¹ EGI Platform Roadmap, EGI-InSPIRE Milestone MS518, 2014: <https://documents.egi.eu/document/2232>

revision/extensions, experience reports or requirements definition. Relevant standards within the EGI Core Infrastructure Platform are OGF Usage Records, OGF GLUE2, ITU-T X.509 with IETF proxy extensions for authentication, and others.

The accounting team will collaborate with the OGF Usage Record Working Group, in particular to agree a schema for a data usage record. Likewise, the newly launched EGI Federated Cloud Infrastructure Platform not only serves as an integration blueprint, but also exposes access interfaces governed by publicly defined open standards, such as OGF OCCI (Open Cloud Computing Interface) and SNIA CDMI (Cloud Data Management Interface). The target audience of this type of results are standardisation bodies and funding agencies.

2.2.1 Exploitation models

These results will lead to the optimised use of ICT in research and budget-saving opportunities. They will also contribute to the standardisation bodies' efforts to reduce technology fragmentation and promote uptake of new technologies. EGI commits to facilitating avoidance of vendor lock-in for any of its deployed and operated service platforms and plans to contribute to the further development of the OCCI, UR and GLUE standards of OGF, CDMI of DMTF and OVF of OASIS-Open.

2.3 Policy & procedure development

2.3.1 Strategic Planning and Evaluation

The target audiences here are the collaboration's service providers (NGIs), the supporting funding agencies and the user communities that make use of EGI's services.

This activity involves monitoring and analysing EGI external environment and its internal conditions to make sure the objectives and tactics of the initiative are aligned with the real situation. This activity includes iterations of the established strategic planning process as an essential activity to ensure adaption of the plan to the changing circumstances.

2.3.1.1 Exploitation models

The results will be used as basis for discussion and decision-making at the appropriate management boards of the project and of the initiative (EGI Council and EGI Executive Board). An essential part will be also to monitor the execution of the strategy to ensure the achievements of the overall goals. The output of this activity is a yearly update of the EGI sustainability plan that includes both the EGI strategy map and the balanced scorecard.

This group of results will guarantee that the decision-making process within the project (and within the EGI community coordinated through EGI.eu) is well informed, is aligned with market trends, contributes to European-level vision and is in a position to liaise with external partners and peer infrastructures.

2.3.2 Data policies, legal aspects and market analysis

This activity consists of two main areas: identification data sharing policies and legal aspects as well as a market analysis² for fishery and marine scientific domains. Those activities provide documents to:

- Investigate market potential, size, structure, stakeholder composition and segmentation, value chains, competing offerings of the agri-food, and/or geospatial data analytics sector.
- Investigate the data analysis sector in Europe and worldwide and identify stakeholders and related interests, value chains and revenue streams, and competing players.
- Explore legal barriers in sharing fishery & marine sciences datasets.

² <https://documents.egi.eu/document/2700>

- Deliver a framework of legally relevant instructions to data providers and consumers on how to describe their data, the access to this data, and the lifecycle of data and contents and / or of parts thereof in an infrastructure.
- Advise on how the legal interoperability is best supported through infrastructure security, especially where storage and access arrangements are required.

2.3.2.1 *Exploitation models*

The results will be used to provide recommendations³ for new and enhanced services for (big) and/or open data services targeting the industry and academia.

2.3.3 Governance evolution and Impact assessment

This group of activities includes the following:

- Assessing the suitability of the EGI governance model⁴ in relationship to the evolution of the strategy and the business models.
- Defining a number of qualitative and quantitative indicators to assess the impact of EGI. They are instrumental to support the communication of the EGI value and impact to key stakeholders through the various communication channels. Represented NGIs are collaborating on the definition of the indicators.

2.3.3.1 *Exploitation models*

The results will be used to:

- Implement to Open Science Commons visions.
- Assess performance towards the goals.

2.3.4 Overview of project results

A detailed overview of policy and procedures results is provided in Appendix I.

2.4 Software & service innovation

Service providers, RIs and international research collaborations and the long tail of science are the main targets of this wide category of results, designed to enhance the EGI ICT service offer. A wide range of software choices and services will benefit both the service providers and the service consumers (researchers) who can embrace a wider choice of services.

2.4.1.1 *EGI AppDB*

The EGI Applications Database (AppDB) is a central service that stores and provides to the public, information about software solutions in the form of native software products and/or virtual appliances, the programmers and the scientists who are involved, and publications derived from the registered solutions.

Reusing software products, registered in the AppDB, means that scientists and developers may find a solution that can be directly utilized on the European Grid & Cloud Infrastructures without reinventing the wheel. This way, scientists can spend less or even no time developing, porting or even using a software solution to the Distributed Computing Infrastructures (DCIs). AppDB, thus, aims to avoid duplication of effort across the DCI communities, and to inspire scientists less familiar with DCI programming and usage.

2.4.1.2 *Pay-for-use*

In early 2013, the EGI Council approved a policy to explore business models for pay-for-use service delivery to couple together with the traditional method of free-at-point-of-use. The goal of this activity is to support the

³ See <https://documents.egi.eu/document/2700>

⁴ See <https://documents.egi.eu/document/2655>

implementation of this policy in collaboration with NGIs through the definition and execution of proof of concepts. The mandate of the group is to create a proof of concept pay-for-use prototype. EGI-Engage is supporting the transition of previous work in order to move from prototype to production.

2.4.1.3 Marketplace

The EGI Marketplace is currently in the nascent stages to ideally offer a one-shop-stop concept that would allow the request, provision, accounting, billing of e-Infrastructure services. A dedicated group is currently developing scenarios for allocating capacity to research communities in collaborations with pilot user communities (user-driven scenario development), identifying incentive mechanisms for resource centres to provide capacity, analysing revenue streams (e.g., PCP, PPI, direct charging to users, free service at point of delivery and integration with other marketplaces (e.g., Helix Nebula).

2.4.1.4 Long Tail of Science (LToS) Platform Access

The LToS platform⁵ is open for any researcher who needs a simple and user-friendly access to compute, storage and applications services in order to carry out data/compute intensive science and innovation. The researcher needs to be affiliated with, or at least have a partner (for example a referee), at a European research institution to qualify for access. The platform is designed to meet the needs of individual researchers and small research groups who have limited or no experience with distributed and cloud computing.

The platform is accessible through a portal and offers grid, cloud and application services from across the EGI community for individual researchers and small research teams. The platform gives access to the following type of resources:

- High-throughput computing sites for running compute/data-intensive jobs
- Cloud sites suited for both compute/data intensive jobs and hosting of scientific services
- Storage resources for storing job input and output data, and for setting up data catalogues
- Science gateways that provide graphical web environments for building and executing applications in the platform.
- Applications that are made available 'as services' through the science gateways.

In order to access the platform, researchers need to be affiliated with, or at least have a partner (for example a referee), at a European research institution to qualify for access.

2.4.2 Exploitation models

The results will be tangible as demonstrators, prototypes, proofs-of-concept, or even products or services fit for commercial exploitation.

Software & service innovation results will be also exploited to increase the user base of the EGI Community and strengthen the service provider sustainability and will be used to maximise Outreach activities.

2.4.3 Overview of project results

A detailed overview of software and service innovation results is provided in Appendix II.

2.5 Business model innovation

The RIs, industry/SMEs, service providers (NGIs) & funding agencies are the audiences for this category of results. These outcomes contribute to the long-term sustainability of the EGI Community, thus guaranteeing that researchers have state-of-the-art ICT services for their work and assuring that the investments made by service providers and funding agencies are maximised.

⁵ <http://access.egi.eu/>

Business model innovation outputs will be exploited to increase the user base of EGI because they bring more options for engagement and increase transparency, to this effect, the project is:

- Piloting the business models and promote them with the funding agencies
- Keeping the website updated with the Solutions and Service Portfolio

2.5.1 SME engagement

Dedicated activities to understand the requirements of SMEs and define models for engagement increase the skills of the participating NGIs (and EGI in general) to approach SMEs and figure out possible ways of collaboration, also leading to the creation of future business projects. Promising SMEs have been identified and contacted in appropriate forums (e.g. industrial clusters, scientific community forums, or initiatives related to Open Data, Big Data Value, and European SME Instruments). The project is leveraging in open data generated in selected fields and possibly may use EGI resources as enabling systems to produce outcomes fit for commercial exploitation.

2.5.2 Services and Solutions Board

- Advises EGI Management on the priorities for evolving the services and solutions portfolio;
- Conducts regularly scheduled management reviews of services and solutions portfolio;
- Implements the recommendations from the EGI Strategy and Innovation Board (SIB) that have been endorsed by the EGI Council;
- Interfaces with the UCB, TCB and OMB for inputs; steers the creation, review and approval of service/solution design packages including descriptions and specifications;
- Plans the design and transition the state of new or changed services considering timescales, responsibilities, new or changed technology and communication.

2.5.3 Exploitation models

Engagement with SMEs will provide a 'European innovation space' to address Big Data Value challenges by broadening of availability and accessibility of datasets and the creation of an environment for testing and development of applications.

2.5.4 Overview of project results

A detailed overview of business model innovation results is provided in Appendix III.

2.6 Know-how

All EGI-Engage audiences benefit from the know-how accumulated by the EGI Community, from the researchers that will have better support and better services to the service providers that will have stronger business models and enhanced sustainability opportunities.

2.6.1 Exploitation model

Reflecting the wide range of audiences that will benefit from know-how, the exploitation strategies to maximise this group of results will span the entire toolset of communication channels (outlined in the following section). To give a few examples:

- The know-how created by carrying an in-depth market analysis will be used to increase the knowledge base of the community.
- Knowledge accumulated by national support teams and user communities will be exchanged and transferred in the form of training events⁶, manuals and software documentation.

⁶ See training plan: <http://go.egi.eu/trainingplan>

- Security best practices collected by one service provider, during a security challenge, for example, will be disseminated to the wider community.

2.6.2 Overview of project results

- A detailed overview of know-how results is provided in Appendix IV.

3 Report on communications activities

3.1 Internal and external communications activities

The internal communication activities aim to strengthen the ties between the EGI-Engage stakeholders as a way to promote synergies and build a sense of appreciation for the community itself.

EGI-Engage relies on the EGI communication channels established during the EGI-InSPIRE project and described in deliverable D2.1⁷.

3.1.1 Website

The website remains as the most important communication channel of EGI, as host of the EGI blog, newsfeed and newsletter.

a) EGI Blog

During the first year of EGI-Engage, we published 20 blog posts⁸, ranging from announcements to opinion pieces on technical and policy issues. The blog received 4,871 page views⁹.

The most popular post throughout the year was written by Tiziana Ferrari and was a call to action ("Shaping the Open Science Cloud of the future: participate!¹⁰", 326 views) and illustrates the outreach role the Blog has.

From the policy area, the most read was "Summer reflections on the Open Science Cloud"¹¹ (271 views), written by T. Ferrari.

b) Newsfeed

The newsfeed¹¹ saw 39 new news items since March 2015. Types of stories published include:

- Generic announcements (event-related, new publications, new jobs). E.g.: "EGI will be present at the 7th European Innovation Summit"¹²
- Stories about project/EGI outputs. E.g.: "EGI publishes strategy document for 2015-2020"¹³
- Stories about collaborations. E.g.: "EGI-UberCloud Partnership: Bridging Research and Innovation"¹⁴
- Stories about EGI stakeholders. E.g. "First French Cloud center integrated in the EGI Federated Cloud"¹⁵. According to the Communications plan, we made an effort and succeeded in increasing the relative proportion of NGI/Community-led news items.

The newsfeed received 7,145 visits throughout the year and remains the most popular section within the 'News & Media' area of the website. The top 5 most read stories were:

- 1) *INDIGO-DataCloud project approved*¹⁶, about a new sister project of EGI-Engage.
- 2) *The European Open Science Cloud for Research*¹⁷, about a position paper published jointly with other e-Infrastructures

⁷ Communications, Dissemination and Engagement Strategy (<https://documents.egi.eu/document/2489>)

⁸ EGI Blog: <http://www.egi.eu/blog/>

⁹ All figures reported here are taken from Google Analytics and refer to the period March 2015 to February 2016.

¹⁰ http://www.egi.eu/blog/2015/10/08/shaping_the_open_science_cloud_of_the_future_participate.html

¹¹ EGI Newsfeed: <http://www.egi.eu/news-and-media/newsfeed/>

¹² http://www.egi.eu/news-and-media/newsfeed/News_2015_038.html

¹³ http://www.egi.eu/news-and-media/newsfeed/news_2015_025.html

¹⁴ http://www.egi.eu/news-and-media/newsfeed/News_2015_039.html

¹⁵ http://www.egi.eu/news-and-media/newsfeed/news_2015_007.html

¹⁶ http://www.egi.eu/news-and-media/newsfeed/news_2015_002.html

¹⁷ http://www.egi.eu/news-and-media/newsfeed/news_2015_034.html

- 3) *EGI Conference 2015 gets underway in Lisbon, Portugal*¹⁸, highlights of the event, timed with the opening of the conference.
- 4) *New statutes and a new name for EGI*¹⁹, on the changes to the governance structure
- 5) *CF2015 - early-bird extension and programme details*²⁰, an announcement of an upcoming event

The Top5 list suggests that the most interesting topics for the EGI Community (to whom the news feed is intended to) are about collaborations, partnerships and what happens in the wide community in general. We intend to continue to pursue this line in the future.

c) Case studies

Two case studies were published in the first year of EGI-Engage. This is below what was expected and it will be explained below in the 'Deviations from the plan' section. Despite the lack of new content, the Case Studies section remains the most read section of the website after "About" with 25,793 page views.

- *New biomarkers for multiple sclerosis*²¹
- *New viruses implicated in fatal snake disease*²²

The two case studies published illustrate the editorial line which will be prioritised during EGI-Engage: stories with a strong scientific component that can also be used for dissemination of specific computing tools (in these cases the VIP & Chipster platforms, operated by a Virtual Organisation and an NGI, respectively).

d) Inspired newsletter

We published four editions of Inspired in April, July and October 2015 and, more recently, January 2016. Combined, the four newsletters included 32 articles, of which about half were contributed by people external to the EGI Foundation (i.e., from the EGI Community). Four stories were about technical platforms and can be used for outreach purposes; a third of the articles were about EGI stakeholders and cooperation partners: EGI-Engage Competence Centres, National Grid Infrastructures and sister projects.

The newsletters were distributed by email through the Single Sign-On mailing list and were each open, on average by about 2,000 people. The Click-to-Open rate hovers around 20%.



Issue 19, April 2015

<http://go.egi.eu/Issue19>



Issue 20, July 2015

<http://go.egi.eu/Issue20>



Issue 21, October 2015

<http://go.egi.eu/Issue21>



Issue 22, January 2016

<http://go.egi.eu/Issue22>

¹⁸ http://www.egi.eu/news-and-media/newsfeed/news_2015_015.html

¹⁹ http://www.egi.eu/news-and-media/newsfeed/news_2015_027.html

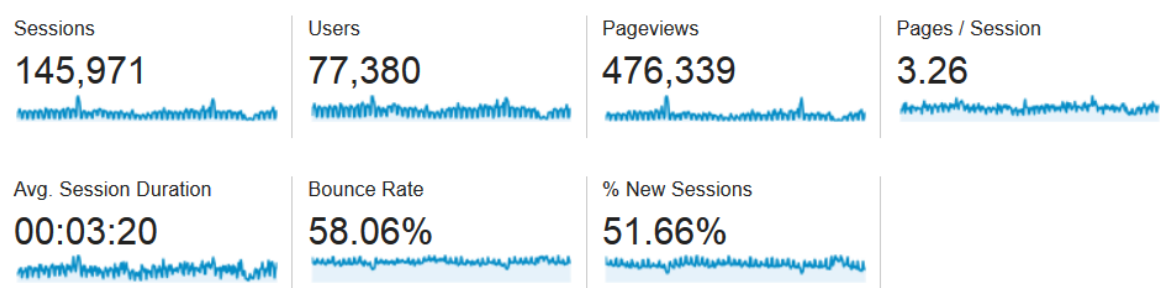
²⁰ http://www.egi.eu/news-and-media/newsfeed/news_2015_031.html

²¹ http://www.egi.eu/case-studies/medical/ms_biomarkers.html

²² http://www.egi.eu/case-studies/natural-sciences/bibd_snake_disease.html

3.1.1.1 Overview of website Google analytics figures

The EGI website was visited by 77,380 visitors during the first year of EGI-Engage. They visited a total of 476,339 pages in 145,971 sessions, which translates to 3.26 pages read in each visit.



Website section	Page views	Unique page views
/about/	35,740 (22.18%)	28,302 (21.55%)
/case-studies/	25,793 (16.00%)	22,655 (17.25%)
/news-and-media/	15,844 (9.83%)	13,340 (10.16%)
/community/	11,793 (7.32%)	9,614 (7.32%)
/infrastructure/	8,548 (5.30%)	6,997 (5.33%)
/services/	8,016 (4.97%)	6,121 (4.66%)
/blog/	4,871 (3.02%)	3,957 (3.01%)
/how-to/	4,350 (2.70%)	3,894 (2.97%)

3.1.2 EGI publications

During EGI-Engage, we produced:

Type	Title	html
Presentation	EGI towards an Open Science Commons	PDF of slides ²³
Brochure	EGI Brochure	PDF ²⁴
Brochure	Open Science Commons	PDF ²⁵
Brochure	EGI Strategy	PDF ²⁶

²³ <https://documents.egi.eu/public/RetrieveFile?docid=2184&version=1&filename=2015-05-18-EGI-keynote-final.pdf>

²⁴ http://www.egi.eu/export/sites/egi/news-and-media/publications/About_EGI.pdf

²⁵ http://www.egi.eu/export/sites/egi/news-and-media/publications/About_Open_Science_Commons.pdf

²⁶ <http://go.egi.eu/strategy2020>

3.1.3 External publications

During the first year of EGI-Engage, we continued to explore the opportunity to use external publications for dissemination & communications through direct contacts and press releases. The results were:

- [A Bari i geni europei dei supercalcolatori](#) (in Italian) (Gazzetta del Mezzogiorno, 9 November 2015)
- [Fisica, per la prima volta in Italia il congresso europeo dell'«Egi»](#) (in Italian) (Corriere del Mezzogiorno, 10 November 2015)
- [EGI - A federation supporting research collaboration \(page 11\)](#), Excellent Science in the Digital Age (EC publication, 2015)
- [European science cloud on the horizon](#), HORIZON magazine (27 July 2015)
- [Opening science to the world; opening the world to science](#), iSGTW (27 May 2015)
- [EGI-InSPIRE: Building the digital European Research Area from the ground up](#) (CORDIS magazine, 22 May 2015)
- [Towards an Open Science Commons](#) (BIOBANK Sweden, December 2015)
- [EGI and EDUGAIN – supporting the long tail of research](#) (CONNECT, issue 19 – pg 20)
- [Next EGI Conference – Building the Open Science Commons](#) (CONNECT, issue 18 – pg 57)
- [Ensuring service levels for digital research through EGI](#) (DRIHM newsletter)
- [Towards an Open Science Commons](#) (e-IRG newsletter (page 3)
- [A new approach to sharing the scientific resources that enable 21st century research](#) (Science Node)
- [Identifying new biomarkers for multiple sclerosis](#) (Science Node)
- [Moving up to an Open Science Commons](#) (e-IRG newsletter)
- [Supporting research with grid computing and more](#) (Science Node)

3.1.4 EGI Champions programme

3.1.4.1 Background and lessons learned

The EGI Champion programme was first implemented in 2012 as part of the EGI Community Outreach activities. This programme was summarised in an internal document entitled: *EGI Champions – goals and processes*²⁷. The main features of this first iteration were:

- The Champions programme was envisioned as a mechanism to “support and nurture enthusiastic individuals from a variety of fields and backgrounds to act as ambassadors for the European Grid Infrastructure helping, assisting and encouraging current and potential users when and where they need it through their technical knowledge and awareness of available resources and services.”
- The Champions were recruited through a formal process and their activity was meant to be steered by an Oversight Committee. The appointment was limited to 18-24 months and a comprehensive list of responsibilities was compiled (Appendix A of the document mentioned above).
- The programme put a great emphasis on educating the Champions about every aspect of EGI – from policy themes to technical issues – to allow them to relay this to their respective communities.

The first Champions programme recruited nine individuals²⁸ from different countries, covering various research fields.

What makes a good champion?

The most active and effective Champions from the first cohort have in common the following characteristics:

- They are practicing scientists, actively engaged in computationally-demanding research projects. They feel first-hand the benefits of working with EGI.

²⁷ <https://documents.egi.eu/secure/ShowDocument?docid=1383>

²⁸ http://www.egi.eu/community/egi_champions/

- They are highly-motivated early-career scientists looking for an edge to make a difference in the fiercely competitive environment where they move. They see EGI and the contacts it provides as a useful tool for their own advancement.
- They are proactive and contribute regularly in their fields of research with papers and (not “and/or”) abstracts to field-specific conferences. They have their own networks.

Processes & etc.

- It’s perhaps best to focus on an ambassadorial role for the Champions, as opposed to expect Champions to be informed and be able to impart information about EGI’s technical services.
- The lump sum scheme to reimburse travel expenses works well.
- The targets and measures of success proposed in the first document are not adequate (they focused on an exponential growth of the number of Champions, which is not feasible due to logistic and financial constraints).
- The recruitment process was cumbersome and the oversight committee did not prove to be useful at all (it met only at the beginning).
- The existence of a ‘contract’ and its limitation did not prove to be useful.

The task was then to revise the Champions programme taking these experiences into consideration.

3.1.4.2 The revised Champions programme

The updated Champions programme started with a new definition of the Champion role and our goals for the programme:

The EGI Champion role:

EGI Champions are enthusiastic scientists that use EGI’s computing and/or data services for their research and that are keen to spread the word about the benefits of working with EGI.

What do we want EGI Champions for?

EGI Champions will be partners in impact marketing activities. As such, they will help us to showcase the benefits of EGI to science. Their aim is to promote EGI in their scientific community; their task is to use their example to inspire colleagues to adopt EGI’s services.

Starting from this framework, we defined the essential characteristics of EGI Champions:

- They are active researchers in their field of science.
- Their research depends on computing and/or data services provided by EGI and they have hands-on experience with EGI.
- They participate frequently in scientific conferences, where they are used to present the results of their research”.

And we outline what is expected of EGI Champions:

- *Go to scientific conferences* in their fields of research and promote EGI’s services by:
 - Acknowledging EGI’s contribution to their results in their posters and/or presentations and/or papers. For this he/she will use the pre-defined, customisable slides and templates from EGI.eu. (See Appendix 1 for details)
 - Being available to answer queries from the audience regarding EGI’s services and being able to direct the interested parties to the appropriate contact(s) in EGI.
 - Being available, if applicable, to support EGI’s outreach activities at the conference, for example: by showcasing their research at the EGI booth or directing attendees to the EGI booth.
- *Support EGI’s Engagement activities* by (for example):
 - Providing feedback and suggestions, when requested, to improve EGI’s outreach materials (e.g. brochures aimed at the scientific community).

- Keeping an eye open for opportunities of collaboration between EGI and scientific projects/initiatives.
- Suggesting outreach actions directed at their communities (e.g. training events).
- Attending the monthly 'EGI Engagement' teleconferences as member of the EGI Engagement Board²⁹.
- *Be willing to cooperate with EGI's outreach by:*
 - Agreeing, if applicable, to be profiled in the EGI website and/or other communications channels (e.g. newsletter)
 - Providing ideas for articles to be included in the EGI Case Studies³⁰ portfolio.

As an acknowledgement for their role in EGI's communications, dissemination and outreach, EGI will provide the Champions with:

- Financial support for travelling to scientific events.
- Integration into the EGI network through the Engagement Board, which is tasked with building partnerships between EGI and scientific communities so they can access EGI services and resources for the benefit of research.
- Through his/her involvement in EGI Engagement the Champion will learn about the various services and options that EGI offers for scientific communities and this can also advance the Champion's own research too.

3.1.4.3 Processes and logistics

The previous iteration of the programme focused on recruiting individuals to **be EGI Champions**. The updated programme will place less emphasis on the recruiting process and look instead for individuals willing to **act as EGI Champions**.

In practice, this shift of paradigm means that individuals don't need to apply to be Champions. Instead, individuals will apply directly to receive travel support and that support will be conferred on a case by case basis, according to the priorities defined in the Engagement Strategy.

The process, described in detail elsewhere³¹, can be summarised as:

- 1) EGI opens an ongoing 'Open Call' for travel support.
- 2) EGI assesses individual applications.
- 3) The EGI Champions travel and report back.
- 4) The individuals become part of the EGI Champion pool.

3.1.4.4 The Champions programme in year 1 of EGI-Engage

The programme was advertised to the community at two EGI flagship events (Lisbon and Bari), through a news item³² and through a slide in the EGI homepage slide banner.

We had four applications: two were not accepted because the applicants applied to go to EGI events, which are not in line with the proposed guidelines; and two applications from two Champions of the previous cohort.

The number of applications was disappointing and will be discussed in the section dealing with 'Deviations from the plan'.

²⁹ The EGI Engagement activity and the Engagement board are explained in the EGI Engagement Strategy: <https://documents.egi.eu/document/2079>

³⁰ <http://www.egi.eu/case-studies/>

³¹ <https://indico.egi.eu/indico/event/2529/page/0>

³² http://www.egi.eu/news-and-media/newsfeed/news_2015_017.html

3.2 Events

3.2.1 EGI-Engage events

EGI Conference 2015 in Lisbon, 18-22 May 2015

The event was successfully organised in partnership with IBERGRID and the local support of the LIP – lead partner of the Portuguese NGI. More information about the logistics and organisation procedures is available in a milestone document³³, on the event website³⁴ and its Indico pages³⁵.

EGI Community Forum 2015 in Bari, 10-13 November 2015

The event was organised by EGI.eu in collaboration with the partners of the Italian National Grid Initiative (INFN, INAF and INGV) and hosted by INFN-Bari. More information about the logistics and organisation procedures is available in a milestone document³⁶, on the event website³⁷ and its Indico pages³⁸.



Poster of the EGI Conference in Lisbon



Poster of the EGI Community Forum in Bari

During the first year of EGI-Engage there was also work put into the preparations of the 2016 flagship events, namely:

EGI Conference 2016 in Amsterdam, 6-8 April 2016

As of the writing of this report:

- the Indico pages are created³⁹
- the programme is online
- a registration system is in place
- logistical arrangements (venue, catering) are being arranged
- co-locations are under negotiation

Digital Infrastructures 2016 [provisional name] in Kraków 2016

³³ M2.2 EGI Flagship Events 2015 - <https://documents.egi.eu/document/2673>

³⁴ <http://conf2015.egi.eu>

³⁵ <http://go.egi.eu/c15>

³⁶ M2.2 EGI Flagship Events 2015 - <https://documents.egi.eu/document/2673>

³⁷ <http://cf2015.egi.eu/>

³⁸ <https://indico.egi.eu/indico/event/2544/>

³⁹ <https://indico.egi.eu/indico/event/2875/>

This event will be co-organised by EGI and e-infrastructures GÉANT, EUDAT, OpenAIRE and RDA Europe, based on a concept led by EGI (Tiziana Ferrari) and GÉANT (Valentino Cavalli).

As of the writing of this report:

- EGI identified the local host (PL-Grid, the Polish representative in the EGI Council) and negotiated the venue and logistic arrangements with them.⁴⁰
- With the partner e-infrastructures, we established a Steering Committee and negotiated the DI 2016 Memorandum of Understanding
- With the partner e-infrastructures, we established a Programme Committee

3.3 Deviations from the plan, remediation and lessons learnt

3.3.1 Case studies

At the start of the EGI-Engage project, the Communications Team had planned to increase the output of case studies, to build on the successes of the published material: a high number of visitors to the case studies section and excellent feedback received by the Case Studies brochure. Unfortunately this was not possible due to lack of manpower and stability in the team (the new Communications Officer started to work only in late October). As with other writing-based activities, the time that needed to be put into identifying good case studies, research the problem, interviewing scientists and finally writing the story, had to be reallocated to time-sensitive tasks, such as the organization of the EGI flagship events. We expect the case study output to normalise during year 2 of EGI-Engage.

3.3.2 Champions programme

The Champions programme designed and implemented during the first months of EGI-Engage was not as effective as hoped: despite the effort to advertise the programme through the channels available to us, we only received four applications. Measures for remediation taken:

- We invited the existing Champions (from the first cohort) to comment on and test the application process. The replies encourage us to believe that the process itself is not a barrier to more applications.
- With the help of the UCST, the programme was frequently advertised to the support teams across the EGI Community.
- The programme is now advertised in a prominent place of the EGI homepage.

Because none of these measures has led to an improvement, we now believe that the problem is one of reach. The Communications Team runs efficient communication channels towards the EGI Community – but not towards end users. It is therefore difficult to spread the word using only the channels available to us. This is an important conclusion and a lesson that has led to a new round of improvements to the programme, described in the section on plans for the future.

3.3.3 Website redesign

The original plan of EGI-Engage Communications did not include effort spent on website (re)design. With the publication of the EGI Strategy 2015-2020⁴¹ in the summer, it became clear that the EGI website is not being used to maximum capacity. The main problems with the current website are: 1) Unfocused content – trying to reach too many audiences and focus on too many messages; 2) Rigid design – unsuitable for browsing on mobile phones, tablets; 3) Old-fashioned structure / navigation – dated and no longer suitable for information discovery.

The Communications task of EGI-Engage, which looks after the communication channels of EGI, is currently working on a plan to renovate the website, which will be described in the section on plans for the future.

⁴⁰ PL-Grid was originally scheduled to co-host the EGI Community Forum 2016, which is now expanded in this new concept.

⁴¹ <http://go.egi.eu/strategy2020>

4 Report on engagement activities

Engaging and supporting new users of EGI are a key activity for the success of the pan-European EGI collaboration. Since March 2015 this activity is coordinated by the WP6 activity of EGI-Engage, with effort for technical consultancy and service development spread across various other WPs, as well EGI-Engage partner projects. The EGI Engagement activity has the following goals:

1. Identify scientific communities that could break current scientific barriers with the use of EGI services and solutions. The main target groups are: Research Infrastructures and FET Flagships, research Collaborations (primarily FP7/H2020 projects), research groups/institutes (the 'long-tail of science'), SME/industry.
2. Reach out to, and carry out discussions with these communities about ICT technologies to understand and capture details of their e-infrastructure use cases and requirements.
3. Help these communities tackle scientific challenges with the use of existing EGI solutions and by new solutions brought into, or developed within EGI as required.
4. Support scientific communities during the whole process they need to go through to become active and self-sufficient users of EGI services and tools.
5. Act as a meeting point for research communities, a community of communities, where information and experiences relating to e-infrastructure application and adaptation can be shared.

This complex activity requires coordinated action of the following EGI members:

- Country/site-specific engagement and user support teams. They are connected to EGI.eu through the NGI International Liaisons (NILs)
- EGI-Engage Competence Centres (WP6, task 3-10)
- Teams providing support for new users (WP6, task 2)
- Established user communities, connected to EGI.eu through the User Community Board (UCB)
- Technology-specific support teams (currently Federated Cloud support).
- Developers of EGI services (participating in technical WPs of EGI-Engage).
- EGI.eu staff members to coordinate the activities and to integrate effort from other projects (e.g. H2020 projects with EGI.eu involvement, projects with MoUs).

Further details about the Engagement process is given in Appendix 1, based on content that was published in June 2015 in the EGI-Engage D2.1 deliverable (Communications, Dissemination and Engagement Strategy). Since June 2015 the engagement activity was implemented based on this strategy, delivering significant results in broadening and deepening EGI's user base within the ERA. Section 4.1 describes those activities that were carried out since May 2015 to implement the engagement strategy in an effective way. Section 4.2 describes the partnerships that this engagement activity resulted for EGI since May 2015.

4.1 Running and improving the Engagement activity

The EGI-Engage project inherited the engagement activity from the previous EGI flagship project, EGI-InSPIRE. The Engagement process was further improved and optimised in EGI-Engage PY1 through the following actions:

- Monthly meetings were organised for members of the Engagement board: NILs, UCB, CC coordinators, EGI.eu staff. (Usually teleconferences and f2f meeting at EGI forums). Changes to the engagement board have been tracked to keep the respective email list and webpage up to date. New members of the board were introduced during monthly meetings.
- A dedicated queue was setup in the RT system to track every engagement case that enters into the Engagement pipeline. Documentation was prepared for user support/engagement teams about how to use the queue. (<http://go.egi.eu/technicalsupportcases>)

- SLA-OLA negotiation process was introduced in autumn 2015. This new activity bridges the Engagement and Operation activities by supporting new communities in expanding their community-specific pilots into full-scale production setups and in the operation of these according to agreed service levels⁴². EGI.eu monitors these SLAs-OLAs. SLA-OLA negotiations started in the second half of 2015. Until now 1 SLA-OLA setup was completed (for the BILS - Swedish Bioinformatics Infrastructure for Life Sciences), and there are 5 SLA-OLA arrangements in the pipeline (DRIHMS hydrometeorology community, MoBRAIN-WeNRM-INSTRUCT research infrastructure community, international nanotechnology community, Terradue SME an ESA spin-off, Human Brain Project).
- Briefings were given by the chair of the Engagement board to the NGI Council and to the OBM about engagement progress during their regular meetings.
- Kickoff platform-specific user support meetings for Federated Cloud user support teams. These meetings bring together representatives of those user support teams that operate cloud sites in EGI, and offer consultancy and support for users with these sites.
 - 14 meetings since March 2015;
 - 18 national user support teams from 12 countries: Czech Republic (CESNET), Croatia (SRCE), France (CNRS), Greece (GRNET, IASA), Hungary (MTA SZTAKI) Italy (INFN Bari, INFN Padova), Macedonia (UKIM), Poland (CYFRONET) Portugal (LIP), Slovakia (IISAS), Spain (BIFI, BSC, CESA, CIEMAT), Sweden(KTH);
 - 26 communities supported since March 2015.
- EGI.eu UCST meetings are organised on a weekly basis and bring together those people who are responsible for Engagement in H2020 projects with EGI.eu participation. (Currently: EGI-Engage, AARC, Indigo-Datacloud, ENVRiplus, EDISON, HelixNebula-ScienceCloud, BioMedBridges).

4.2 Achievements per target group

EGI Engagement needs to establish partnerships with researchers of the ERA. Researchers can be engaged with at different levels. The Engagement Strategy needs to know the specific characteristics of these levels in order to be able to choose suitable and effective engagement approaches and priorities. Over the years EGI recognised the typical 'target groups' for engagement and optimised the outreach, support and development activities for the unique characteristics of these groups.

4.2.1 Research Infrastructures and FET Flagships

EGI provides a world-class e-infrastructure that can support researchers in pushing the frontiers of science, in particular within areas with massive data or computational requirements. In the next two years a growing number of Research Infrastructures (RIs) from the ESFRI roadmap⁴³ and from national roadmaps are expected to reach implementation or operational stage. These RIs as well as the Future and Emerging Technologies (FET) Flagship Initiatives⁴⁴ are already exploring needs of their user communities and thus they are key instruments in bringing together a wide diversity of stakeholders to look for solutions to many of the problems science is facing today. Given their international nature and awareness of the benefits of e-infrastructures the European RIs and Flagships, their preparatory projects, and other similarly large, multinational and structured scientific collaborations are considered as the primary long-term beneficiaries of EGI services and therefore the prime targets for EGI to engage with.

During PY1 the main focus of work in this engagement area was on the setup of the 8 Competence Centres (CC) of WP6. These CCs link to 7 RIs from the ESFRI roadmap: BBMRI, ELIXIR, Instruct, DARIAH, LifeWATCH, EISCAT_3D, EPOS. The CCs bring together scientists, software developers, resource providers sharing the interest

⁴² SLA (Service Level Agreement) is signed with the community, OLA (Operation Level Agreement) with the resource providers.

⁴³ ESFRI roadmap: http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri-roadmap

⁴⁴ FET Flagship Initiatives: <http://cordis.europa.eu/fp7/ict/programme/fet/flagship/>

of support for the respective RIs. During PY1 these CCs reached 9 deliverables and milestones⁴⁵ which are main outcomes of the technical collaborations with the respective RIs. These deliverables/milestones are:

- Production applications integrated with EGI compute and storage services and offered for RI communities. Such deliverables were produced by the LifeWATCH CC in M9 and by DARIAH CC in M11.
- Demonstrators that showcase how community-specific applications can benefit from EGI services. Such deliverables were produced by the MoBrain, LifeWATCH and EISCAT_3D CC in M12 (same time as this report).
- Documents that capture details of scientific use cases and derived e-infrastructure requirements for EGI. Such deliverables were produced by the ELIXIR, BBMRI and EPOS CCs in M12 (same time as this report).

Engagement with RIs and FETs that are not represented in EGI-Engage were implemented through the ‘Technical User Support’ task of EGI-Engage (SA2.2), often in collaboration with partner projects or teams that are unfunded from EGI-Engage within the NGIs. Progress with these RIs are captured in the table below.

Name of RI	Science discipline (2 nd level in the EGI classification scheme ⁴⁶)	Progress in PY1 and achievements so far
GBIF - Global Biodiversity Information Facility	Biological sciences	The GBIF Spanish Node is hosting of open data and portal on the EGI federated cloud. The GBIF Dutch Node proposed a use case for analysis: host their called GBIF Integrated Publishing Toolkits (IPT's) on the EGI Federated Cloud so their partners could perform analysis in large scale. The development is followed up in the LifeWATCH Competence Centre (task SA2.7).
Human Brain Project	Biological sciences	Two use cases have been captured so far in the partnership. One concerning access to federated brain datasets and one about providing Jupiter Notebook environment from VMs hosted in the EGI Federated Cloud. The use cases are currently under implementation. Negotiation of SLA recently started.
eLTER	Biological sciences	eLTER is partner in the ENVRIplus where EGI.eu is also involved. Following an EGI introduction training in November 2015, eLTER became interested in using IaaS cloud services from EGI. A possible joint use case with EUDAT2020 is currently under discussion.
DANUBIUS	Biological sciences	Requested inclusion in the 2016 ESFRI Roadmap. The inclusion was recently granted, so EGI will approach this RI in 2016.
FixO3	Biological sciences	Collaboration started with EGI in the context of the ENVRIplus project in late 2015. (See more info in ENVRIplus section below)
AnaEE	Biological sciences	Collaboration started with EGI in the context of the ENVRIplus project in late 2015. (See more info in ENVRIplus section below)
SeaDataNet	Biological sciences	Collaboration started with EGI in the context of the ENVRIplus project in late 2015. (See more info in ENVRIplus section below)
EATRIS	Clinical medicine	First contact was made by Czech representatives of EATRIS in May 2015 during the EATRIS Conference in Amsterdam. NCI-CZ followed up the discussion since

⁴⁵ [https://wiki.egi.eu/wiki/EGI-Engage:WP6 \(SA2\) Knowledge Commons#Milestones .28M.29_and_Deliverables .28D.29](https://wiki.egi.eu/wiki/EGI-Engage:WP6_(SA2)_Knowledge_Commons#Milestones_.28M.29_and_Deliverables_.28D.29)

⁴⁶ https://wiki.egi.eu/wiki/Scientific_Disciplines

		then and identified potential collaboration to support the EATRIS 'Biomarker Product Platform' ⁴⁷ . Follow-on technical meeting is planned for the next months.
Euro-Argo	Earth sciences	Euro-Argo, EMSO and ICOS submitted a joint use cases to EGI through ENVRIplus. The use case outlines a scientific cloud with a subscription service for scientific users. The setup would provide a regular data flow to scientists from different RIs based on their individual subscriptions.
EMSO	Earth sciences	EGI-Engage started collaboration with the EMSODev project in 2015. EMSO's interest is setting up an Hadoop Cluster using Sahara on top of OpenStack EGI sites. Initial tests have started on the INFN-Bari site. Experiences and next steps will be discussed in a meeting at the end of January.
ACTRIS	Earth sciences	Requested support letter from EGI for the application for inclusion in the 2016 ESFRI Roadmap. Joint activities will start in 2016 depending on the outcome of the ESFRI evaluation.
ICOS	Earth sciences	Partner in ENVRIplus. Interested in using Docker-ised Linux based VMs on EGI and couple this as a compute service to input & output data storage in B2SAFE. Possible joint use case with EUDAT2020 and with EMSO and Euro-Argo.
ENES / IS-ENES2	Earth sciences	Collaboration started with EGI in the context of AAI through the ENVRIplus project in late 2015. (See more info in ENVRIplus section below)
ELI	Physical sciences	ELI-trans project with H2020 started recently. EGI.eu and member of the Romanian NGI are involved in the consortium. Technical activities will start in 2016.
WLCG (testing of Federated Cloud)	Physical sciences	Representatives of the ATLAS/CMS/LHCb communities started experimenting the usage of the EGI Federated Cloud in May 2015. Meeting about their experiences will be discussed at a meeting in early February.
Km3Net	Physical sciences	The collaboration started in 2014 but because of other priorities no progress was made during EGI-Engage PY1. EGI.eu will delegate responsibility of this engagement case to those NGIs where Km3Net has strong footprint.
AUGER	Physical sciences	During the collaboration two different application: CORSIKA and OFFLINE have been successfully integrated in the EGI Federated Cloud Infrastructure. Based on this experience the community is discussing how to best exploit the EGI FedCloud resources.
LOFAR and SKA	Physical sciences	In the second half of 2015 LOFAR and SKA with EGI started discussing possibilities for joint adoption of cloud services. The technical details of a possible setup are emerging from these discussions and will be analysed by EGI members in PY2. In parallel with this, guidance was provided to the Scuola Normale Superiore (Pisa) Cosmology group who collaborate with SKA and are interested in accessing cloud resources from EGI.
CLARIN	Languages and literature	EGI acted as a broker of cloud services for hosting of the CLARIN 'Virtual Language Observatory' service

⁴⁷ <http://www.eatris.eu/platforms/biomarkers.html>

(VLO). CLARIN chose the CESNET cloud site from EGI for this, and during 2015 successfully setup VLO as a production service on the site. CESNET and CLARIN signed an SLA for the operation of the service.

Research Collaborations

A second target group for EGI Engagement is the large number of highly dynamic, small/medium size research collaborations, software developer communities, research networks. These are often represented by FP7 or H2020 projects at the European scale, and by similar-size national projects at the national scale. Unlike RIs and Flagships, these groups may scarcely, or not be aware of e-infrastructures and their benefits to science, so discussions have to start at a more basic level. The below table provides details of the technical collaborations that EGI-Engage built in PY1.

Name of collaboration/project	of Science discipline (2 nd level in the EGI classification scheme ⁴⁸)	Progress in PY1 and achievements so far
BILS Bioinformatics Infrastructure for Life Sciences) (Swedish)	Biological sciences	SLA and OLAs have been signed ⁴⁹ for BILS in 2015, making cloud resources available for the community through the vo.nbis.se Virtual Organisation. Monitoring of community activity will be done by EGI Operations.
Chipster community	software Biological sciences	Chipster is a user-friendly analysis software for high-throughput data developed by CSC, the Finnish IT Center for Science and ELIXIR node. Chipster moved to production in 2015 after successful conclusion of the prototyping phase at INFN-Bari. During 2015 training materials have been developed about the setup. Two tutorials were delivered in 2015, and one is planned at CSC in 2016 during an ELIXIR workshop. During PY2 the tools is planned to be integrated into the EGI Platform for the long-tail of science to broaden its user base.
PhenoMeNal H2020 project	Biological sciences	The project started in early 2015 with the aim of setting up a sustainable e-infrastructure for the processing, analysis and mining of molecular phenotyping and genotyping data to be generated by metabolomics applications. The project is coordinated by EMBL-EBI. A meeting took place with EBI and EGI representatives where the initial requirements for e-infrastructure have been captured. EBI – with contributions from EGI and other e-infrastructures – is currently working on the setup of the ELIXIR Compute Platform. This platform is expected to serve as the underlying system of the PhenoMeNal infrastructure.
ICGC’s PanCancer Analysis of Whole Genomes consortium	Biological sciences	The community expressed interest in using pay-for-use resources from EGI for cancer genome analysis. Interest were collected from resource providers and published on the ICGC website for their community members. The community did not start active use of this capacity yet.
transPLANT FP7 project →	Biological sciences	During 2015 the transPLANT gateway was connected

⁴⁸ https://wiki.egi.eu/wiki/Scientific_Disciplines

⁴⁹ BILS SLA and OLAs: <https://documents.egi.eu/document/2701>

MultiscaleCompexGenomics H2020 project		to EGI Federated Cloud (fedcloud.egi.eu VO) and is offered to ELIXIR setup as part of the INB Cloud. The transPLANT project finished in November 2015, with Excellent mark. The interaction with EGI was a plus towards sustainability. The extension/further development of the transPLANT portal will continue in the recently started MultiscaleCompexGenomics H2020 project. User requirements are collected concerning the service at the moment.
DRIHM FP7 VRE project	Earth sciences	During 2015 the DRIHMS community started an SLA-OLA negotiation with EGI. Cloud and HTC resource providers have been identified and EGI.eu is currently finalising the SLA-OLA documents with the community and with providers.
EXTRAS FP7 project	Physical sciences	The project asked for support to access HTC and cloud resources in EGI. EGI.eu granted access through the fedcloud.egi.eu VO. The community started experimentation on the sites to harvest the hitherto unexplored temporal domain information buried in the serendipitous data.
CERN@School	Physical sciences	This partner used EGI resources in the past, but recent usage was zero. The future of the collaboration will be discussed with the customer.
InnoVine FP7 project	Agriculture	The project contacted EGI recently and requested access to cloud resources. A Skype call was arranged to discuss details of the use case and requirements for resources. Identification and invitation of suitable resource providers and support teams is on-going.
Nanoscience technologies community	Nano-technology	Technical requirements for accessing HPC/HTC sites with MPI support in EGI have been captured. EGI.eu identified suitable HTC resources and the community is testing the performance of their Quantum Chemistry/Monte Carlo codes on these sites. We will move forward to a dedicated VO and SLA-OLAs based on the outcome of these tests.

4.2.2 Long tail of science

The long-tail of science refers to the large number of individual researchers and small laboratories who are scattered across Europe which do not have access to computational resources and online services to manage and analyse large amount of data. The Long-tail is almost invisible and most of its members lack the technical know-how and expertise in using e-Infrastructures. During PY1 the project reached out to this community in two ways:

1. In the SA3.1 activity developed a new European e-Infrastructure platform to simplify access to grid, cloud, storage and application services. The platform reached demonstrator level in November 2015 and won the best demo prize in the EGI Community Forum in Bari. Feedback for finalisation was captured during the event. The platform is currently finalised and will be released for early adopter NGIs in early PY2. The D5.2 deliverable (due at the same time as this D2.8) provides details about this new platform.
2. Several long-tail users and use cases were supported by country or software specific teams. Not all of these are tracked in RT, because the majority of the long-tail users are served at the site level, without the need for involving the NGI or EGI.eu.

4.2.3 ENVRIplus

ENVRIplus⁵⁰, is a 4-year H2020 project, started from May 2015, and obtained 15M Euro EC contributions. ENVRIplus brings together 21 important European Environmental and Earth System Research Infrastructures, projects and networks, together with technical specialist partners, to create a more coherent interdisciplinary and interoperable cluster of Environmental Research Infrastructure across Europe. EGI.eu is member of ENVRIplus and actively engages with RIs involved in the project. So far, EGI has

1. Established new collaboration with 5 ENVRIplus research infrastructure communities: Euro-Argo⁵¹, EMSO⁵², ICOS⁵³, and FixO3⁵⁴, AnaEE⁵⁵. The collaborations aim at the setup of community-specific infrastructures or infrastructure demonstrators based on the EGI federated cloud.
2. Captured use cases for AAI from SeaDataNet⁵⁶, ICOS, FixO3 and IS-ENES2⁵⁷.
3. Strengthened exiting collaborations with EISCAT_3D⁵⁸, ELIXIR⁵⁹, EPOS⁶⁰, and LifeWatch⁶¹.
4. SIOS⁶², IAGOS⁶³ and INTERACT⁶⁴, showed early interest in adopting EGI services for some of their use cases.

These established leads will be followed-up in collaboration with ENVRIplus during EGI-Engage PY2. EGI-Engage effort will complement the ENVRIplus activities with technical development work that are required for the specification and implementation of community-specific EGI-based systems.

4.2.4 INDIGO-DataCloud

INDIGO-DataCloud⁶⁵, (INDIGO in short), is a H2020 project, Apr 2015-Oct 2017, and obtained 11M Euro to develop a data and computing platform, targeting various scientific communities and deployable on hybrid (private or public) Cloud infrastructures. 11 scientific research communities participating in INDIGO representing different domains of scientific communities: Life Sciences (ELIXIR, INSTRUCT/WeNMR, EuroBioImaging); Physical sciences and Astronomy (CTA, LBT, WLCG); Social Science & Humanities (DARIAH, DCH-RP); and Environmental Science (LifeWATCH, EMSO, ENES). EGI.eu participates the project and leads the requirements collection and software exploitation tasks. Besides the requirements collected from the INDIGO communities, EGI also ensures that requirements collected from other communities are also taken into consideration during the design and implementation of INDIGO solutions.

4.2.5 EUDAT2020

The EGI-EUDAT collaboration aims at providing tools for the harmonised use of the two infrastructures for research communities. The work started in March 2015 with the involvement of user communities who already collaborate with both infrastructures: Earth Science (EPOS and ICOS), Bioinformatics (BBMRI and ELIXIR) and Space Physics (EISCAT-3D).

⁵⁰ <http://www.envriplus.eu/>

⁵¹ Euro-Argo, <http://www.euro-argo.eu/>, an ESFRI Research Infrastructure for open sea observations

⁵² EMSO, <http://www.emso-eu.org/>, an ESFRI Research Infrastructure for seafloor and water-column observations

⁵³ ICOS, <https://www.icos-ri.eu/>, an ESFRI Research Infrastructure for greenhouse observation

⁵⁴ FIXO3, <http://www.fixo3.eu/>, a FP7 project for fixed point open ocean observations

⁵⁵ AnaEE, <http://www.anaee.com/>, an ESFRI Research Infrastructure for experimental manipulation of managed and unmanaged terrestrial and aquatic ecosystems.

⁵⁶ SeaDataNet, <http://www.seadatanet.org/>, a pan-European infrastructure for high quality ocean and marine data access.

⁵⁷ IS-ENES2, <https://is.enes.org/>, infrastructure for the European network of earth system modeling.

⁵⁸ EISCAT 3D, <http://blog.eiscat3d.org/>, an ESFRI Research Infrastructure for upper space atmosphere observations.

⁵⁹ ELIXIR, <https://www.elixir-europe.org/>, an ESFRI Research Infrastructure for life-science and biological informations.

⁶⁰ EPOS, <http://www.epos-eu.org/>, an ESFRI Research Infrastructure for earthquakes and volcanoes observations.

⁶¹ LifeWatch, <http://www.lifewatch.eu/>, an ESFRI Research Infrastructure for biodiversity and ecosystem research.

⁶² SIOS, <http://www.sios-svalbard.org/>, an ESFRI Research Infrastructure for Arctic Earth science observation

⁶³ IAGOS, <http://www.iagos.org/>, an ESFRI Research Infrastructure for long-term observation of atmospheric composition, aerosol and cloud particles on a global scale from commercial aircraft of internationally operating airlines.

⁶⁴ INTERACT, <http://www.eu-interact.org/>, is an infrastructure project to build capacity for research and monitoring in the European Arctic and beyond.

⁶⁵ <https://www.indigo-datacloud.eu/>

The first outcome of this activity was the definition of a generic use case that captures the typical user scenario with respect to the integrated use of the EGI and EUDAT infrastructures. This generic use case allows a user to instantiate a set of Virtual Machine images on the EGI Federated Cloud to perform computational jobs that analyse data previously stored on EUDAT long-term storage systems. The results of such analysis can be staged back to EUDAT storages, and if needed, allocated with Permanent identifiers (PIDs) for future use. The implementation of this generic use case requires the harmonisation of the user authentication and authorisation models, and new tools to connect the relevant EGI and EUDAT services (particularly EGI Cloud compute facilities and EUDAT long-term storage and PID systems).

A first implementation of the universal use case was demonstrated at the EGI Community Forum 2016 (Bari, IT). Based on the feedback gathered during the demo the teams have started bringing the tools towards a production setup.

4.2.6 AARC

The EC-funded AARC project started in May 2015 as collaboration among e-Infrastructures, NRENs, and other service providers, including various user communities and libraries. EGI is represented in the consortium by EGI.eu and several other partners of the EGI federation.

One of the goals of AARC is to deliver the design of an integrated and interoperable framework for Federated Authentication and Authorisation Infrastructures (AAI), which meet the needs of the Research Infrastructures and e-Infrastructures across Europe and beyond. During the first months of the project, AARC members have been discussing requirements with the communities and the infrastructures, in terms of capabilities, blocking issues, and training requests. The first 6 months of the project AARC collected requirements from the main stakeholders, through surveys and interviews: BioVeL, DARIAH, EISCAT, WLCG, EPOS, Photon and Neutron community (Umbrella), ELIXIR, CLARIN, EGI, EUDAT, D4Science, PSNC, FMI, Libraries and education.

AARC for the end of PY1/beginning of PY2 is developing the first version of the architecture blueprint which defines the main building blocks of the AAI infrastructure, and to further deploy pilots to address the use cases collected so far. AARC will also start providing trainings to some target communities, starting with DARIAH and ELIXIR. This will be based on first AARC training module: Federation 101, which was produced in PY1.

4.2.7 Report on national engagement activities

A detailed overview of the national engagement activities is provided in Appendix VI.

4.2.8 SMEs and industry: Individual Partners work

EGI.eu

As activity leader, EGI.eu organises regular phone meetings, chairs discussions, tracks actions and steers the direction of activities. It established contact with all partner, set-up all mailing lists, project management tools (e.g. wiki), and definition the activity metrics. In addition, during the first 12 months of EGI-Engage, the main achievements can be summarised as:

Reports

- Main author of D2.2 – Master Model for SME Engagement

EGI Conference (May 2015)

- Business track leader organising overall content and speaker liaison (5 sessions over 2 days including chairing summary and wrap-up session to extract key action points).
- Prepared and presented a dedicated talk opening the business track on the “EGI Business Engagement Programme) including a post-event summary article on the EGI Blog.

EGI Community Forum in Bari (Nov 2015)

- Responsible for the overall organisation of the 2-hr session on “Innovating with SMEs and Industry”, which comprised agenda/topic development, speaker liaison and publishing all information in Indico. Prepared and presented “EGI Business Development” and chaired the session including the panel led discussion (with questions prepared in advance).
- Presented “Procurement in EGI & CERN Cloud Market Survey Feedback” in the “Cross-border service procurement”, which required the preparation of the survey that was ran through the EGI Pay-for-Use list and analysed the results.
- Supported the organisation of the “Data without borders” session as part of EGI-Engage NA2.3 – Market analysis activities.
- Represented EGI within the “Demand Of Data Science Skills & Competences” organised by the EDISON project through a completely new presentation prepared called “Demand from e-Infrastructures”.

Direct Engagement with Industry

- Dedicated meetings: Arctur, Altec, Big Data Europe, CloudSME, Engineering, FIWARE, ITEMO, Mathworks, Strategic Blue, Luna Technologies, Dropbox, Zenotech
- Agreement established with UberCloud, an SME (with offices in the US and Germany) has a Marketplace of services and a network of 4000 SMEs. They support the interaction between providers and users and provide consultancy for the identification or creation of “containers”, which are pre-packaged services and applications that can be easily ported
- Terradue SME (a spin-off of ESA) - SLA-OLA negotiation for cloud resources has recently started. The INFN-BARI cloud site is already configured to support their 2 Virtual Organisations, and testing of these is ongoing.

Other Events/Meeting attended

- FIWARE Workshop – Rome, Italy (Mar)
 - Participated in this event on behalf of EGI, which led to developing relations with FIWARE on a number of fronts, created a contact with Telecom Italia and networking led to EGI being invited in an ESA stimulus project through Thales (€6,500).
- Net Futures 2015 – Brussels, Belgium (Mar)
 - Part of this event was in support of the CloudWATCH project, however networking led to business contacts such as Strategic Blue, FIWARE follow-up, venture capitalists and cluster projects in support of EGI-Engage SME engagement activities.
- Telecom Italia Meeting – Rome, Italy (Aug)
 - As follow-up to the contact from the FIWARE Workshop, we met with Telecom Italia at their offices in Rome to discuss how to incorporate EGI as part of FIWARE sustainability and other collaboration opportunities.
- Cloud Forward Conference – Pisa, Italy (Oct)
 - Organised an EGI FedCloud paper submission and presentation of the EGI FedCloud, as well as EGI Sponsorship of the event. Given the location, this was an opportunity to promote the EGI FedCloud, specifically with the cluster project.

CNRS

CNRS maintained the previously established contacts and took advantage of the JRES conference⁶⁶ in December to establish new contacts with SMEs present on the exhibition part of the conference. The result is that four SMEs out of the list of exhibitors contacted could be of interest for the EGI community. Each contact is described in a dedicated RT ticket. Reports on the encountered difficulties in this work were provided to the partners in order to improve the documents and the web site information available for the industry.

IICT-BAS

⁶⁶ <https://www.jres.org/en/programme>

IICT-BAS based its work on the established contacts from SMEs, which were added to the EGI database. One of these SMEs has been more active and established collaboration between several European SMEs and academic partners. Access to IICT-BAS resources was provided and work started on the testing and pre-production deployment of the envisaged system for processing of real-time mobile data for analytics and management purposes. After assessing the resource requirements of this pilot run at its full capacity it is expected that, a full production run will need to use EGI FedCloud resources. Further details are available in EGI requirements tracking tool and will be the foundation for formally advancing activities with EGI's technical support teams.

Due to the introduction of the new computing facility of IICT-BAS, contacts were established at a higher level with IT industry representatives and with the recently opened Sofia TechPark. EGI-Engage was presented at an event "113th European Study Group with Industry, 7-13 September 2015", where concrete interest in the EGI e-GRANT platform was expressed. Follow-up is planned in order to analyse their requirements on GPU resources. The company contacts have been entered in the contact database.

IICT-BAS also contributed with feedback to the first version of the platform and in the other topics discussed at the regular teleconferences.

GRNET

GRNET continued its active participation in the regular phone conferences of this activity and implemented all the allocated action items that are tracked via an internal Google Doc as formal minutes of each meeting and has started to gather a list of current and potential companies as potential collaborations for EGI. GRNET actively contributed to the organisation of the Business track of the EGI Conference (May 2015) and the EGI Community Forum in Bari (Nov 2015).

SwiNG

To help provide input from the perspective of industry into the project, the Friedrich Miescher Institute for Biomedical Research has been involved as it is funded by Novartis and can provide an industry perspective on activities. Also, SwiNG is leading the EGI-Engage marketplace activity and has been reaching out to commercial companies as well as academic and non-profit resource providers. Various academic resource providers will offer resources to SMEs (e.g. Institut Curie, ETHZ) and as well Thermo Fisher has initiated the process to join the activity where they will advertise their services of interest to researchers. Dropbox has also expressed interest in joining the marketplace and developed a special offering for participants within EGI.

IFCA-CSIC

IFCA-CSIC has continued and extended the collaboration with SMEs related to exploitation of Big Data that started in EGI-InSPIRE. The work with ECOHYDROS SL using the implementation on a Federated Cloud machine of the DELFT3D Water quality module has entered in production, and is in use regularly for the work of a team of 5 people in the SME. Different problems have been traced, some related to the large output of the program (around 30 GB for each scenario simulation, that takes around 3-5h), some need to explore a large number of model parameters (the total number is around 300), so we are designing a strategy to address this issue. IFCA-CSIC is about to conclude the migration of TRUFA to the Cloud, so it can be deployed in other sites. Over the last 6 months, IFCA-CSIC also collaborated with AEONIUM, ISOTROL, VIAVANSI and ADEVICE, to prepare a new portal to support the full data cycle. We will have a first operative pilot for April (with open data from the work in the water reservoir with the SME ECOHYDROS).

Another NGI partner, BIFI, has participated in the Spanish Big Data initiative⁶⁷ led by the ICT platform (PLANETIC), and supported by the rest of the technical platforms (e.g., health, agri-food, logistics), where many SMEs are involved. BIFI promoted the participation of other research centres (CESGA, IFCA, UPV, IAC). Currently, the initiative is compiling information about the infrastructure of these centres available for industrial use with the goal of, jointly with the information requested about industrial needs, influence in the national policies around Big Data for industry, SMEs included.

⁶⁷ <http://planetec.es/iniciativa-big-data-2015>

CSC

After some discussions with SMEs and collection of requirements CSC made a contract on using HPC IaaS cloud service with Fimmic Oy⁶⁸, a start-up company based on the research done at the University of Helsinki. The Software as a Service (WebMicroscopy) of Fimmic is for virtual microscopy for pathological images. Due to the fact that the microscopy images can be terabyte scale and demand matrix operations, and in the future will use classification algorithms, there is need for efficient cloud service including computing, storage and network. Under Fimmic contract, CSC offered a trial period for cloud service evaluation. This demonstrated to be valuable for trust building. WebMicroscopy software runs on Windows Server and therefore CSC had to acquire the commercial data centre license for a server. CSC's cloud is used also for agricultural science, called CSCJuga, where an SME is doing the administration of the operating system and operates their bioscience software on the virtual machine for the scientists. In this case, the researchers pay for the work and licensing for the SME, but do not have to pay CSC for the resources since the research project can be applied by the university researchers free of charge. The CSC press release on the CSCJuga cloud service for agricultural science was published on Feb 2015⁶⁹.

INFN

The INFN contribution to the SME engagement activity has been mainly related and included in the activity of the Open City Platform (OCP) project⁷⁰. OCP is a research project funded in the SCN "National Smart Cities" call, aiming at developing and implementing new open software and interoperable solutions in the area of Cloud Computing applied to local and regional Public Administrations, e-government and Small and Medium Enterprises. In this project, we established collaboration between several SMEs and we will investigate their interest in the EGI FedCloud and eventually the pay-per-use service. Moreover, we are defining several contacts with SMEs in the Emilia Romagna Region, being part of the Regional High Technology Network a network among universities, public research institutions and enterprises. INFN is founding stakeholder of an association called Smart Cities and Smart Communities⁷¹ and we will investigate the stakeholders' interest in the EGI FedCloud services.

4.3 Summary of achievements and lessons learnt

During the first project year good progress was made in establishing technical collaboration with new communities. The most impactful achievement in this respect is the setup of the WP6 tasks which includes 8 Competence Centres (CCs) linked to 8 Research Infrastructure/community. The two other tasks of WP6 (6.1 Training and 6.2 Technical user support) helped EGI deepen existing collaborations and establish collaborations with new communities. These WP6 activities altogether produced 9 technical deliverables/milestones, established training and support materials about the EGI Federated Cloud solution.

A new process – SLA-OLA negotiation, co-funded by EGI-Engage – was introduced during PY1 in EGI. The process supports communities in accessing dedicated resources with agreed operational agreements from EGI. Such SLA-OLA was setup for the BILS - Swedish Bioinformatics Infrastructure for Life Sciences), and close to finalisation for the DRIHMS hydrometeorology community, MoBRAIN-WeNRM-INSTRUCT research infrastructure community, international nanotechnology community, Terradue SME an ESA spin-off and the Human Brain Project.

The EGI Engagement activity initiated and pushed forward technical collaboration with 27 RIs/FETs, 11 projects/communities and numerous 'long-tail users' (some representing institutes, some research labs, or individual scientists) during EGI-Engage PY1. The spread of the 38 RI-FET-community engagement cases (27+11) of PY1 across science disciplines is the following:

⁶⁸ <http://www.fimmic.com>

⁶⁹ <https://www.csc.fi/-/bc-platforms-ja-csc-kehittivat-supertehokkaan-palvelun-genomitiedon-hallintaan>

⁷⁰ <http://www.opencityplatform.eu/>

⁷¹ <http://www.smartcitiesandsmartcommunities.it>

- Biological and medical sciences (incl. biodiversity, ecosystems): 47.4% (18/38)
- Earth sciences: 21% (8/38)
- Physics (incl. astro, particle, laser, etc.): 21.2% (8/38)
- Digital humanities (incl. languages): 5.2% (2/38)
- Agriculture: 2.6% (1/38)
- Nanotechnology: 2.6% (1/38)

The Engagement activity successfully established a tool within RT to track all these engagement cases at the EGI community level – from the first contact until the respective communities are handed over for EGI Operations for production support.

Despite the national engagement activities are unfunded in EGI-Engage, given the prime importance for the project to grow the uptake of EGI services within new communities, these national aspects cannot be ignored. During the first year the NGIs seemed to become less active in joining the monthly Engagement meetings, and often also in organising engagement activities at the country level. The introduction of bi-weekly Federated Cloud user support meetings improved NGIs' (practically cloud site) participation in user engagement. Because most of the new support/request cases seem to relate to the EGI Federated Cloud solution, the introduction of solution-specific engagement network was a good decision and we will need to continue building capacity and knowledge within the NGIs in the Federated Cloud area. Also we should consider doing the same for the Federated Open Data solution as soon as it becomes available from the JRA2.2 activity in PY2.

While the interest for the EGI federated cloud infrastructure is undoubtedly growing within the ERA, accessing multiple clouds within a federation remains relevant only to large and mature communities, such as ELIXIR and EPOS, who expect the adoption of the EGI technology to establish their own federated infrastructure. Smaller and less developed communities want to access 'a cloud' and for their use cases the distributed nature of the EGI cloud infrastructure brings unnecessary complexity rather than benefit. To remain attractive for the 'single-site' use cases the project should support the EGI resource providers in scaling up their cloud sites, and federating more large sites into the infrastructure.

Another clearly identifiable trend in cloud usage is the growing need for containers (typically Docker) in the EGI cloud. The project (in SA2.2) already started the development of guidelines⁷² to satisfy such use cases. This activity needs to continue and produce new training module/exercises (SA2.1), user guides and reusable tools (e.g. scripts, code snippets).

Regarding SME engagement, over the last year, efforts have been on formalising a business engagement programme that outlines the areas and benefits for collaboration. Through the collective efforts of each partner, there are currently more than 50 private organisation in a dedicated contact database that range from SMEs to large enterprises in role such as technology providers, brokers and consumers. Two formal collaboration agreements have also been established (Terradue, UberCloud). Towards the end of the project year, work has been on better documenting the current or potential use case within the EGI requirements tracker tool in order to feed discussions into EGI technical support teams. The challenge is to ensure that all opportunities are analysed and selected based on the best return on investment, as we are fully aware resources are not infinite.

⁷² https://wiki.egi.eu/wiki/Federated_Cloud_user_support#Docker_containers

5 Plans for the second period

5.1 Communications

The communications objectives of EGI-Engage are⁷³:

- **Corporate image:** maintain the EGI brand.
- **Internal communications:** manage the EGI communications channels (e.g.: website, director's letters, newsletter, blog, newsfeed), to strengthen the EGI-Engage community and maximise both cooperation and synergies. Ensure that the members of the project are aware of what the rest of the team is doing.
- **External communications:** support the Engagement and Dissemination activities through the project's communication channels. The communications' contribution to these activities is also described in the Engagement and Dissemination chapters.
- **Events:** organise the EGI-Engage events, where stakeholders can meet with other actors in the e-Infrastructure landscape.

During the first year of EGI-Engage, despite the issues raised in chapter 2, the communications task proceeded well and we have no reason to consider a radical change in the communications strategy.

5.1.1 Corporate image

We plan to maintain and reinforce the EGI corporate image and brand by:

- Developing new banners, posters and presentations for use at events
- Developing an integrated Social Media strategy
- Developing a new online presence through a redesign of the website (see also below)

5.1.2 Internal and external communications

We plan to adapt and use the EGI communication channels as follows:

5.1.2.1 Website

We plan a complete redesign of the website, taking into account the following directives:

Aims of the website

- Showcase / focus on the service and solution offer
- Establish EGI as a leading data and computing e-infrastructure for science
- Increase service awareness
- Give visibility to the stakeholders (e.g. news about NGIs)

Target audiences

- The EGI community: stakeholders and everyone associated with them from users to policy makers
- Prospective users: both individual and representatives of e-infrastructure, research and science

Design goals

- Needs to be modernised, with a fresh look & feel
- Needs to keep the logo and colour scheme
- Needs to be usable and readable from mobile devices.

Content goals

⁷³ D2.1 – Communications, Dissemination and Engagement strategy

- Separate the About EGI / corporate area (of interest to the EGI Community) from the Main area of the website, about the service offer (of interest to prospective users)
- Remove detailed and technical content / information to the EGI Wiki space
- Create a dedicated area to disseminate the Impact of EGI in policy, science, society

5.1.2.2 Other communication channels

During year two of EGI-Engage, we plan to:

- Publish regular news items on the news feed (at least 30)
- Encourage the team and the community to post their thoughts on the EGI Blog
- Publish four issues of *Inspired* and maintain the levels of readership
- Publish new case studies on the website (at least 10), in particular case studies that are also use cases of a specific tool and/or platform that can be used for general and technical dissemination purposes
- Publish a brochure on the Impact of EGI, in partnership with the Strategy & Policy team
- Maintain a dynamic publications portfolio
- Involve members of the community, as much and when possible, in all activities mentioned above to guarantee high levels of engagement

5.1.3 Events

Up to February 2017, we aim to:

- Successfully organise the EGI Conference 2016 in Amsterdam (April)
- Successfully co-organise the Digital Infrastructures 2016 (name TBC) event in Kraków (September) in cooperation with other e-infrastructures and sister projects: EUDAT, GÉANT, RDA and OpenAIRE
- Identify a local host and start the necessary logistical arrangements for the organisation of the EGI Conference 2017
- Support the Training and Outreach activities of the project's technical teams, by coordinating the organisation/logistics of their presence at external and internal events

5.1.4 Champions programme

Based on the experience accumulated in year 1 and lessons learnt, we plan to reinvigorate the Champions programme by coordinating this activity with the technical teams:

- **SA2.** SA2, through the Competence Centres, has access to either end users or the people that directly support them. They are able to identify who is using services developed by, with and for the Competence Centres, that is, the individuals with the best credentials to become ambassadors of EGI in their field. With this in mind, we plan to recruit at least one Champion per each Competence Centre
- **VO managers.** In year 1 we limited our communications efforts to our contacts in the NGIs. For the next period, we will contact directly the managers of highly active VOs and ask them to disseminate the programme through their users.

5.2 Engagement

The Engagement activity progressed quickly and in the right direction during PY1. There is no need for radical change in the strategy and based on the lessons that were learnt in PY1 the activity can be fine-tuned to increase efficiency. The following activities will be carried out in PY2 in the engagement area:

- The project will continue using the RT system, the Engagement Board for the tracking and implementation of the Engagement cases. Both EGI-Engage and its partner projects (ENVRplus, AARC, ...) will be more mature and ready for external collaborations in PY2. We will need to build on this capacity, intensify and at the same time focus our work with them.

- PY2 will be critical for the CCs, because they will start demonstrating/presenting the developed community-specific, EGI-based applications for their respective RI communities. The engagement activity need to ensure that feedback is captured from these demos/presentations and then collected and assessed at the EGI level, making sure that the applications and/or the underlying EGI services are updated accordingly. Appendix II provides a list of upcoming events that the CCs will organise/contribute to.
- To maximise the impact of the engagement activities under the currently available effort level, the following priorities will be followed for engagement cases:
 - High priority will be given to cases that can result in active usage of the EGI cloud infrastructure in the short term (within 12 months). This can be achieved if support is focussed on use cases that already have committed user communities behind them. The HBP Jupiter Notebooks and the SCIPION software of the MoBrain CC are good examples of this.
 - High priority support will be given also to use cases that would result large and long-term user base on EGI. The mature RIs (e.g. those with ERIC and/or in operational phase) bring such cases. A new ESFRI roadmap will be published in 2016. The roadmap will help EGI focus RI engagement activities and start new collaborations with new ESFRI members (e.g. DANUBIUS).
- The project will continue building capacity and expertise within the NGIs for user support in the EGI Federated Cloud. This can be achieved with the development of new training materials for the NGIs and by organising ‘training the supporters’ events for NGI support teams. The upcoming EGI-Engage M6.5 milestone document (Joint training programme for the second period) will provide details about these.
- The Open Data Platform will be established in PY2 by the JRA2.2 task. The project will roll this out into production and the engagement activity will need to build capacity within the NGI user support teams to support users with this solution. New training materials and courses will be delivered to achieve this goal.
- The project will continue monitoring the websites, newsletters, RSS feeds of those projects and RIs that are in the engagement pipeline, or are candidates for engagement. We will seek for meetings where EGI could strengthen community-specific engagement and dissemination activities. The recently started H2020 VRE projects are top priority targets for new engagement activities. Contact will be established with these in the first half of PY2. The activity will pro-actively engage with the following, already identified prospective new user/customer communities:
 - OpenMinTed H2020 project – Creation of an infrastructure that fosters and facilitates the use of text and data mining technologies in various disciplines. → Possibly related to DARIAH CC activities.
 - OpenDreamKit H2020 VRE project – Integrate DBs, SW and services with Jupyter Notebook into a VRE for mathematics. → Possibly related to the Jupyter Notebook use case of HBP.
 - EVER-EST H2020 VRE project – Will provide a generic Service Oriented-based Architecture Virtual Research Environment (VRE) tailored to the needs of the ES community. → Related to EPOS CC activities.
 - Bluebridge H2020 project – will contribute to the e-infrastructure commons with services relevant for data actors, competent agencies and SMEs. → Related to EGI SME engagement activities.
 - EarthServer2 H2020 project – provide tools for agile data analytics on big earth data cubes, particularly for COPERNICUS/Sentinel data. → Relevant for EPOS CC and other engagement use cases with work on COPERNICUS/Sentinel data.
 - MuG HPC CoE H2020 project – tools and infrastructures for genomics. → Possible integration of MuG with the NGS VO and tools of EGI.
 - READ H2020 VRE project - set up a VRE for the transcription, recognition and searching of handwritten archival documents. → Possible synergies with the DARIAH CC activity.
- The integration of engagement and operation activities through the SLA-OLA negotiation will continue, and need to find better ways in reaching relevant resource providers to be able to setup OLAs/SLAs more quickly than in 2015.
- SME engagement:
 - Continue regular telcos about SME Engagement by EGI-Engage NA2
 - Turn already identified opportunities into new H2020 projects, jointly run with SMEs

- Development of ‘SME engagement’ support materials for NGIs
- Complete the integration of SME engagement cases into the Engagement process through RT queue

5.2.1 Individual partner work plans

EGI.eu

- Continue to actively manage the SME engagement activity.
- Advance initial meetings with several companies towards meaningful service development and/or delivery.
- Produce dedicated brochure for industry engagement with the communications team.
- Improve industry engagement related webpages as the new website comes online.
- Support the collation of a business FAQ.

IICT-BAS

- Disseminate the possibilities for SME/Industry use of EGI services at upcoming high-profile events related to the official opening of the new datacentre at IICT-BAS.
- Focus on the possibilities for real-time data processing using advanced hardware, software and services.
- Establish new partnerships with IT companies of medium and large size in order to facilitate the industry involvement in our research activities related to EGI.
- Organize training for SMEs, devoted to the distributed data processing.

CNRS

- Contribute to the documents and the web site information available for the industry ‘SME engagement’ support materials for NGIs.
- Disseminate EGI possibilities and services for SMEs.
- Continue interaction with the SMEs previously contacted and try to establish collaborations.

GRNET

- Contribute to all relative activities
- Devise a plan to attract SMEs through LDA Athens Project and other related GRNET activities.
- GRNET recently developed the following services and is planning to advertise them to SMEs that could be interested:
 - Lambda (λ) on Demand service⁷⁴
 - GRNET eScience (codename orka), a cloud-based integrated service platform for big data analytics⁷⁵
 - Sentinel Image Processing Toolbox⁷⁶

CSIC

- Setup an easier to sustain framework to collaborate with other SMEs that are interested in testing how the Cloud, and in particular FedCloud, could help them.
- BIFI is organising the launching of CESAR (Centre of Supercomputing of Aragon) funded with 2 M € (1,5 M € for HPC and Grid & Cloud computing) from FEDER funds. As this centre will provide computing resources not only to researchers but also industry, BIFI has organised a internal session where the 30 main companies of Aragon have been invited in order to explain the main benefits of using this infrastructure. The session will take place the 9th of February in the Government of Aragon dependencies. The public launching of CESAR will take the 2nd of March and it’s expected to have wide impact in the region concerning press and media.

⁷⁴ <https://lambda.grnet.gr>

⁷⁵ <https://escience.grnet.gr/#/homepage>

⁷⁶ <https://sentinels.space.noa.gr/toolbox.php>

SwiNG

- Continue to add partners to the marketplace platform to add additional academic partners to offer services to SMEs as well as commercial solutions of interest to researchers. This will allow SMEs to have access to cutting edge solutions as well academic institutions to have access to commodity solutions, which then allows both focus energies into innovative areas instead of re-establishing existing solutions.

INFN

- Continue regular telcos about this by EGI-Engage NA2
- Turn already identified opportunities into new H2020 projects, jointly run with SMEs
- Development of 'SME engagement' support materials for NGIs
- Complete the integration of SME engagement cases into the Engagement process through RT queue
- Continue to work through the Open City Platform (OCP) project, with an established collaboration between several SMEs, to investigate their interest in the EGI FedCloud and eventually the pay-per-use service. INFN is defining several contacts with SMEs in the Emilia Romagna Region, being part of the Regional High Technology Network a network among universities, public research institutions and enterprises. As a founding stakeholder of an association called Smart Cities and Smart Communities, INFN will investigate the stakeholders interest in the EGI FedCloud services.

SURFsara

- Contribute to the documents and the web site information available for industry
- Devise a plan to attract SMEs through SURFsara Private Section Program, Fortissimo and other related SURFsara activities
- Disseminate EGI possibilities and services for SMEs
- Continue the discussion with the SMEs and try to establish collaborations

LIP

- As reported, over the last year LIP has experienced issues regarding updates to the mandate of the national infrastructure roadmap, which were delayed at the government level. LIP has a network of SMEs, but was reluctant to initiate discussions without the assurance of having capacity to offer. With enlarge capacity foreseen during PY2, LIP plans to kick-off SME engagement activities.

5.2.2 Joint activities with partner projects**5.2.2.1 *HelixNebula-ScienceCloud (HNSciCloud)***

The HNSciCloud project is a Pre-Commercial Procurement which aims to bring together commercial cloud service providers, publicly funded e-Infrastructures and the buyers' in-house resources to build a joint cloud platform for European research community on top of which a competitive marketplace of European cloud players can develop their own services for a wider range of users. The procured innovative cloud services, developed in the context of the HNSciCloud project, will be made available to multiple user groups including:

- LHC experiments via WLCG;
- CTA - Cherenkov Telescope Array;
- HELIX - distributed infrastructure for Life Science information
- Long Tail of Science users accessing EGI services
- Local users at each procurers site including ESFR, EU XFEL, EUCLID ESA Space Mission, ISIS, WeNMR, etc.

The project started in 2016 with the definition of these use-cases. The first selected use-case aims to support the long tail of science users to give them access to an analysis facility linked to the Zenodo repository. The idea is that users can use the EGI long tail of science portal to process data stored in Zenodo with software also stored in Zenodo and run on compute services to be procured via HNSciCloud Pre-Commercial Procurement (PCP).

5.2.2.2 *ENVRIplus*

EGI-Engage will continue supporting the project in the uptake of EGI services for those RIs that expressed interest in this during 2015 (more than 10!). The project started the preparation of a training plan based on the priorities collected from the involved communities. EGI-Engage will support the project in the preparation, delivery and publishing of EGI-related training materials. The key event in this respect will be the ENVRIplus week in May 2016, targeting the whole ENVRIplus communities. EGI-Engage will also support the project in the evaluation of services implemented by ENVRIplus development areas and in the deployment of these services on EGI resources. Based on the outcome of evaluation these services then could be turned into production setups through the SLA-OLA negotiation process.

5.2.2.3 *Indigo-Datacloud*

The requirement collection activities of the project will finish in 2016. EGI-Engage will support the project in the analysis of the requirements, ensuring that the design and development processes are resulting in systems that address the customers' needs. EGI-Engage will also actively participate in addressing those requirements that are outside of the INDIGO competences but are in the development area of EGI-Engage.

5.2.2.4 *EUDAT2020*

Based on the feedback captured about the integrated EGI-EUDAT pilot, the two infrastructures continue evolving the demo into a production system that would allow joint use of EGI and EUDAT services for the selected Research Infrastructure use cases. This further development will require: (1) support the new AAI infrastructures based on Identity Federation that both infrastructures are currently implementing, (2) adoption of the new, high-level EUDAT APIs that are available for data transfer (3) generate and manage Persistent Identifiers in the integrated setup, (4) Possible changes to the EGI/EUDAT policies to facilitate interoperability. These developments will be first tested by two early adopters: EPOS and ICOS.

5.2.2.5 *AARC*

During PY2 EGI-Engage – primarily through the JRA1.1 (Authentication and Authorisation Infrastructure) task will continue working together with AARC on the setup of AAI prototypes that facilitate the integration of community-specific e-infrastructures based on generic solutions from EGI and other e-infrastructures. This will deepen the relationship with the communities that answered to AARC surveys in PY1: BioVeL, DARIAH, EISCAT, WLCG, EPOS, Photon and Neutron community (Umbrella), ELIXIR, CLARIN, EGI, EUDAT, D4Science, PSNC, FMI, Libraries and education institutes.

5.2.3 **NGI plans**

Many of the NGIs are involved in the WP6 competence centres, and/or in EGI-Engage partner projects and carry out engagement-related work in this context. This section provides information about those national engagement activities that will happen during PY2 in the EGI context, but are outside of EGI-Engage or its partner projects. These national plans help the EGI community harmonise activities between EU and national levels. The list does not cover all the NGIs that participate in EGI, but those who were willing to share their national engagement activity plan with us for this report.

- Bulgaria:
 - Disseminate the possibilities for SME/Industry use of EGI services at the upcoming high-profile events related to the official opening of the new data center at ICT-BAS.
 - Focus on the possibilities for real-time data processing using advanced hardware, software and services.
 - Establish new partnerships with IT companies of medium and large size in order to facilitate the industry involvement in our research activities related to EGI.
 - Organize training for SMEs, devoted to the distributed data processing.
- France:

- Priorities remain the same for the EGI-Engage PY2: (1) Focus on RIs from the French roadmap: ANAEE, EISCAT3, ELIXIR, EMSO, EPOS, EURO-ARGO, EuroBioImaging, IAGOS, Instruct, ICOS, KM3NET, LifeWatch. (2) Support the long-tail researchers by operating a DIRAC instance and an iRODS instance.
- Hungary:
 - Priorities for the next period are on forming joint projects with nanotechnology communities; Stakeholders from academia and industry from the topic of connected cars and agriculture.
- Netherlands:
 - Engagement priorities for PY2 are: BBMRI.nl, ELIXIR, LOFAR, WeNMR / MoBrain
 - Ongoing collaboration with Cryo-EM, supporting MoBrain, WestLife-VRE project and INSTRUCT, including upcoming training course for INSTRUCT.
 - We've visited (in 2015) many Dutch universities and University Medical Centers to make an inventory of the e-infrastructure needs of these institutes. Now we are working on an e-infrastructure report describing the e-infrastructure activities of the research institutes. Release of the report is expected in March 2016.
 - We found that engaging scientists directly is very time consuming and often quite inefficient. We now try to focus on research supports: those people at the universities whose job it is to help out scientists with their e-infrastructure / support needs. We try to train them to (better) use the SURF infrastructure and make them aware of the available services. This seems to be quite successful in the sense that we only need to reach out to a small number of people to reach a large(er) number of end-users.
 - Research institutes are very interested in adding national / european e-infrastructures if / when they are available to their own scientists. They like to add as a broker to these infrastructures. When doing this, the information that a scientist is looking for is available at the website of their own institute, which a scientist is more likely to look at then the site of a national e-infrastructure provider.
- Portugal:
 - In the next period we plan to continue supporting the actual communities like HEP, LifeWatch, Neuroscience groups (non-related with HBP) and RNA sequencing groups. Along this period we continue to pursue our efforts in order to engage with the National Partners of the different European RI's. Nevertheless the National Roadmap for Research Infrastructures it's still without funding meaning there is no national funding for any partners. This situation it's not expected to change in the months and affects not only national EGI partners but also all future activities of all groups.
- Turkey:
 - Highest priority is to reach national ESFRI communities. Currently there are more than 10 research groups who are in member or observer status in 8 ESFRI projects. However infrastructure demand is limited with a few researchers who use HPC resources at the NGI. Being a part of BILS VO was a success for improving Federated Cloud activities and to strengthen the FC site more projects are expected.

Appendix I. Policy and Procedures Project Outputs

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
EGI Strategy Document	Revision of EGI Strategy	Align actions across the EGI federation towards common goals Communicate the EGI strategy externally	EGI participants, funding agencies, decision/policy makers, user communities	Open Source License	Publication, EGI website
EGI Strategy Implementation	Document describing how to implement EGI strategy	Align actions across the EGI federation towards common goals Communicate the EGI strategy externally	EGI participants, funding agencies, decision/policy makers, user communities	Open Source License	Publication
Data policies, legal aspects and market analysis	Report providing: -Investigation on market potential, size, structure, stakeholder composition and segmentation, value chains, competing offerings of the agri-food, and/or geospatial data analytics sector in Europe, and possibly extended to other geographical areas such as North and South America. -Identification of requirements from the identified SMEs that will be used to profile new and enhanced EGI services. -Definition of recommendations for new	New and enhanced services for (big) and/or open data services targeting the industry and academia	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI conference, policy papers

	and enhanced services for (big) and/or open data services targeting the industry and academia.				
Data Sharing Policies and Legal Aspects in fishery and marines	Document providing: Assessment of the market size and potential of the sector, main actors identification and description (customers, providers, competitors, others), market structure, opportunities and threats, identification of value chains, and recommendations of how to address the opportunities	New and enhanced services for (big) and/or open data services targeting the industry and academia	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI conference, policy papers
Governance Evolution	Document assessing the suitability of the EGI governance model in relationship to the evolution of the strategy and the business models. Definition of a set of recommendations for supporting the evolution of the governance model	Implement to Open Science Commons vision	Service providers, Funding agencies and decision/policy makers, Standardization bodies	Open Source License	publication, EGI website
Impact Assessment	Document providing: Definition of a number of qualitative and quantitative indicators to assess the impact of EGI	Assess performance towards the goals	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies and decision/policy makers, Standardization bodies	Open Source License	EGI publications

Appendix II. Software and Service Innovation Project Outputs

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
Pay-for-Use	Creation of a pay-for-use prototype	Establishment of an EGI marketplace of IT services for science, ideally applying the one-shop-stop concept.	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies and decision/policy makers	Open Source License	EGI website, publications
EGI Marketplace	Establishment of an EGI marketplace of IT services for science, ideally applying the one-shop-stop concept	Contribute to EGI sustainability plan	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies and decision/policy makers	Industrial Design	EGI website

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
Operation portal	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
SAM, Framework	ARGO Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
GOODB	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers	Open Source License	repository and as production instance
Accounting portal	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
Message Network	Broker Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers	Open Source License	repository and as production instance
Pakiti	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers	Open Source License	repository and as production instance

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
e-Grant	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
Accounting Repository	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
Long tail of science platform	Software enhancement	Tool will be used by EGI production infrastructure	NGIs, Resource centers, RI	Open Source License	repository and as production instance
rOCCI-* (core, api, cli, server)	Implementation/framework of OCCI in Ruby	As a necessary component of other EGI production tools (AppDB)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
oneacct-export	Exporter of OpenNebula accounting data		RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
jOCCI-* (core, api)	Implementation/framework of OCCI in Java	As a necessary component of other EGI production tools (AppDB)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
Cloud-BDII-provider	Information provider for cloud	As a necessary component of other EGI production tools (monitoring)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
OCCI-OS	OpenCloud OCCI implementation within Nova	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
ooi	OpenStack OCCI Interface	Public OGF standard. As a necessary component of other EGI production tools (AppDB)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	public OGF standard
EGI: onedata	Federated data solution	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
OSSSM	APEL/SSM Openstack connector for EGI Fedcloud accounting system	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
cASO	OpenStack Accounting extractor	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
keystone-voms	Component for providing VOMS authentication to a Grizzly OpenStack Keystone.	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
Glancepush-vmcatcher	Component which enables publishing of images using vmcatcher into Openstack Glance catalog	As a necessary component of other EGI production tools (AppDB)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
vmcatcher/vmcaster	Allows for retrieval of VM images in an automated fashion, and managing lists of images	As a necessary component of other EGI production tools (AppDB)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
EGI-FCTF/cloud-bdii-provider	Generates a GlueSchema v2 representation of cloud resources for publishing it into a BDII	As a necessary component of other EGI production tools (monitoring)	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
synnefo connectors		As a necessary component of the fedcloud	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
GPGPU-enabled CREAM	Extension of CREAM to make use of GPGPU facilities	Tool is used by EGI production infrastructure	RIs, international research collaborations and the long-tail of science, service providers	Open Source License	repository and as production instance
Application Database	??			Open Source License	repository and as production instance

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
Caffe - Assisted pattern recognition tools integrated with EGI for citizen science	A demonstrator that provides a classification service on flower species through image recognition. The images can be uploaded by the user through a Web interface or Android app. The service returns the probable Latin names of the flower, and the probability ratio for the name-hits.	The final goal of this part of the project is to demonstrate for LifeWATCH the viability of using cloud infrastructures for deep learning frameworks and how final users will benefit from this type of deployment.	Research groups; individual researchers working in biodiversity science	Open Source License	repository and as production instance
Data repository for DARIAH	Two systems for data repository management: (1) a digital repository based on gLibrary service and the EGI Federated cloud and grid infrastructure and (2) a semantic search engine. The first system helps digital humanities communities build customised and highly-available digital repositories, while the second enables the discovery and correlation of content across geographically distributed digital repositories.	The system will be one of the demonstrators of EGI capabilities for digital humanities researchers linked to the DARIAH RI.	researchers, research groups, IT service providers in digital humanities	Open Source License	Promotion/dissemination and training activities by the DARIAH CC, targeting digital humanities researchers

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
EISCAT_3D Data Portal Demonstrator based on DIRAC	A data portal prototype to demonstrate some of the key features of the envisaged system for the EISCAT community. The prototype is based on the DIRAC4EGI system and builds on existing capabilities of the DIRAC File Catalogue and GUI systems.	The demonstrator will be used to gather further input for the portal development about the expected services and behaviour from the EISCAT community, and to optimise the performance of data management services in the EISCAT_3D system.	EISCAT_3D community	Open Source License	EGI website
Fully integrated MoBrain web portal	An entry portal by the MoBrain Competence Centre that integrates and/or gather information form the various web portals relevant to the WeNMR, INSTRUMENT and N4U research communities.	The portal will be used as an entry point for researchers and communities who want to use and/or learn about the MoBrain services.	User communities linked to WeNMR, NeuGrid4You, WestLife, to related ESFRI projects (e.g. INSTRUMENT) and in the long term the Human Brain Project (FET Flagship)	Open Source License	Will be connected to the EGI website/wiki as the portal about MoBrain activities

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
Final version of Multi-Source Distributed Real-Time Search and Information Retrieval application	SIR application and CDSTAR framework hosted at GWDG to serve local researchers, with the analytics part the framework using third party clouds which are made available by the EGI Federated Cloud infrastructure.	The release will be further developed to enable institutes and researchers from digital humanities to operate and/or access the SIR application and CDSTAR system.	research groups, IT service providers in digital humanities	Open Source License	EGI website
Data flow handler and basic R tools to integrate and process data from Ecological Observatories on EGI	Support for R applications with EGI services	TBD	Primary audience are researchers in biodiversity sciences, using R. Secondary target group is researchers in other domains using R (e.g. ELIXIR)	Open Source License	EGI website, source repository

Appendix III. Business Model Innovation Project Outputs

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
SME Engagement document	Master Model for SME Engagement	Increase the connection of EGI with SMEs at a European and National level	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI website, publications
UberCloud Integration	EGI Marketplace integration with UberCloud	Establishment of an EGI marketplace of IT services for science, ideally applying the one-shop-stop concept.	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI website
SME Engagement agreements	Establishment of collaboration agreements with SMEs and Industry	Explore and detect opportunities and threats around the Open Data and co-develop business models for their exploitation.	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	website, EGI Article published on UC newsletter

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
SME Engagement Support material for NGIs	Development of 'SME engagement' support materials for NGIs	Increase the skills of the participating NGIs (and EGI in general) to approach SMEs and figure out possible ways of collaboration, also leading to the creation of future business projects	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI website
	FitSM Training course - Terradue	Adoption of the FitSM standard within the EGI community Align NGIs to a common standard for IT service management	Funding agencies, industry/SMEs, IT service providers, RIs	Open Source License	Logo and events added to FitSM pages on EGI website; EGI events on mITSM pages
SME engagement Collaboration agreements	Document defining collaboration agreements with SMEs/Industry	Increase the opportunities of exploitations of EGI services and research results	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	website, EGI Article published on UC newsletter
Service Portfolio	Document defining EGI portfolio of services	Establishment of an EGI marketplace of IT services for science, ideally applying the one-shop-stop concept. Increase visibility Contribute to sustainability plan	RIs, international research collaborations and the long-tail of science, industry/SMEs, service providers, Funding agencies	Open Source License	EGI website

Appendix IV. Know-how Project Outputs

Name	Description	Exploitation	Target Groups	IP Protection	Main Dissemination Instrument
Cross-border procurement of e-Infrastructure services	Report analysing opportunities and barriers for cross-border procurement of e-Infrastructure services, identifying best practices that could enable RIs or large research collaborations to acquire services to support their research agenda collectively.	Establishment of an EGI marketplace of IT services for science, ideally applying the one-shop-stop concept.	service providers, Funding agencies and decision/policy makers, Standardisation bodies	Open Source License	EGI publications
Data repository for DARIAH	Two systems for data repository management: (1) a digital repository based on gLibrary service and the EGI Federated cloud and grid infrastructure and (2) a semantic search engine. The first system helps digital humanities communities build customised and highly-available digital repositories, while the second enables the discovery and correlation of content across geographically distributed digital repositories.	know-how on the setup and management of digital data repositories	data providers from humanities; researchers working with digitalised humanities data (text, sound, pictures, videos, etc.)		

**Data flow handler and
basic R tools to
integrate and process
data from Ecological
Observatories on EGI**

It's also a know-how on
possible ways of
supporting R
applications with e-
infrastructure services

Appendix V. List of upcoming events

Event	Contribution from EGI	Next step
AnaEE International Conference, Paris 2-3 March 2016, https://colloque.inra.fr/anaee-conference	New community in EGI. Contribution/participation TBD.	UCST (Yin)
ELIXIR All Hands 2016, Barcelona, 2016. March 7-10	Event programme is under preparation. Contribution from the ELIXIR CC is expected.	SA2.3 - ELIXIR CC
Cryo EM Solving the Structure of Macromolecular Complexes: A Hands on Workshop during ISGC, March 14, 2016, Taipei: http://event.twgrid.org/isgc2016/cryo.html	The training workshop is co-organised by MoBrain CC.	SA2.5 – MoBrain CC
France Grilles user training on DIRAC and iRODS in March	TBD	NGI-FR

EGI Conference in Amsterdam (April 6-8), co-located meetings with/for new communities (April 4-5)	Organisation by EGI.eu. Details under development	EGI-Engage AMB
INSTRUCT course co-organised by MoBrain CC in Utrecht (11-15 April): http://www.bonvinlab.org/education/INSTRUCT-practical-course/	The event is co-organised by MoBrain CC.	SA2.5 – MoBrain CC
European Geosciences Union General Assembly, Vienna 17-22 April: http://www.egu2016.eu/	Contributions from EPOS CC.	SA2.9 – EPOS CC
SURFsara Research Boot Camp: one day training session on 21st of April to teach 150 participants about the use of different types of e-infrastructure and data carpentry techniques. https://www.surf.nl/en/agenda/2016/04/surf-research-boot-camp/surf-research-boot-camp.html	TBD	NGI-NL
France Grilles user training on cloud in April	TBD. Possibly build on or contribute to EGI training materials	NGI-FR
DARIAH VCC 2016 – Autumn 2016, Gent, Belgium	TBD	SA2.6 – DARIAH CC
Status and plans for e-infrastructures in Croatia, May 10-11, Zagreb (by SRCE in Croatian)	Best way of support to TBD with Croatian NGI	NGI-HR
EMBL Conference: CTLS 2016 - Core Technologies for Life Science, Heidelberg, 12-15 June, 2016	Can be relevant for the ELIXIR CC, however little interest/availability for contribution.	SA2.3 – ELIXIR CC
Meeting of the EPOS-IP H2020 project in Prague in	Demonstration of the EPOS-EGI AAI setup, one of the use cases of the EPOS-CC	SA2.9 – EPOS CC
Digital Humanities conference, Karkow, July 12-16: http://dh2016.adho.org/	Relevant event to present/demonstrate the services of the DARIAH CC.	SA2.6 – DARIAH CC

Appendix VI. Report on National Engagement Activities

This table provides information about the progress made in the various NGIs that are active in the Engagement activity. The work reported here is not funded from EGI-Engage, but kept in this document to complete the picture from the national perspective as much as possible.

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
BG	<ul style="list-style-type: none"> • Computational physics (fluid dynamics, semiconductor modelling) • Astrophysics (VOs) • CLARIN and DARIAH (BG-CLaDa) • BG-BBMRI (focus on HPC) • Environmental sciences (Climate change, Env. Protection) • Marine community • Integration of new HPC cluster (Xeon Phi cards and CPUs) 	<ul style="list-style-type: none"> • Join DARIAH CC and BBMRI CC activities • Join federated open data for marine use case activity of EGI-Engage (JRA2.1) • Join GPGPU integration activity of EGI-Engage (JRA2.4) 	<p>IICT-BAS based its work on the established contacts from SMEs that were added to the EGI database. One of these SMEs has been more active and established collaboration between several European SMEs and academic partners. Currently the work is under way to organize the funding for part of this activity, related to the use of real-time mobile data for analytics and management purposes. During the period, due to the introduction of the new computing facility of IICT-BAS, which is in the top500 list of supercomputers, contacts were established at higher level with IT industry representatives and with the recently opened Sofia TechPark.</p> <p>At the events where EGI-Engage was presented, like 113th European Study Group with Industry, 7-13 September 2015, some concrete interest in the EGI E-grant platform was expressed.</p>

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
CH	<ul style="list-style-type: none"> To play a more active role as the "eScience Support Team" to offer the human component of eScience/e-Infrastructure support. ELIXIR and ATLAS 		
CZ	<ul style="list-style-type: none"> No change since 2014: BBMRI, CTA, ELI, ELIXIR, EuroBioImaging, Instruct, ICOS. (With direct participation in ELIXIR) Early engagement with LINDAT/CLARIN. Supporting NGI users participating in HBP. In contact with ELI. 	Connect to ELIXIR and BBMRI CC; ELITRANS project; HBP collaboration;	
ES	<ul style="list-style-type: none"> LifeWatch (already coordinates the respective EGI Comp. Centre). DANUBIUS eLTER EMSO Nanoscience 	<ul style="list-style-type: none"> Join forces with NGI Romania for harmonised activities for DANUBIUS. 	
FR	<ul style="list-style-type: none"> No change since 2014: ANAEE, EISCAT3, ELIXIR, EMSO, EPOS, EURO-ARGO, EuroBioImaging, IAGOS, Instruct, ICOS, KM3NET, LifeWatch Operating the DIRAC instance, which supports approx. 15 VOs, and an iRODS instance. 	Already involved in the ELIXIR, EPOS and LifeWatch Comp. Centres.	The national multidisciplinary VO is now in the top ten Vos of EGI. This VO gives access to DIRAC, iRODS, HTC and cloud resources. Several user trainings (success days ⁷⁷) were organised in November 2015.

⁷⁷ <http://succes2015.sciencesconf.org/in>

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
HU	<ul style="list-style-type: none"> • Start a new project to build a federated cloud that serves Hungarian academic research institutes. (Based on OpenStack, HEXAA, WS-PGRADE, etc.) • Engage with business communities in Hungary (topics: agriculture, big data, automotive) • Implementation of a big data platform for agriculture in the Agrodat project. • Introducing cloud courses at 3 universities: Miskolc, Szeged, Óbuda. 	<ul style="list-style-type: none"> • EGI to achieve that it's included as an e-infrastructure on the European ESFRI roadmap so national roadmaps can include the NGIs. • Harmonise EGI FedCloud and Hungarian FedCloud. • Contribute to EGI cloud-related training with university courses. 	

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
PT	<ul style="list-style-type: none"> • Continue supporting HEP communities (incl. Auger and SNO++) communities. • EMSO, EPOS and LifeWATCH – with Spain. • Neuroscience groups related to HBP • RNA sequencing groups (plants and animal), but with need more for HPC resources 	<p>The work being done at establishing bridges between EGI and RI / ESFRI's it's perceived as really helpful. As for infrastructure requests HPC federation would be major success together with some data federation.</p>	<ul style="list-style-type: none"> • The support for HEP communities continues to evolve a new storage system was implemented during 2015 for WLCG communities. This improvement allows continuing the commitment of Portugal towards HEP community and in particular the LHC. • Along this period there was a effort in engage the neuroscience groups related to HBP but the national partners involved are dropping the project. • Along this period there was a notorious increase of groups asking for HPC resources not only for RNA sequencing dedicated to plants, animals but also for cancer research. This reinforces of requests strengths the importance of the creation of a HPC federation. • Good collaboration in Lifewatch under the umbrella of the EGI-Engage project. There were no advances in EMSO, EPOS.
RO	<ul style="list-style-type: none"> • Supporting WLCG collaborations (Alice, Atlas, LHCb) and HEP communities (ILC, Hone) • ELI-Nuclear Physics (eli-np.eu); Registering a new EGI site (GRIDFIN) • Nuclear & condensed matter physics (gridifin.ro) • Computational biology 	<p>Explore the establishment of a Virtual Team with HU and CZ to support the definition of ELI computing activities.</p>	

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
RS ⁷⁸	<ul style="list-style-type: none"> Supporting active users of the current infrastructure: national computational physics and computational chemistry communities, international agricultural community. Lobbying for establishing a national funding programme for research infrastructures that should also include funding of DCI related activities. IPB requires further funding to expand the use and capabilities of its infrastructure and to get involved in ongoing engagement activities. As observer, IPB is interested in the developing ELI, CERN@School and DRIHM engagement cases. 		
UK	<ul style="list-style-type: none"> To join up a number of activities which should provide a pipeline for researchers to move from local to national to international facilities, e.g. EGI, GridPP, EU T0, UK T0. 	Prepare guidance through the EGI-EUDAT collab. on moving from national to international facilities. Make this reusable across NGIs and disciplines.	

⁷⁸ At the time of writing the Republic of Serbia does not have an NGI status in EGI. However, the Institute of Physics Belgrade (IPB), as NGI_AEGIS coordinator, continues coordination of national Grid infrastructure operations, and delegates an International Liaison to EGI.

NGI	Engagement priorities in 2015 (from D2.1)	Planned activities in D2.1 (May 2015)	Report on progress (since June 2015)
TR	<ul style="list-style-type: none"> Operating Grid sites to serve the HEP community. Recently started operating a federated cloud site to serve other national users. (e.g. Nanoscience to run Windows models) Turkey is involved only in very few ESFRIs and the NGI did not have success with engaging with national nodes so far. Priority here is ELIXIR and Earth science. 	<p>The NGI to consider joining the EPOS and ELIXIR Competence Centre activities (as unfunded contributor/observer)</p>	<p>The NGI is not funded in EGI-Engage for any of the Engagement-related activities (e.g. in WP6 Competence Centres), however infrastructure is directly used by national ELIXIR and Earth Science communities. The Turkish Federated cloud site is now supporting the BILS community (see among the Research collaboration cases above). Tried to reach out ESFRI communities during BASARIM2015 conference⁷⁹ and H2020 INFRA national information day⁸⁰. These contacts did not result in technical collaborations yet.</p>

⁷⁹ <http://www.basarim.org.tr/2015/doku.php>

⁸⁰ <http://www.h2020.org.tr/tr/haber/arastirma-altyapilari-2016-2017-calisma-programi-bilgi-gunu-0>