



EGI-Engage

Master Model for SME engagement

D2.2

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Abstract

This document outlines the EGI Business Engagement Programme defining how private organisations, with a focus on SMEs, can engage with EGI for joint collaborations. The programme outlines the opportunities and benefits for organisations to work with EGI, and defines varying levels of collaboration. The document also presents an implementation plan to develop all the needed mechanisms for the engagement to happen. This work is supported by EGI-Engage TNA2.3, which has the following objectives: understand the requirements of SMEs and define models for engagement, and 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.



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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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1 Introduction

There are more than 20 million SMEs in the EU representing 99% of businesses. SMEs are considered one of the key drivers for economic growth, innovation, and employment. The European Commission has made them one of the focuses in the Horizon 2020 with the aim of putting SMEs in the lead for the delivery of innovation to the market. EGI aims at supporting this policy objective by exploring opportunities for synergies with SMEs (e.g. offering the EGI innovative services for big data analytics).

In 2014, a dedicated team was setup to establish a Business Engagement Programme [R1] for developing relationships with SMEs and bringing them into the EGI ecosystem to create mutual value. The result of the virtual team [R2] was the basis for future, broader actions by identifying SMEs potentially willing to collaborate with EGI in these activities and establishing active strategic partnerships. Several SMEs were members of the virtual team and were fundamental in shaping the Business Engagement Programme outlined in this document.

EGI-Engage offers the opportunity to put into action the work carried out and focus on key objectives that comprise:

1. Facilitating the connection of EGI with SMEs at a European and National level.
2. Understanding the requirements from SMEs in all sectors but with special focus on the agriculture and food and the fishery and marine sciences sectors, which will provide use cases for the creation of enhanced services unifying computing and data approaches.
3. Creating a model (similar to a master franchise) for SME engagement that will be put in practice but can also later be adopted and adapted for a wider number of NGIs/Resource Centres.
4. Attracting SMEs to explore and detect opportunities and threats around the Open Data and co-develop business models for their exploitation.

Therefore, this document outlines the EGI Business Engagement Programme defining how private organisations, with a focus on SMEs, can engage with EGI for joint collaborations. The programme outlines the opportunities and benefits for organisations to work with EGI, and defines varying levels of collaboration. The document also presents an implementation plan to develop all the needed mechanisms for the engagement to happen. This work is supported by EGI-Engage TNA2.3, which has the following objectives: understand the requirements of SMEs and define models for engagement, and 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.

2 Background

2.1 Motivation

There is a renewed requirement for stimulating the knowledge transfer activities and outcomes produced in science and scientific innovation into business and society. This requirement is in many cases translated into requisites for funding in such a way that knowledge transfer is not anymore a nice-to-have, but has become essential for sustainability/survival.

- H2020 programmes include an “impact” section that aims to go beyond the exploitation and dissemination plan at the end of the project, which was the standard of previous projects. From now on, the proposals need to demonstrate that outcomes have a positive impact onto business and society from day 1.

The scientific big (open) data push opens a particularly promising field of opportunities for cooperation and development. A flexible, highly co-operative, and efficient network of many different parties is needed to build sustainable models of exploitation. The roles that every party has to play are very different, and they go beyond the traditional role of firms as users of the research outputs. They are also expected to become active developers, aggregators, enablers and/or marketers. For example:

- Helping in the production/development of the project outcome/result at an early stage by surveying the potential consumers’ needs and/or by conducting a “Test Drive”-service.
- Supporting the distribution of the project outcome by becoming a channel to address an audience that could otherwise not be reached by the project (geographical, segment, niche).
- Adopting the outcomes of the project such as novel technologies as another input of their supply chain, i.e. a part of their business process (for example a new visualisation methodology)

In order to achieve this, EGI needs to establish a network of people with skills in business development, backed with specific, co-ordinated organisational structures, and dedicated personnel resources to establish fluid and sustained relationships with other partners for the creation of these value networks.

Strengthening the relationship with the business sector in EGI is also fundamental part of the Open Science Commons strategy and a way to show the leadership that has been asked to take.

2.2 Approach

One of the main issues to-date was the absence of dedicated effort within EGI-InSPIRE to reach out to the private sector. In spite of some efforts and some encouraging examples, the initiatives for business engagement have not yet progressed towards any meaningful impact. At local level there are few good examples, but they are the result of the individual initiatives of some NGIs that have a clear mandate from the national or local administration, which is not obvious or the case in many other NGIs.

The members of EGI have for many years engaged a variety of research communities with mature structures, procedures and expertise for this engagement, but there is no structure or procedure for business engagement, which includes activities such as identifying the SMEs with interest to collaborate or have a clear value proposition to create a formal engagement relationship with its associated business model.

- [Example] Loss of momentum from EGEE Business Activities.
- [Example] No previous effort in EGI-InSPIRE.
- [Example] An EGI Business Engagement Programme has not yet been launched.

The language spoken by the business sector and their aspirations are different to those in use in the EGI research community. There are also difficulties reported by those NGIs with more experience in business development.

- [Example] SURFsara (NL) has reported difficulties in assessing the application of the fair competition rule in some cases and of the national norms for publicly funded activities.
- [Example] CSC (FI) reported problems in selling services because of insufficient production, and the management of time-to-results expectations.

Besides this, another barrier is posed by the strategic goals and organisational structures of some EGI members, whose mandate does not consider involvement with companies, or have a very limited framework for the relationship.

- [Example] France Grilles (FR) has to deal with the national policy for relations with the private sector, Italian NGI and RCs have limitations to offer infrastructure services to companies.

Most of the current NGIs/Resource Centres activity is done at a local level, but this remains unknown for the rest of the EGI community except for a few reported cases. There is thus poor European coordination for managing these experiences, which is also seen in the lack of formal structures for addressing the request for cross-border access.

- [Example] Lack of a Business Engagement Programme giving a formal structure and effort to coordinate activities.
- [Example] So far, requests for cross-border access are solved ad-hoc by the EGI.eu outreach team. For instance, an SME identifies the most suitable platform in another country, but that country's access policies prevent the use of resources by a foreign company.

There is also deficiency in liaising with European and national/local structures with a goal in business engagement i.e. Innovation Clusters, European and national/regional SME instruments (e.g. Horizon's 2020 SME Instrument, COSME, Enterprise Europe Network), European projects with a goal in data and computing (e.g. CloudSME, Fortissimo) entrepreneurs and business organisations (such as PIN-SME).

Overcoming barriers and engaging industry for common benefits

EGI needs a specific structure (not necessarily a legal structure) for business engagement with dedicated effort, dedicated personnel knowledgeable in business activities, and established procedures, working at local level and with European co-ordination.

- [Example] The EGI.eu Strategy and Policy Team has experience in working with industry from previous projects

- [Example] Selected NGIs with proven business use cases i.e. IFCA, SURFsara
- [Example] SMEs already working with EGI i.e. 100%IT, SixSq, new business partners coming through EGI-Engage e.g. Engineering, Agro-Know

3 EGI Business Engagement Programme

This section defines the Business Engagement Programme and can be used as content for promotion (e.g. dedicated webpages on the EGI website, print material).

3.1 Purpose and Scope

The European Commission has made engaging SMEs one of the priorities of their policy with the aim of putting SMEs in the lead for the delivery of innovation to the market. EGI aims at supporting this policy objective by exploring opportunities for synergies with SMEs as well as connecting to other SME-focussed initiatives within Horizon 2020. This will allow EGI to establish collaborations for creating mutual value, and for conducting research and development and innovation activities with the private sector.

The commercial exploitation of the final outputs/results of the development project by the participating companies is encouraged. However, for the EGI community, the main purpose of this programme is to support and drive innovation and knowledge exchange while recovering costs. Any co-development of software or products is subject to EGI's copyright policy [R3].

3.2 Programme Definition

The EGI Business Engagement Programme is a framework underlying the specific future joint activities between EGI members and the different representatives of the business sector.

The EGI community represents a broad range of organisations with different governance, priorities and interests including different policies for commercial use. EGI will work with programme participants to agree on joint work with appropriate community members.

The creation of this Business Engagement Programme should guarantee the right of every EGI member to engage on a particular project developed under the aegis of this programme. Depending on the degree of involvement the agreement will be more generic or will be defined on a case-by-case basis. Joint activities requiring a deeper level of commitment will be submitted to a more thorough process of acceptance. The formalisation of agreements involving EGI as a federation will still be presented for approval to the relevant EGI body.

3.3 Objectives and Beneficiaries

The EGI Business Engagement Programme provides an opportunity for both commercial and non-profit organisations to engage with the world's largest e-Infrastructure supporting European and global scientific and research collaborations to accelerate the adoption of the scientific outputs into society, to support innovation and knowledge transfer into the market.

EGI is open to engagement with a broad range of public and private companies of all sizes and sectors, and will develop specific offerings for different types and collaboration activities.

3.4 Potential areas of Collaboration

Participants can benefit in multiple ways ranging from promotion, market intelligence, and networking up to to access to dedicated consultancy and support, to exploit EGI services for pre-commercial R&D and test proof of concepts. The opportunities for developing added-value services for reusing open research data sets will be particularly encouraged. The following table offers examples of possible collaboration types.

Area	Opportunity	Example
Computing Capacity	Obtain computing capacity to test workflows, models, and applications that will be part of a future advanced ICT product or service.	SME gets computing access grant to test their in-development software on a large-scale infrastructure. Receive support for porting applications from EGI.
	Supply computing or storage resources on demand for EGI user communities complementing EGI resources.	Commercial provider technically integrates with the infrastructure and offers computer and storage capacity to user communities on a paid basis
Software products	Access to EGI software products, virtual appliances, and documentation.	Company accesses EGI Application Marketplace to find open source software products, applications in different scientific domains, and related documentation and training material.
Expertise & knowledge sharing	Access to a highly specialised community of experts on distributed computing systems and all scientific domains.	EGI provides expertise, experience, consultancy and tools to assist a provider in designing and engineering a computing cluster and connecting it to the EGI distributed infrastructure.
	Opportunity to collaborate with EGI to deploy technological solutions for the EGI infrastructure.	SMEs can join development groups to create new technological products that can later be qualified as part of the EGI service portfolio.
Big (open) data	Access to the increasing amount of research data sets connected to EGI resources to assist in building your own added-value services.	A life sciences enterprise accesses EGI-connected datasets to test a protein-folding algorithm then offers the new algorithm as SaaS over the EGI infrastructure.
Market intelligence & promotion	Opportunity to interact with research communities, data centres and other members of the EGI ecosystem to gather information relevant to the company for market and product development.	Participating in EGI events and teams provides direct contact with resource providers, software developers and user communities. This helps companies produce efficient and desirable new products and services.
	Promotion and recognition of the company brand, product, and services within the EGI ecosystem.	Programme membership provides European and global visibility to the participant brand and products in the EGI community and beyond. This also establishes possibility for sponsorships and organisation of common events.

3.5 Benefits

3.5.1 For Programme Participants

The number and degree of the benefits will depend on the formula and level of involvement. Any benefit is naturally aligned with the current European policies for supporting SMEs and large

commercial organisations and will naturally respect fair competition rules or any other applicable laws. By joining, the participant can obtain one or several of the following benefits:

- Increased visibility on a European and global scale.
- Access to key information on relevant European policies.
- Possibility to develop new products and technologies to enhance their product portfolio.
- Adoption of new and innovative technologies.
- Reduction of learning curve and ensuring faster and trustable results.
- Potential high rate of Return on Investment (ROI) for consumer partner.
- Greater potential market for commercial services as academia moves from CAPEX to OPEX model.
- Opportunity to expand and strengthen the customer base with new and repeated clients.
- Access to market intelligence to gain competitive edge.
- Possibility to provide direct input to shape future services of EGI for business opportunities.
- Opportunity to contribute as a partner to proposals for funded projects.

3.5.2 For the EGI Community

The Business Engagement Programme aligns with the current European policies to support SMEs and business development in general. In this sense, establishing more, wider, and tighter relationships with the private sector, and SMEs in particular, and other actors bring not only benefits to the EGI members, but also is a must, and a good base for ensuring the approval of future funded projects and ensuring the sustainability of the outputs after project life.

Value demonstration	Infrastructure
<ul style="list-style-type: none"> • Increase visibility of EGI services in forums beyond the scientific community such as the private sector, media, public and business forums and in society as a whole. • Demonstrate the value of the EGI services as creator of innovation and knowledge that is transferred to society through a tight relationship with the business sector. • Support, develop and become a visible actor in the Big Data Value Chain with the private sector • Share skills and expertise on distributed computing infrastructure gathered by the EGI members to other entities (public or private) 	<ul style="list-style-type: none"> • Add complementary IT resources to the infrastructure and increase the capacity and capability of EGI infrastructures. • Improve technical services offered to the research communities arising from co-operation with the different parties. • Increase efficiency of internal operational processes through partnerships. The inclusion of business partners with complementary, even very specialised, expertise can improve the efficiency of internal operations of the EGI members.
Knowledge	Business
<ul style="list-style-type: none"> • Increase the number and variety of research innovation projects outputs in which EGI members participate. • Add new topics for research and innovation coming from the interaction between the private sector and the scientific communities. 	<ul style="list-style-type: none"> • Obtain free licenses or discounts on usage of proprietary products/services. • Access new category of users with business potential or societal potential. • Offer a wider range of tailor-made products, services or solutions created specifically for the

- **Acquire new knowledge and expertise** coming directly from the business sector or gained during the process in which EGI and the Business Participants co-operate.
- **Boost research publication citations/references** made available for the community. This is also a key indicator of the performance of the EGI infrastructure and an important measure of the value provided by EGI to the society.
- **Expand the base of business sector partners** for designing, applying and funding and implementing research and innovation projects.
- **Access a wider number of key actors in the exploitation, dissemination and sustainability** of technical and scientific results arising from the EGI research and innovation projects. The co-operation with the private sector is a prerequisite.
- **Lead to potential revenue generation/cost recovery** through new customers for pay-for-use services based on proven services, skills and capabilities (if so agreed).

3.6 Approving and formalising business engagement

The EGI Business Engagement Programme is a framework underlying the specific future joint activities between EGI members and the different actors in the business sector. EGI is open to engagement with a broad range of public and private companies of all sizes and sectors, and will develop specific offerings for different types and collaboration activities.

The EGI community represents a broad range of organisations with different governance, priorities and interests including different policies for commercial use. The creation of this Business Engagement Programme should guarantee the right of every EGI member to engage on a particular project developed under the aegis of this programme. Depending on the degree of involvement the agreement will be more generic or will be defined on a case-by-case basis. Joint activities requiring a deeper degree of commitment will be submitted to a more thorough process of acceptance.

This proposes a three-tier structure for engagement that would provide formalisation of the collaboration activity and make easier starting the common activities at a local and European level. The formalisation of agreements involving EGI as a federation still will be presented for approval to the appropriate EGI body.

EGI recognises that many different businesses may want to interact with the EGI community, from small SMEs embedded in highly innovative sectors to R&D units of large enterprises, public bodies, projects, etc. The scope of activities, industry sector or scientific discipline and levels of engagements may also vary in great degree. In order to deal with it, EGI proposes a multi-level engagement programme that offers something for everyone: from simple membership to facilitate discussions and joint promotion, to some form of strategic alliance. The most important issue is deciding what all involved parties want to do together and agree on which mechanisms are the most appropriate:

- EGI Business Engagement **Programme Member**

- Low commitment starting point, support discussion, exploration of opportunities and joint promotion. Based on lightweight generic cooperation agreement, and NDA if needed or requested.
- **EGI Business Associate**
 - Deeper engagement and memorandum of understanding to support technical interaction and reserved access to EGI services and resources.
- **EGI Business Partner**
 - Longer-term partnership and commitment based on a joint work plan or contract and shared strategic goals.

See Appendix 1 for further details regarding each level.

3.7 Communication Channels

In addition to internal mailing lists, it is important to provide a channel for external organisations to contact EGI¹ as a complementary communication channel to online and print material.

¹ businessprogramme@egi.eu

4 Activity Plan

4.1 Promotion plan

Raising the level of awareness about EGI work and services among European SMEs is a very ambitious objective that will require time and dedicated effort. The way to achieve it is to start with cost-effective actions and reasonably feasible objectives. A webpage will be created on the EGI website once approved using content from this document as a basis. The objective is to give a point of reference for every member of EGI, the NGIs/EIROs and any external organisation interested in learning more about what EGI can do for business. With this step, a seed at a smaller scale is created for learning from each other and testing the most suitable activities and formats for preparing the launch of the programme at local levels.

4.1.1 EGI Website

A dedicated webpage will describe the EGI aim for engaging with SMEs and other business sector, the possible collaboration models, opportunities, the mutual benefits and the contact details for further information. This will serve as the main shop window for external organisations.

4.1.2 Promotional Material

Targeted dissemination material will play a key role in underpinning the key objectives of the EGI's Programme for Business. A combination of communication tools will focus on creating, developing, refining and sustaining awareness. Awareness is considered to be a prime objective, particularly in sectors where it is under represented. Communications will be diversified in cases where it is essential to tailor core messaging to audiences that have different understanding of and engagement with EGI.

4.1.3 Events

4.1.3.1 *Business related sessions at EGI Forums*

Business tracks and sessions have already proven to be an opportunity to share ideas and success stories across the EGI Community. The principle aims of the Business Tracks have been to highlight the opportunities for businesses adopting distributed computing technology, understanding technical and business challenges from the perspective of real-world environments providing the examples of technology adoption through case studies and pilot applications.

During the parallel sessions, key decision makers and business players have provided the audience with an inside look at the growing interest within specific vertical markets and the development and adoption of relevant technologies.

These activities will continue throughout EGI-Engage.

4.1.3.2 Attendance at Relevant Events

EGI Forums are effective communication channels for the EGI Community, however, are challenging avenues for attracting external or new contacts. This is mainly due to many private organisations requiring financial support for the time and travel when limited or no business relationship has been established. Therefore, in order to increase the visibility of EGI, its Programme for Business and to obtain new contacts and interest, EGI partners will actively participate in business-focused events. Future events will be discussed and approved internally in order to specifically define rationale for attendance, identify potential companies in attendance and expected outcomes. This will ensure that limited resources available are spent efficiently and effectively.

Some potential, non-exhaustive list of events for participation are:

- **BDVA Summit (1st)²** - Madrid – 17-19 June 2015 (attended and participated in the Business Task Force³)
 - Next summit to be announced (2016)
- **Fortissimo Forum 2015⁴** – Amsterdam – 8 July 2015 (attended)
- **RDA 6th Plenary⁵** – Paris – 23-25 Sept 2015
- **ISC Cloud and Big Data⁶** – Frankfurt - 28-30 Sept 2015
- **OpenFOAM User Conference 2015 (3rd)⁷** – Stuttgart – 19-21 Oct 2015
- **ICT 2015⁸** – Lisbon – 20-22 Oct 2015
- **European Data Forum 2015⁹** - Luxembourg - 16-17 Nov 2015
- **European Innovation Summit (7th)¹⁰** Brussels – 7-10 Dec 2015
 - 8th edition to take place 10-13 Oct 2016
- **Helix Nebula General Assembly** – Heidelberg – 19-21 Jan 2016
- **Cloudscape VII¹¹** – Brussels – 9-10 Mar 2016

More will be identified as activities progress.

4.1.4 Network

Gathering and analysing existing activities through the project partners will maximize synergies between the project and external sources and to develop links with individual companies as well as government agencies, technology transfer offices and EU-funded projects and initiatives.

² <http://www.bdva.eu/?q=summit>

³ <http://www.bdva.eu/?q=task-force-8>

⁴ <http://www.fortissimo-project.eu/forum/fortissimo-forum-2015.html>

⁵ <https://www.rd-alliance.org/plenary-meetings/rda-sixth-plenary-meeting.html>

⁶ <http://isc-cloudbigdata.com/>

⁷ <https://www.esi-group.com/company/events/2015/3rd-openfoam-user-conference-2015>

⁸ <http://ec.europa.eu/digital-agenda/en/ict2015-innovate-connect-transform-lisbon-20-22-october-2015>

⁹ <http://2015.data-forum.eu/>

¹⁰ <http://www.knowledge4innovation.eu/7th-european-innovation-summit-7-10-december-2015>

¹¹ <http://www.cloudscapeseries.eu/Pages/Home.aspx>

The EGI-Engage SME engagement activity has already started to define its network of relevant contacts comprising 35 private organisations of which more than 20 are SMEs. Over the next two years, efforts will be spent in evaluating and augmenting this network with the business objectives firmly mind.

4.1.4.1 Multipliers

In the present context, multipliers are associations and organizations that may provide dedicated support activities to outreach and dissemination activities. Partners will interact closely with multipliers with the aim of leveraging their pools of relevant contacts with regard to targeted messages. Multipliers connected with the business objectives comprise: Technology Transfer Offices, Chambers of Commerce, European Business and Industrial Associations, and SME support organizations such as Big Data Europe, FIWARE, i4MS and Fortissimo. Business activities will build on its current network of multipliers to improve the effectiveness in promoting EGI to industry.

4.1.4.2 Collaboration Agreements

Collaboration agreements represent an opportunity to enable EGI and selected projects and organizations to work towards common objectives in a way that is mutually beneficial. Such agreements may have technological relevance or support dissemination and outreach activities, such as co-located events and the publication of articles, and announcements through relevant channels. Potential agreements have already started to be discussed such as with UberCloud, TerraDue, Dropbox, Mathworks, CloudSME.

4.1.4.3 Media

The EGI-Engage business activities will continue to foster relations with media publications such as iSGTW to ensure targeted coverage of EGI business related activities and exploited the EGI Inspired newsletter with relevant information as well as its social media channels e.g. Facebook, Twitter, LinkedIn.

4.2 Relevant actions covered by EGI-Engage

4.2.1 SME Engagement

This activity provides the main support channel for SME engagement activities. The dedicated activity within WP2 has the following objectives: understand the requirements of SMEs and define models for engagement, and 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. This activity will start with an internal discussion among the participants and produce content and material. Promising SMEs will be 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 will leverage in open data generated in selected fields and possibly may use EGI resources as enabling systems. Some of these projects are expected to produce outcomes fit for commercial exploitation. This activity for will be developed throughout the whole project M1-M30.

4.2.2 Market Analysis and user requirements in selected sectors

Another project activity that complements the SME engagement activity is the market analysis and user requirements gathering in selected sectors. The objectives of this activity are to investigate 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; collect and validate a wide set of requirements from the identified SMEs that will be used to profile new and enhanced EGI services; propose recommendations for new and enhanced services for (big) and/or open data services targeting the industry and academia. This activity will focus on developing personas (descriptions of typical users) and scenarios described in detail, and then validate these assumptions in a series of interviews with potential users. The scope of the interviewees is intended to cover different roles, segments, and activities. This activity also examines what problems EGI can address (market/product fit), the specific challenges, and, if possible co-develop demonstrators or prototypes. GRNET is responsible for the lead and the production of the deliverable D2.10.

This activity will also look at the identification data sharing policies and legal aspects as well as a market analysis for fishery and marine scientific. The aim is to:

- Explore legal barriers in sharing fishery & marine sciences datasets (raw and processed data) with other institutions and communities, which would prevent research and business opportunities.
- 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.
- Validate a use case with a selected community of a regional database targeting fisheries' productivity.
- Devise a context where infrastructure support to processing a mix of public and non-public datasets results in improved data availability whilst respecting legal dissemination boundaries.
- Advise on how the legal interoperability is best supported through infrastructure security, especially where storage and access arrangements are required (e.g. to support confidentiality needs of data owners). This issue will be done by working with Regional Fishery Bodies on the development of regional databases in support to stock assessment and fishery management, or discussing value of public data in data value added chain with its community partners.

4.2.3 EGI Marketplace

Another area of opportunity for industry will be through the establishment of an EGI marketplace. This project task involves the analysis and development of a legal, policy and business framework for a marketplace capability that would allow the request, provision, accounting, billing of e-Infrastructure services. The activity will develop scenarios for allocating capacity to research communities in collaborations with pilot user communities (user-driven scenario development),

identify incentive mechanisms for resource centres to provide capacity, analyse revenue streams (e.g., PCP, PPI, direct charging to users, free service at point of delivery), analyse integration with other marketplaces (e.g. Helix Nebula, DBCE). Outputs of the pay-for-use activity, SME engagement and the procurement study will be fed into this work.

4.2.4 Procurement

With e-Infrastructures evolving towards service-oriented provision with on-demand allocation and pay-for-use capabilities, there is an opportunity for analysing and revising the procurement process for e-Infrastructure services. Currently publicly funded resource providers and their users lack the knowledge and mechanisms to collectively bid within a public procurement process. The goal of this activity is to analyse opportunities and barriers for cross-border procurement of e-Infrastructure services and to identify best practices that could enable RIs or large research collaborations to acquire services to support their research agenda collectively. A number of RIs and infrastructure providers will contribute to the analysis and documentation of use cases. A final report will be produced identifying opportunities, barriers, use cases and best practices. The report will be disseminated to relevant authorities at national and international level, including those involved in structural funding, and feedback will be collected.

4.2.5 Pay-for-Use

Finally, the pay-for-use proof of concept that is moving into production will offer a concrete means for industry to engage with EGI. Currently, EGI operates within a publicly funded research and academic environment providing services free at point of delivery with resources bought from grants dedicated to certain groups or disciplines either by direct allocation or by peer review. With the advent of cloud computing, business models and user expectations are shifting towards on-demand and pay-for-use service provision increasing flexibility and agility. This new paradigm provides motivation for EGI to explore new service definitions by enabling the possibility to provide ICT services that can be paid for the use, along with the more traditional procurement of resources to be managed and offered for free to the owners. This activity is closely linked to the EGI SME engagement, procurement, and marketplace.

4.3 Priorities and General Actions

The EGI Business Engagement Programme was discussed by the EGI Council on 12 February 2015. The main feedback was to define priorities to the various areas to ensure that effort matched available resources and effort was spent on high impact activities to increase return on investment. As a result of the first in a series of business related sessions at EGI events held within the EGI Conference 2015 in Lisbon, a set of initial short- to medium-term actions were prepared, discussed and agreed, which will be periodically analysed and revised.

Further details and specific actions were provided in D2.1 Communications, Dissemination and Engagement Strategy [R4], however, priorities and general actions that are matched to the effort allotted within the project [R5] can be summarized as:

Priority 1: Focusing on developing partnerships with European and National Initiatives able to serve as “multipliers”.

Priority 2: Targeting SME/industry as consumers to 1.) Support the usage of EGI services and 2.) Understand the requirements for developing/enhancing services.

Priority 3: Incorporating SME/Industry as providers to 1.) Integrate products and services within EGI 2.) Establish bulk-licensing agreements 3.) Endorse external services and make visible through EGI marketplace.

Priority 4: Developing and validating a re-usable model that can be adopted and adapted for a wider number of NGIs/Resource Centres.

General Actions (with effort from NA2.2 Strategy, Business Development and Exploitation and NA2.3 SME/Industry Engagement and Big Data Value Chain):

- Promote business engagement programme
 - EGI website page, marketing material, networking, event organisation
 - Liaise with EU and National organisations
- Facilitate the connection of EGI with SMEs at a European and National level
 - Leverage existing partner contact networks
 - Establish collaboration agreements with strategic industry partners
- Understand the requirements from SMEs
 - Top-down through market analysis
 - Bottom-up through identified use cases (agriculture, marine and fisheries)
- Attract SMEs to explore opportunities around Open Data and co-develop business models for their exploitation
 - Identify stakeholders and related interests, as well as competing players
 - Determine value chains and revenue streams
 - Provide recommendations of how to address the opportunities
- Create a model (similar to a master franchise) for SME engagement based on achievements and lessons learnt that will be put in practice, adopted and adapted for a wider number of NGIs/Resource Centres

5 Conclusions

This document presents a detailed description of the EGI programme for business with particular reference to main objectives and details on how the tasks will be carried out. The document will serve as a key reference guide for implementing and monitoring the core business activities during EGI-Engage.

Given the range of tasks and the various processes involved, it is essential to ensure regular interaction and effective collaboration between business partners. The document will also serve as a key tool for monitoring progress and outcomes. Furthermore, the business team should ensure that any deviations and new developments in the fast-changing IT landscape are adequately evaluated and objectives amended accordingly.

Close interaction between partners will ensure that the overriding objectives, that is, identifying and supporting potential EGI users and building on the engagement programme, are met. Dissemination and event organisation and attendance are important activities to raise and sustain awareness of EGI, to obtain information for the market analysis, and pinpoint new adopters and potential new collaborations.

Several key activities are already underway to establish concrete business relationships that will continue to solidify as other products and services are introduced over the life of EGI-Engage.

6 References

No	Description/Link
R1	EGI Business Engagement Programme - https://documents.egi.eu/document/2339
R2	EGI Business Engagement VT - https://wiki.egi.eu/wiki/VT_Business_Engagement
R3	List of Copyrights used in EGI Collaboration - https://wiki.egi.eu/wiki/Copyright
R4	EGI-Engage D2.1 “Communications, Dissemination and Engagement Strategy” - https://documents.egi.eu/document/2489
R5	EGI-Engage WP2 (NA2) Strategy, Policy and Communications - https://wiki.egi.eu/wiki/EGI-Engage:WP2

Appendix I. Summary of the three-tier level structure for engagement

This table summarises the three-tier level of relationship between EGI and business sector representatives at both European and local level, more detailed information follows:

	Member	Associate	Partner
Inclusion in marketing material/presentations/website	✓	✓	✓
Access to test bed resources and basic support	✓	✓	✓
Access to open research datasets, tools and apps	✓	✓	✓
NDA (if requested)	✓	✓	✓
Lightweight Cooperation Agreement	✓		
Limited term formal MoU (max 12-month cycles)		✓	
Opportunity to participate in EC-funded projects with EGI and partners.		✓	✓
Specialised consultancy		✓	✓
Presentation and promotion opportunities at EGI events (e.g. reduced sponsorship prices)		✓	✓
Formal allocation of resources and advanced support		✓	✓
Membership to the Business Advisory Board*		✓	✓
Long-term Partnership Agreement (e.g. 2-year) - benefiting from expertise of EGI community			✓
Stronger role in the EGI governance**			✓

**The Business Advisory Board is a group of business representatives who advise EGI on business needs and opportunities and helps guide the strategic direction of this world-leading e-infrastructure.*

*** The mechanism needs to be defined*

EGI Business Engagement Programme Member

This initial level allows business of all sizes to engage with EGI, get information about the research community it serves, get exposure to the community through joint promotion and get access to testbed resources, open research datasets, tools and apps. Membership in the engagement programme has a low administrative overhead.

Formalisation

The document for formalising the relationship can be a lightweight, standard cooperative agreement, with generic text about the collaboration. It may also include a mutual NDA, if needed. It will include generic formal statements through which the potential participant will declare their adherence to European, relevant national law, and any other EGI policies such as not misusing the resources made available for them, IPR and copyright.

EGI Business Associate

The EGI Business Associate programme is for companies who commit to deeper level of interaction with EGI. They are eligible for all benefits listed for the previous level, including using the EGI infrastructure testbed and open research data sets, but may imply more technical engagement. In addition, an EGI Business Associate would benefit from:

- Participating in special EGI meetings and events to network with this European and global research community, opportunities to present at EGI conferences.
- Contact with technical outreach teams and systems experts to develop plans for technical engagement.
- Being eligible for formal allocation of resources.
- Membership on the EGI Business Advisory Board.

Formalisation

A Memorandum of Understanding (MoU) is best suited to formalise this relationship, because is a formal but light approach with a reasonably low barrier to engagement, which allows the future associates the flexibility they need to focus on work and maximise resources. MoU templates are already available¹².

EGI Business Partners

Business partners are organisations that aim to have a very deep level of commitment with EGI, sharing strategic goals in a long-term commitment. This level would be required when developing the distribution channels of a pay-for-use activity, or exploitation of technological outputs arising from EGI project activity. The last bit is particularly relevant for the development of the (big) Open Data Value activities. Business partners may have previously been Business Associates. EGI Business Partners would also have the opportunity for a stronger role in the EGI governance. The specific mechanism needs to be defined.

Formalisation

This level requires an agreement specific for each Business Partner and EGI (being it as the whole organisation or any of the EGI member(s)). It may require a Memorandum of Understanding, a contract or even a joint-business venture.

¹² <https://documents.egi.eu/document/87>

Appendix II. Business Engagement Centres

European Business Engagement Centres

The network of business centres is entitled to receive guidance and support for performing the activities. Leadership and coordination will also be needed to increase the impact and the efficiency of the activities performed at the local level (see following section). There are also activities whose value emerges especially at a coordinated European level (such as liaising with European organisations or contribution to the shaping of European policy).

The activities proposed are:

- Support local business centres to formulate relevant messages towards local industry (guidelines and support).
- Organise internal trainings for acquisition of knowledge of Business Centre's on business issues and on their activity about SMEs instruments, description of business models, coordination, legal and organisational issues, PPPs, fair market, public funding use, etc.
- Coordinate and produce materials for informing funding and political bodies (e.g. EC) about the activity with industry, the exchange experiences and opportunities between industry and the whole EGI at a European level.
- Participate in events and public contributions for defining new instruments and influencing the definition of related policies.
 - Participate in external forums with a goal in connecting industry and business sector and organised by other players.
 - *Objective:* raising the awareness about EGI activity and the opportunities to engage, gathering user requirements, networking.
 - Liaise with similar programmes/activities in other pan-European infrastructures (e.g. GEANT, PRACE, EUDAT).
 - *Objective:* Exchange of information, development of common activities, lobbying for purposeful funding instruments.
 - Study and liaise with European SME instruments¹³.
 - And European Business Associations e.g. PIN-SME, IraSME, Enterprise Europe Network.
 - Lead the Business Engagement Programme, set best practices.
 - Organisation of events (free for SMEs) of interest for both academic and business sector, which can be co-located with EGI community forums.
 - Reaching businesses and demonstrating the value of distributed computing.

¹³ <http://cloudsme.eu/> - <http://www.cloudforeurope.eu/> - <http://www.cloudingsmes.eu/> - <http://www.ocdirectory.org/organization> - <http://www.eu-maths-in.eu/> - <http://www.fortissimo-project.eu/>

- Opportunity to exchange knowledge and gain experience in the use of technologies (tools, APIs).
- Addressing new challenges: Scientific Big (Open) Data with activities such as datathons, hackathons.
- Workshops, master class, and information meetings on distributing computing at various own or external events.
- Formats to be considered, other organisations.
 - Study Groups with Industry¹⁴
 - ELIXIR Innovation and SME programme.
 - PRACE industry events.
 - Almere Big Data Value Centre organised events for SMEs.

Local/National Business Engagement Centres

Dedicated Business Engagement Centres in a few NGIs (e.g. 3-7). This is a seed for future enlargement acting as a learning structure to define, develop, and test mechanisms that can later be adopted at a larger scale.

- A lightweight survey/ mailing list message among all EGI members for recruiting those willing NGIs will be conducted. Especially interesting are those NGIs with experience in liaising with the business sector.
- Propose the creation of an 'EGI Industry Ambassador' or Business Developer figure – possibility to add the role to an existing outreach figure (NIL, champion) or creating a brand new one.

Activities that the Business Engagement Centre Network is proposed to conduct:

- Mapping and contacting the SME associations and similar organisations that can bridge with SMEs and other business at local level and identify the responsible persons and contact details.
 - This activity is essential because these organisations have a deep understanding of the needs and potential of their SMEs for collaboration with EGI. Its multiplying effect has a big impact with a relatively small effort.
- Characterise (market analysis) the most potential sectors/segments for collaboration: the ones having rapid growth, more dynamic, more innovative, etc.
 - e.g. Bioinformatics as undeserved segment. The new technologies in DNA sequencing are making available a big amount of data that can be processed and turned into business opportunities.
 - Food and agriculture, Earth Sciences, ...
- Produce suitable marketing materials for approaching SMEs/business localised at their local market.

¹⁴ <http://miis.maths.ox.ac.uk/how/>

- Adaptation and localisation of the material produced at the European level and own material if needed.
- A clear message and offering has to be developed. Some possible examples are (for more examples check:
 - Membership to Business Engagement Programme
 - Participation in selected EGI projects
 - Standard/tailor-made support package
- Participate in events and public contributions representing EGI and business engagement in their area of responsibility.
- Actively look for and reach out to SMEs/other business in their area of responsibility.
- Organise workshops, master class and similar events to raise the awareness of EGI offering and promote activities (similar to typical sales activity). Some of the NGIs have already done it by individual initiative. Those NGIs with less experience can start by participating/collaborating with the ones organised at a European level, and when ready work on a more independent basis.
- Participate in internal workshops and activities aimed to increase their skills in these activities (as those organised by the business centre network at a European level).

Appendix III. Example of Support Package

This is an example of one possible supporting service, which can be agreed at a local level by the EGI member and the supported Business Programme member. This can be done on a pay-for-use, or completely for free or a combination of both. The experience shows that this package is very effective in supporting SMEs and has good impact on the acquisition of future clients (on a pay-for-use business model), but also as a way of proving effective actions for knowledge transfer. The benefits can be tracked down also to the improvement of the EGI member skills in technological channels and serving users communities.

1. **Pilot:** Free access to infrastructure for a limited period of time + 10/20 hours of support consultancy. Requires an internal time tracking system for accounting consultancy time.
2. **Project development:**
 - The resource centre services such as infrastructure resources and/or consultancy are offered to the SME/company on a pay-for-use basis. The pricing strategy is aligned to market price, other pricing schemes are possible though.
 - The company deploys their software in a distributed environment. They can also purchase (not compulsory) additional consultancy services from them.
3. The developed software item (e.g. running algorithm, application) goes into **Production:**
 - The collaboration continues if the EGI Resource Centre's mandate allows selling infrastructure services for commercial production. Otherwise, the collaboration ceases here. Support for transferring the software to another resource provider (such a commercial cloud provider).

This package is divided in three phases to take into account the fair competition rules. The first two phases are considered pre-competitive, whereas the third enters into the domain of commercial production. The Resource Centres composing EGI have a very diverse nature and they can decide whether they take this model, what is the pricing policy, and when ceases or continues the collaboration. Supporting this transfer can still be part of the mission as in some nations requires that knowledge activities have to be made available to all.