

**EGI-Engage**

Communications, Dissemination and Engagement Report and Updated Strategy

D2.8

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Abstract

Results of communications, dissemination and engagement activities in the first half of the project and outlining the updated plan for the second half.

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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**

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# Introduction

# Report on communications activities

## Internal and external communications activities

## Website

## EGI publications

## External publications

## Events

## EGI-Engage events

## External participation in events

## Deviations from the plan

## Summary of achievements and lessons learnt

# Report on dissemination of project outputs

## Technical input to standards

## Policy & procedure development

## Software & service innovation

## Business model innovation

## Know-how

## Deviations from the plan

## Summary of achievements and lessons learnt

# 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.

## 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 levels[[1]](#footnote-1). These SLAs-OLAs are monitored by EGI.eu. 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 4 SLA-OLA arrangements in the pipeline (DRIHMS hydrometeorology community, MoBRAIN-WeNRM-INSTRUCT research infrastructure community, international nanotechnology community, Terradue SME an ESA spin-off).
* 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, CESGA, 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).

## 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.

### 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 roadmap[[2]](#footnote-2) and from national roadmaps are expected to reach implementation or operational stage. These RIs as well as the Future and Emerging Technologies (FET) Flagship Initiatives[[3]](#footnote-3) 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 of support for the respective RIs. During PY1 these CCs reached 9 deliverables and milestones[[4]](#footnote-4) 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(2nd level in the EGI classification scheme[[5]](#footnote-5))** | **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. Joint activities can start in 2016 depending on the outcome of the ESFRI evaluation. |
| 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 | Update from NGI-CZ?  |
| 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 scientistsfrom 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 has 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 ENVIRplus. 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 (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** | **Science discipline(2nd level in the EGI classification scheme[[6]](#footnote-6))** | **Progress in PY1 and achievements so far.** |
| BILS (Swedish Bioinformatics Infrastructure for Life Sciences) | Biological sciences | SLA and OLAs have been signed[[7]](#footnote-7) 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 software community | 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 🡪 MultiscaleCompexGenomics H2020 project | Biological sciences | During 2015 the transPLANT gateway was connected 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. |
| Ophidia software community | Earth sciences | Update from Tiziana? |
| 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 ongoing.  |
| 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. |

### 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
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.

### ENVRIplus

ENVRIplus, <http://www.envriplus.eu/>, 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-Argo[[8]](#footnote-8), EMSO[[9]](#footnote-9), ICOS[[10]](#footnote-10), and FixO3[[11]](#footnote-11), AnaEE[[12]](#footnote-12). 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 SeaDataNet[[13]](#footnote-13), ICOS, FixO3 and IS-ENES2[[14]](#footnote-14).
3. Strengthened exiting collaborations with EISCAT\_3D[[15]](#footnote-15), ELIXIR[[16]](#footnote-16), EPOS[[17]](#footnote-17), and LifeWatch[[18]](#footnote-18).
4. SIOS[[19]](#footnote-19), IAGOS[[20]](#footnote-20) and INTERACT[[21]](#footnote-21), 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.

### INDIGO-DataCloud

INDIGO-DataCloud, <https://www.indigo-datacloud.eu/> (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 task. 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.

### 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 2016 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).

The first outcome of this activity was the definition of a generic use case that captures the typical user scenario with respect 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 identifyers (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 started bringing the tools towards a production setup.

### AARC

The EC-funded AARC project started in May 2015 as a 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.

### Report on national engagement activities

|  |  |  |  |
| --- | --- | --- | --- |
| NGI | Engagement priorities in 2015 (from D2.1) | Planned activities in D2.1 (May 2015) | Report on progress (since June 2015) |
| BG | * 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)
 | * 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)
 | 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 a 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.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.  |
| CH | * 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 | * 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 ELIXR and BBMRI CC; ELITRANS project; HBP collaboration;  |  |
| ES | * LifeWatch (already coordinates the respective EGI Comp. Centre).
* DANUBIUS
* eLTER
* EMSO
* Nanoscience
 | * Join forces with NGI Romania for harmonised activities for DANUBIUS.
 |  |
| FR | * 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[[22]](#footnote-22)) were organised in November 2015.  |
| HU | * 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.
 | * 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.
 |  |
| PT | * 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
 | 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. | * The support for HEP communities continues to evolve a new storage system was implemented during 2015 for WLCG communities. This improvement allows to continue 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 reinforce 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 was no advances in EMSO, EPOS.
 |
| RO | * 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
 | Explore the establishment of a Virtual Team with HU and CZ to support the definition of ELI computing activities.  |  |
| RS[[23]](#footnote-23)  | * 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 | * 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. |  |
| TR | * 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.
 | The NGI to consider joining the EPOS and ELIXIR Competence Centre activities (as unfunded contributor/observer) | 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 conference[[24]](#footnote-24) and H2020 INFRA national information day[[25]](#footnote-25). These contacts did not result in technical collaborations yet. |

### SMEs and industry

* Content for this section is developed in this doc: [https://docs.google.com/document/d/1gFk-sGfPMJ7VgTHAAm8hi6rfW249F-oKWxHMuA9CaIQ/edit#](https://docs.google.com/document/d/1gFk-sGfPMJ7VgTHAAm8hi6rfW249F-oKWxHMuA9CaIQ/edit)
* For the Terradue SME (a spin-off of ESA) the 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.

## Deviations from the plan

Continuous prioritisation of cases through the RT tickets helped EGI keep focussed its engagement activities on relevant scientific domains and on impactful cases. There were no major deviation from the initial plan, however some of the engagement cases progressed slower than expected. The reasons of delay are not always within EGI, however the lack of progress with KM3Net, and with more coordinated engagement with long-tail users are both due to the lack of effort that the EGI community could allocate for the Km3Net and long-tail platform development cases.

## 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 and Terradue SME an ESA spin-off.

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:

* 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 became 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 guidelines[[26]](#footnote-26) to satisfy such users. This activity needs to continue and produce new training module/exercises (SA2.1), user guides and reusable tools (e.g. scripts, code snippets).

SME: Summary of achievements and any lessons learnt. Can we provide an analysis of SME/industry engagement cases:

* + EGI members acting as providers in xxx out of xxx cases (providers of HW, SW, consultancy)
	+ EGI acting as buyers in xx out of xxx cases

# Plans for the second period

## Communications

## Dissemination

## 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 (ENVRIplus, 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.
* 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 promise with active usage of the EGI cloud infrastructure already in the short term. 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.
* 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 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 analaytics 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:
	+ Content for SME engagement plan is developed in this doc: [https://docs.google.com/document/d/1gFk-sGfPMJ7VgTHAAm8hi6rfW249F-oKWxHMuA9CaIQ/edit#](https://docs.google.com/document/d/1gFk-sGfPMJ7VgTHAAm8hi6rfW249F-oKWxHMuA9CaIQ/edit)

### Joint activities with partner projects

#### 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).

#### 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.

#### Indigo-Datacloud

The requirement collection activates 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.

#### 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 Identifty Federatation 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. These developments will be first tested by two early adopters: EPOS and ICOS.

#### 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 prorotypes 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.

### 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 outside of EGI-Engage or its partner projects. These national plans help the EGI community harmonise activities between EU and national levels.

* 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 datacenter 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.
* 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.
* 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.

# References

1. The EGI Engagement activity

<ADD from D2.1>

1. List of upcoming events

|  |  |
| --- | --- |
| **Event** | **Contribution from EGI** |
| AnaEE International Conference, Paris 2-3 March 2016, <https://colloque.inra.fr/anaee-conference>  | New community in EGI. Contribution/participation TBD. |
| ELIXIR All Hands 2016, Barcelona, 2016. March 7-10 | Event programme is under preparation. Contribution from the ELIXIR CC is expected.  |
| 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.  |
|  |  |
|  |  |

1. SLA (Service Level Agreement) is signed with the community, OLA (Operation Level Agreement) with the resource providers. [↑](#footnote-ref-1)
2. ESFRI roadmap: <http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri-roadmap> [↑](#footnote-ref-2)
3. FET Flagship Initiatives: <http://cordis.europa.eu/fp7/ict/programme/fet/flagship/> [↑](#footnote-ref-3)
4. [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%3AWP6_%28SA2%29_Knowledge_Commons#Milestones_.28M.29_and_Deliverables_.28D.29) [↑](#footnote-ref-4)
5. <https://wiki.egi.eu/wiki/Scientific_Disciplines> [↑](#footnote-ref-5)
6. <https://wiki.egi.eu/wiki/Scientific_Disciplines> [↑](#footnote-ref-6)
7. BILS SLA and OLAs: <https://documents.egi.eu/document/2701> [↑](#footnote-ref-7)
8. Euro-Argo, <http://www.euro-argo.eu/>, an ESFRI Research Infrastructure for open sea observations [↑](#footnote-ref-8)
9. EMSO, <http://www.emso-eu.org/>, an ESFRI Research Infrastructure for seafloor and water-column observations [↑](#footnote-ref-9)
10. ICOS, <https://www.icos-ri.eu/>, an ESFRI Research Infrastructure for greenhouse observation [↑](#footnote-ref-10)
11. FIXO3, <http://www.fixo3.eu/>, a FP7 project for fixed point open ocean observations [↑](#footnote-ref-11)
12. AnaEE, <http://www.anaee.com/>, an ESFRI Research Infrastructure for experimental manipulation of managed and unmanaged terrestrial and aquatic ecosystems. [↑](#footnote-ref-12)
13. SeaDataNet, <http://www.seadatanet.org/>, a pan-European infrastructure for high quality ocean and marine data access. [↑](#footnote-ref-13)
14. IS-ENES2, <https://is.enes.org/>, infrastructure for the European network of earth system modeling. [↑](#footnote-ref-14)
15. EISCAT 3D, <http://blog.eiscat3d.org/>, an ESFRI Research Infrastructure for upper space atmosphere observations. [↑](#footnote-ref-15)
16. ELIXIR, <https://www.elixir-europe.org/>, an ESFRI Research Infrastructure for life-science and biological informations. [↑](#footnote-ref-16)
17. EPOS, <http://www.epos-eu.org/>, an ESFRI Research Infrastructure for earthquakes and volcanoes observations. [↑](#footnote-ref-17)
18. LifeWatch, <http://www.lifewatch.eu/>, an ESFRI Research Infrastructure for biodiversity and ecosystem research. [↑](#footnote-ref-18)
19. SIOS, <http://www.sios-svalbard.org/>, an ESFRI Research Infrastructure for Arctic Earth science observation [↑](#footnote-ref-19)
20. 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. [↑](#footnote-ref-20)
21. INTERACT, <http://www.eu-interact.org/>, is an infrastructure project to build capacity for research and monitoring in the European Arctic and beyond. [↑](#footnote-ref-21)
22. <http://succes2015.sciencesconf.org/in> [↑](#footnote-ref-22)
23. 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. [↑](#footnote-ref-23)
24. <http://www.basarim.org.tr/2015/doku.php> [↑](#footnote-ref-24)
25. <http://www.h2020.org.tr/tr/haber/arastirma-altyapilari-2016-2017-calisma-programi-bilgi-gunu-0> [↑](#footnote-ref-25)
26. <https://wiki.egi.eu/wiki/Federated_Cloud_user_support#Docker_containers> [↑](#footnote-ref-26)