EGI-Engage

EGI Governance:

Analysis and Recommendations

D2.5

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Abstract

This document presents the EGI governance model and highlights the recent changes to the EGI.eu statutes implemented to increase flexibility, fairness and to align the structure to the ERIC legal framework. As these changes were completed during the first year of the EGI-Engage project, a major discussion on further evolution of the EGI governance was not reopened with the key stakeholders. This will be reassessed during 2016 based on the experience of operating under the new changes and in relationship with the development of the European Open Science Cloud.

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TERMINOLOGY

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

Contents

Executive summary

EGI is an international collaboration that federates the digital capabilities, resources and expertise of national and international research communities in Europe and worldwide. The main goal of EGI is to empower researchers from all disciplines to collaborate and to carry out data and compute intensive research and innovation.

The organisational and governance structure of EGI builds on EGI.eu, a not-for-profit foundation established under Dutch law in the Netherlands. The foundation has participants and associated participants drawn from NGIs[1], EIROs[2], ERICs[3], and other such legal entities. These entities participate in the foundation independantly or as the representative of a national e-infrastructure consortium. EGI.eu participants form the governing body (EGI Council).

Participants and associated participants also provide the physical and human resources and shared services that enable EGI to deliver, improve and innovate services for research communities. EGI.eu coordinates areas such as overseeing infrastructure operations, user community support, contact with technology providers, strategy and policy development, flagship events and dissemination of news and achievements.

During 2015, the statutes of EGI.eu were re-structured to increase fairness and flexibility, and to include the voice and will of all participants. In particular, the governance model was improved on the following key aspects: nature and role of participants, geographical coverage and fees model.

The new statutes still envision two roles of participation: full participant and associate participation. Nevertheless the conditions have changed as now participants and associated participants can also be EIROs, ERICs and such other legal entities, in their own capacity or as a representative of a consortium, that contribute to the objective of the EGI Foundation. This would allow user communities to be represented in the decision making process of the e-Infrastructure. In addition, participation is now open to non-European Countries. This enables part of the EGI strategy to open up at a Pan-European level, thus acquiring a global role. An affiliation partner program was also introduced to give a temporary role and try out the participation in EGI.

A new fee model was introduced linking voting rights and fees on a new scale of 6 levels, depending on the country of origin. Associated participants pay 50% of the fee indicated by the corresponding fee level. Finally, the governance model was better aligned with the ERIC structure in order to prepare for an easy transition if a decision in that direction will be taken in the future.

As these changes were completed during the first year of the EGI-Engage project, a major discussion on further evolution of the EGI governance was not reopened with the key stakeholders. This will be reassessed during 2016 based on the experience of operating under the new changes and in relationship with the development of the European Open Science Cloud.

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[1] NGI: Organisation representing a national e-infrastructure which provides long-term distributed compute and storage resources for research and innovation
[2] EIRO: European Intergovernmental Research Organisation
[3] ERIC: European Research Infrastructure Consortium

1 Introduction

Over the last decade, EGI has built a federation of long-term distributed compute and storage infrastructures that support research and innovation. This international e-Infrastructure has delivered unprecedented data analysis capabilities to more than 46,000 researchers from many disciplines. The federation brings together more than 350 data and compute centres worldwide. EGI is coordinated by a not-for-profit foundation, EGI.eu, and funded through a combination of participant fees, national and EC funding.

Today, EGI provides both technical and human services, from integrated and secure distributed high-throughput and cloud computing, storage and data resources to consultancy, support and co-development. The benefits of EGI are:

> *EGI in Numbers**
>
> EGI: 32 countries + CERN + EMBL
>
> EGI Federation: 51 countries + CERN + EMBL
>
> Virtual Organisations: 290
>
> Users: ~46,000
>
> Resource centres: 335
>
> Federated CPU cores: 650,000+
>
> Federated storage (disk): ~310PB
>
> Computational Jobs: ~ 1,6M/day
>
> Virtual Machines: ~ 1,3K/day
>
> **(Feb 2016)*

1. Ensuring uniform and reliable availability of resources to researchers on a local, national and European scale
2. Enabling faster production of scientific results through collaboration across organisational and national boundaries
3. Promoting open and collaborative science and ensuring open access to shared resources and expertise
4. Allowing researchers to focus on their research rather than managing their e-Infrastructure needs
5. Providing effective utilisation of resources in different administrative domains to ensure the most effective return on infrastructure investments
6. Facilitating the innovation and sharing of solutions by building a thriving ecosystem through community events and collaborative services.

This document presents an overview of the EGI Governance and its recent update towards a more flexible model following this structure: Section 2 starts off describing EGI and its governance structure and how the different boards interact with the governance of the EGI-Engage project; Section 3 describes how the Governance system has been modified over the last year and the motivations that support the new statutes; Section 4 focuses on the analysis of the ERIC framework, first outlining how the new statutes are compliant with this model and what is still missing; Section 5 concludes the document by summarising key points and outlining future work.

2 Governance Structure

The organisational and governance structure of EGI builds on EGI.eu, a not-for-profit foundation established under Dutch law in the Netherlands. The Foundation has participants and associated participants drawn from NGIs[4], EIROs[5], ERICs[6], and other such legal entities. These entities participate in the foundation independantly or as the representative of a national e-Infrastrcuture consortium. EGI.eu participants form the governing body (EGI Council). Participants and associated participants also provide the physical resources and shared services that enable EGI to deliver, improve and innovate services for research communities. EGI.eu coordinates areas such as overseeing infrastructure operations, user community support, contact with technology providers, strategy and policy development, flagship events and dissemination of news and achievements. Figure 1 clarifies the relationship between EGI.eu, EGI, the EGI Federation and the EGI Community.
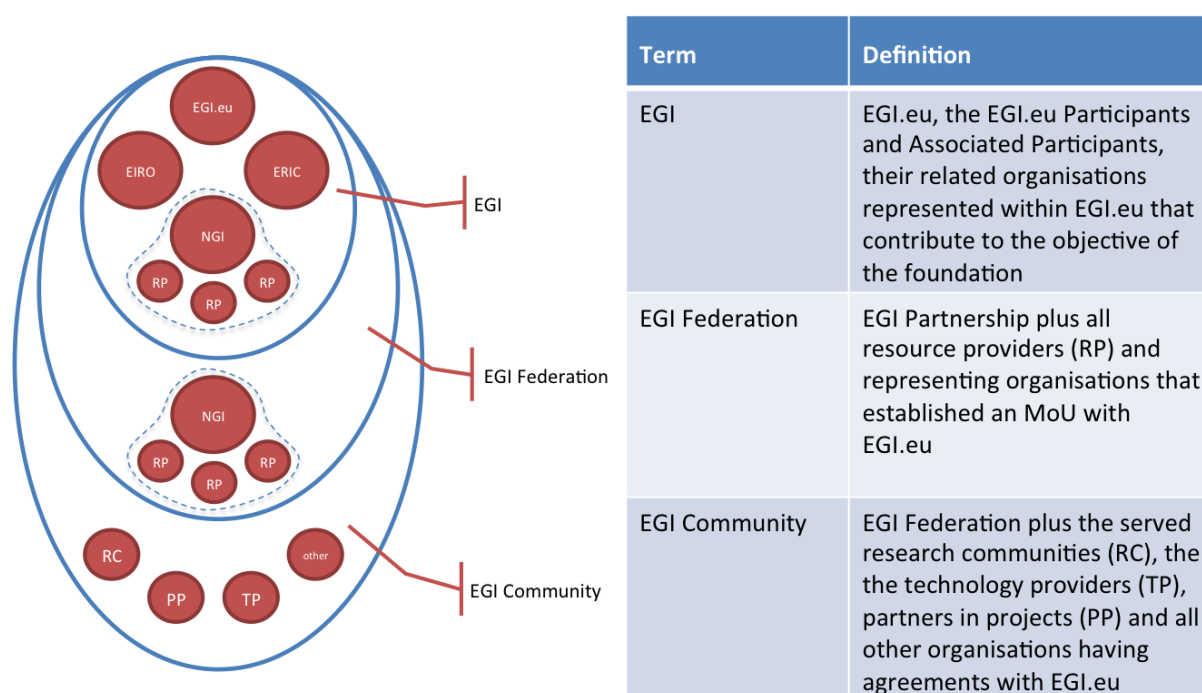

Term	Definition
EGI	EGI.eu, the EGI.eu Participants and Associated Participants, their related organisations represented within EGI.eu that contribute to the objective of the foundation
EGI Federation	EGI Partnership plus all resource providers (RP) and representing organisations that established an MoU with EGI.eu
EGI Community	EGI Federation plus the served research communities (RC), the the technology providers (TP), partners in projects (PP) and all other organisations having agreements with EGI.eu

Figure 1: Defining EGI, EGI Federation and EGI Community

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[4] NGI: Organisation representing a national e-Infrastructure which provides long-term distributed compute and storage resources for research and innovation
[5] EIRO: European Intergovernmental Research Organisation
[6] ERIC: European Research Infrastructure Consortium

2.1 EGI.eu Statutes and Governance Bodies

EGI.eu has adopted the legal form of a 'Foundation' under the Dutch law. Its statutes[7] was recently updated during 2015 and defines the objectives of the foundation, the composition in terms of participants and associated participants, the organisation and tasks of the Council and Executive Board (EB), the role of the Director.

2.1.1 Council

The Council[8] is the supervisory authority and monitors the general course of affairs in the Foundation. It consists of participants and associated participants of the foundation. Only participants have voting rights proportional to the paid fee, while associated participants cannot vote. The Council is also responsible for appointing the chairperson and the members of the Executive Board. The Terms of Reference (ToR) for the Council is defined by the EGI.eu Statutes and by a dedicated ToR.

2.1.2 Executive Board

The Executive Board[9] is charged with the management of the foundation, for which it is accountable to the Council. It is composed from minimally five and maximally nine members appointed for a maximum period of two years. A number of resolutions of the Executive Board are subject to the approval of the Council (e.g. adoption of the budget, employment conditions of the personnel employed by the foundation). The Executive Board devolves financial and organisational responsibility to the EGI.eu Director, who is supported by a staff of ~20 people based at the EGI.eu headquarters in Amsterdam with some limited remote working staff. The Terms of Reference for the EB is defined by the EGI.eu Statutes and by a dedicated ToR.

2.1.3 EGI.eu Participants

Participants and Associated Participants can be NGIs, EIROs, ERICs and such other legal entities, in their own capacity or as representative of a consortium, that contribute to the objective of the foundation. In case of consortium representatives, membership is subject to there being a letter of support from the appropriate relevant authority indicating how the identified organisation represents the National e-Infrastructure strategy. Representation within the EGI Council would be determined by the lead member within the organisation or as defined in its statutes or within a Memorandum of Understanding (MoU) for membership with EGI. By being an EGI.eu participant, an organisation benefits from a set of activities that are delivered by EGI.eu in collaboration with a sub-set of participants listed in Table 1 and can obtain the values identified in Table 2. A comparison of Full versus Associate Membership is outlined in Table 3.

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[7] https://documents.egi.eu/document/18
[8] https://www.egi.eu/about/EGI.eu/council_members.html
[9] https://www.egi.eu/about/EGI.eu/

Core activities	Additional activities
Federated operations and tools supporting High Throughput, Cloud and Data services	Business engagement
Security/technical/operations/community coordination	Software portals
Communications and promotion	Training and capacity development
Project management and planning	Marketplace and service brokering
Strategy and policy development	

Table 1 Activities for EGI.eu participants

Area	Value	Description
Strategy & Policy	Influence European-level policy on e-Infrastructure	Improve your access to policy makers, ensure your issues are considered, e.g. to H2020 work programmes, with the support of EGI.eu. Increase your policy impact as part of a pan-European collaboration. Ensure your efforts are aligned with other countries, simplify international collaboration and support transnational access
	Improve your transfer of innovation to the private sector	Simplify your engagement with the private sector to achieve impact for your research and demonstrate resulting innovations. Be seen as more commercially relevant by funding bodies
	Influence EGI strategy to better support your international users	Influence the evolving joint European service portfolio; check that it matches the needs of your local/national research groups
Funding	Improve access to H2020 funding	Take a leading role in H2020 calls, benefit from the shared reputation of the EGI community, get invited to proposals directly or as a third party due to your EGI participation
	Explore innovative revenue generation models	Benefit from new revenue generating activities, such as acting as an EGI subcontractor or participating in the 'pay for use' programme to receive money in return for resource access
Skills Development	Improve the skills of your personnel through accessing community knowledge, expertise and training	Share knowledge with other EGI participants and increase your community skill levels through working with European experts in many areas, e.g. service management and data science

Technical	Access common tools, services and processes to operate a federated infrastructure	Benefit from a suite of technical tools, internal services and management processes that support federated operations. Avoid building your own alternatives and facilitate cooperation
	Promote your services in a shared marketplace	Get access to a common marketplace supporting a wide range of commodity services, also supporting independent use by smaller communities and the long tail
Community Building	Improve your access to requirements from ESFRIs and emerging user communities	Use strong connections of EGI to user communities and ESFRIs to better understand needs and serve their users
	Connect your local users with international collaborations	Help your local research communities grow to a European or global scale. Help them finding collaborators and highlight their successes

Table 2 Values for EGI.eu participant

	Full Participants	Associate Participants
Advertised on EGI website, according to type of membership	√	√
Attend Council meetings	√	√*
Vote on any decision submitted to the council	√	
Participate to working groups**	√	√
Be elected as chair of the Council or as EB member	√	
Access the member benefits (see Error! Reference source not found.**)**	√	√
Be part of the "linked third party" mechanism to join proposals (e.g., projects in H2020)	√	
Benefit from the new EC regulation about public procurement	√	
Access Strategy and Policy Decision Support briefing and document reports	√	
Compensate Infrastructure Fees with in-kind contribution**	√	

* Only upon express invitation and as observer only
** In the form and conditions defined by the council and supervised by the in-kind committee

Table 3 Comparing EGI.eu participants

Participants pay a fee based on a six-level scheme defined in Table 4. Participants connected to a country pay according to the GDP of their country of origin. For International Research Infrastructures (e.g. EIROs and ESFRIs), the fee is calculated according to the size of the International consortium. For other organisations such as industries and SMEs, fees need to be defined. Full participants have a number of votes related to the paid fee, while associate

participants pay 50% of the fee indicated by the corresponding fee level, but do not have voting rights.

Category (1)	Full Participant		Associate Participant Fee (€)
	Fee (€)	Votes	
> 2,000,000	€ 90,000.00	90	€ 45,000.00
750,000 < x ≤ 2,000,000	€ 75,000.00	75	€ 37,500.00
300,000 < x ≤ 750,000	€ 55,000.00	55	€ 27,500.00
100,000 < x ≤ 300,000	€ 40,000.00	40	€ 20,000.00
30,000 < x ≤ 100,000	€ 25,000.00	25	€ 12,500.00
0 < x ≤ 30,000	€ 10,000.00	10	€ 5,000.00

Table 4 Participant fees levels

Affiliation partners program

During 2015, the EGI Council approved an affiliation partners program that aims to give a temporary role derived from the Associate Participant status to candidate organisations. Eligible organisations and/or NGIs can apply for a period of 12 months renewable once. It can be exceptionally extended for a third year upon approval of the Council after a proposal from the Executive Board. The Executive Board shall decide on each membership request temporarily. Decisions of the EB have to be confirmed by the subsequent Council meeting. Affiliated partners will pay a membership fee as decided by the EB and approved by the Council. Typical Affiliated partners can include organisations and/or NGIs who either:

- Want to have a first contact with the infrastructure;
- Are in a country where there is no national strategy;
- Does not have a proper e-Infrastructure in place;
- Want to assess the interest of such e-Infrastructures for their scientific communities.

They can be either from non-European or associated country or European or associated country with a GDP of up to US$100,000 million. The fee is set up at 1,500 euros/year regardless the type or size of the organisation.

2.2 Other relevant EGI Groups

Other EGI groups and boards have been created to define policies and procedures within a specific functional area. Each group has well-defined responsibilities, composition and operational procedures via Terms of Reference. The main relationships are depicted in Figure 2.
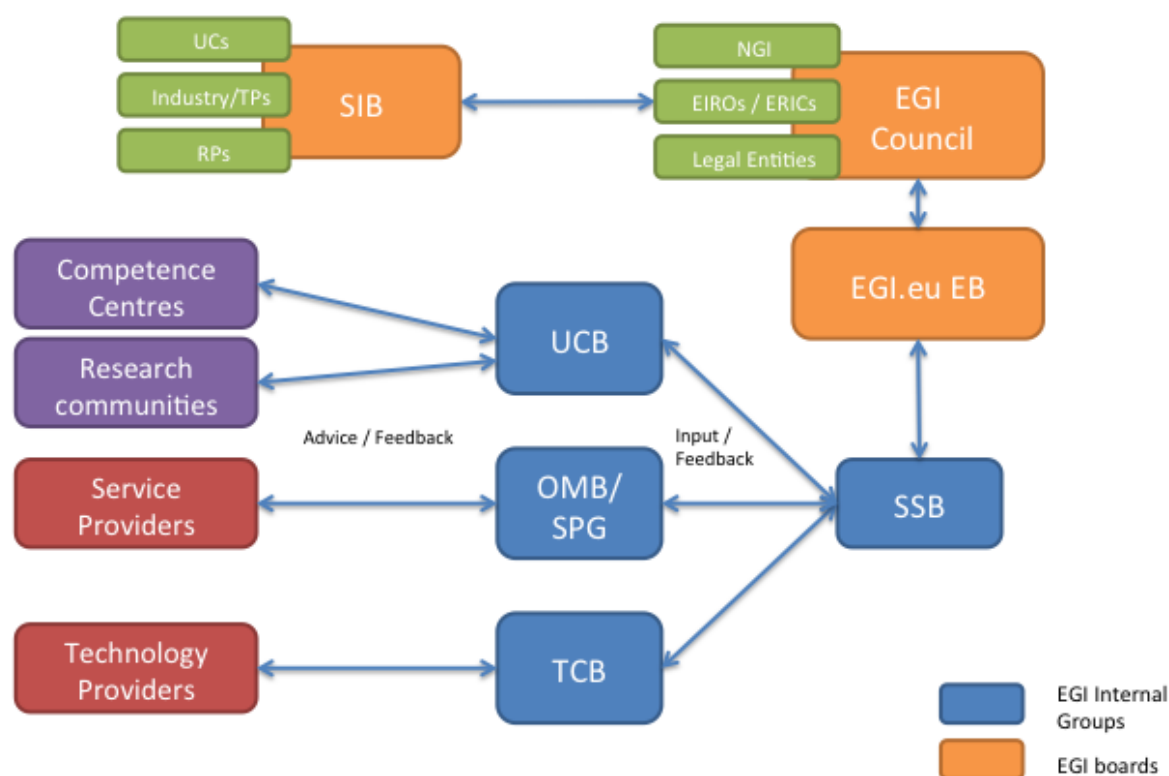

Figure 2: Main relationships among EGI governance bodies

2.2.1 Strategy and Innovation Board (SIB)

The Strategy and Innovation Board (SIB) is an external advisory body that provides advice and guidance to the EGI council and to EGI.eu leadership about the strategy in the area of: relationship and service provision to user communities, relationship to other e-Infrastructures, relationship to industry, technology and innovation; e-Infrastructure organisation and management. The SIB will have ownership of strategy and innovation recommendations, which are intended to be formalised within a living document that will be maintained and updated through regular meetings. Members of the SIB will be appointed during 2016 through an open call mechanism managed by the EB.

2.2.2 User and Community Board (UCB)

The User Community Board (UCB) gathers feedback from the user community relating to the quality of the production infrastructure and prioritises issues requiring management attention for resolution through the OMB. It also defines and prioritises requirements relating to new functionality in the production infrastructure or the user facing operational tools. The UCB includes representatives from the research communities and projects served by EGI.

2.2.3 Operations Management Board (OMB)

The Operations Management Board (OMB) is an advisory body, which develops strategy and technical priorities concerning the deployment and operation of the production infrastructure, oversees the status and progress of the global EGI operational services and of the NGI operational services. Responsibilities of the OMB include the development of policies and procedures that require formal consensus from the NGI operations managers and their respective resource providers, the collection of requirements from the EGI resource providers, the definition of work plans the long-term development of the EGI operations.

2.2.4 Technology Coordination Board (TCB)

The Technology Coordination Board (TCB) provides the focus for the technologies that will be used within the EGI production infrastructure to deliver distributed computing services for the research communities. The TCB carries out strategic activities, such as coordinating the technology evolution and insertion across platforms deployed in the EGI production infrastructure, act as a liaison hub to connect with Research Infrastructure technology coordinators, source components in UMD through bi-lateral relationships with technology providers in the community. The TCB is under reorganisation and new terms of reference will be proposed during 2016.

2.2.5 Services and Solutions Board (SSB)

The Services and Solutions Board (SSB) is responsible for managing the portfolio of services and solutions regarding EGI.eu and the EGI federated services. This includes all services and solutions that are planned, active or to be retired. The SSB also conducts regularly scheduled management reviews of both services and solutions portfolios and related ITSM processes. It also collects inputs from the UCB concerning the services and solutions for the research communities, from the TCB concerning the evolution of technology and how this can affect services and solutions; from the OMB concerning the services and solutions for resource providers.

2.2.6 Security Policy Group (SPG)

The Security Policy Group (SPG) is responsible for developing the policy needed to provide a secure, trustworthy distributed computing infrastructure. The SPG output defines the behaviour expected from NGIs, Sites, Users and other participants to maintain a beneficial and effective working environment. The SPG also seeks to prepare and maintain simple and general policies which are not only applicable to EGI, but that also to other distributed computing infrastructures.

2.3 Funding Model

EGI.eu and NGIs are bodies created to provide coordination and to manage the infrastructure. Whereas EGI.eu would fill the European position, NGIs would be in the National part of the transnational-axis. The budget/monetary perspective is given by the presence of the funding bodies, which again can be either European, national or local. This network could be expanded with commercial parties, which could fill a wide number of roles such as for example e-Infrastructure providing commercial resources, developers, or even users of some of the services. This section provides a brief overview on the EGI.eu funding model.

2.3.1   Participant Fees

The participant fees aim at giving EGI.eu the financial capacity to ensure all of the shared services necessary to coordinate the provision of the e-Infrastructure through its resource providers and make it available to the different scientific communities; coordinate a common voice to national and international policy; ensure communication, outreach and community engagement.

2.3.2   European projects

Participation in European projects is not only aimed to increase opportunities for socio-economic impact or to ensure the future sustainability of EGI as collaboration, but also is meant to align with the main objectives of the European Commission, made explicit in the definition of the H2020 strategy. In particular, it allows to accelerate the implementation of the Open Science Commons vision, where researchers from all disciplines have easy and open access to the innovative digital services, data, knowledge and expertise they need for their work; facilitate the deployment and promotion of a pan-European identity federation; deploy new service models and user tools to tackle the challenges of the Big Data era.

2.3.3   Other funding streams

2.3.3.1   "Pay for use" business model

Until now, EGI has operated 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 with increasing flexibility and agility.

This new paradigm provided 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.

EGI.eu is leading the activity of exploring the pay-for-use business model in collaboration with key resource providers. This additional business model will be rolled out in production during 2016 (more information can be found in D2.9 "EGI Sustainability and Business Development Plan"[10]).

2.3.3.2   Training and consultancy

Over the last years, EGI.eu has contributed to the definition and adoption of a standard for lightweight service management in federated infrastructures (FitSM). This standard envisions also a training and certification program. Given the need to stimulate the adoption and improvements of skills and practices across all resource providers' part of EGI, EGI.eu has defined a new training service with a paid business model[11].

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[10] https://documents.egi.eu/document/2669

[11] http://www.egi.eu/services/catalogue/fitsm/index.html

2.4 Relationship to the EGI-Engage governance

EGI-Engage is the flagship project supporting the coordination and evolution of EGI. It is important that its governance is well aligned with the EGI governance so to ensure and efficient delivery of the expected outcomes. The main governance bodies are:

- **Collaboration Board (CB):** It includes one representative per partner and is chaired by one of the members (rotating chair); it is the ultimate decision-making body of the consortium and is responsible for all decisions having a direct legal and financial impact on consortium members; all partners are entitled to send one voting representative to the CB;
- **Project Management Board (PMB):** it acts as the executive and supervisory body of the project, reporting and accountable to the CB; it is composed of one member representing the Coordinator, 6 members from EGI Participants and 5 members from Competence Centres; it is responsible for coordinating the project and implementing the decisions of the CB.
- **Activity Management Board (AMB)**: it is responsible for monitoring the progress of the project and the day-to-day management of the individual activities within the; it has representation from all the work packages and Quality manager.
- **Administrative and Finance Coordinator (AFC):** responsible for administrative and financial coordination within and across work packages, serving as the official contact point for the European Commission and ensuring that the project is carried out efficiently and in accordance with the contractual obligation; the AFC is the EGI.eu Director;
- **Technical Coordinator (TC):** leads the execution of the project and ensures the technical integration of the work delivered by each WP; the TC is the EGI.eu Technical Director.

The coordination of the EGI Community (as shown in the Figure below) is achieved by interacting with the EGI policy boards active in the various domains: technology, operations, user community and policy: WP2 strategic activities will support the EGI.eu Executive Board, the EGI Council; innovation management will involve the Strategy and Innovation Board; the WP2 leader is the EGI.eu Strategy and Policy Manager; WP3 and WP4 will liaise with the external Technology Providers via the Technology Coordination Board (TCB). The TC will lead the TCB; the EGI.eu Senior Operations Manager chairing the Operations Management Board will lead WP5; the EGI.eu Technical Outreach Manager will lead the User Community Board and WP6.
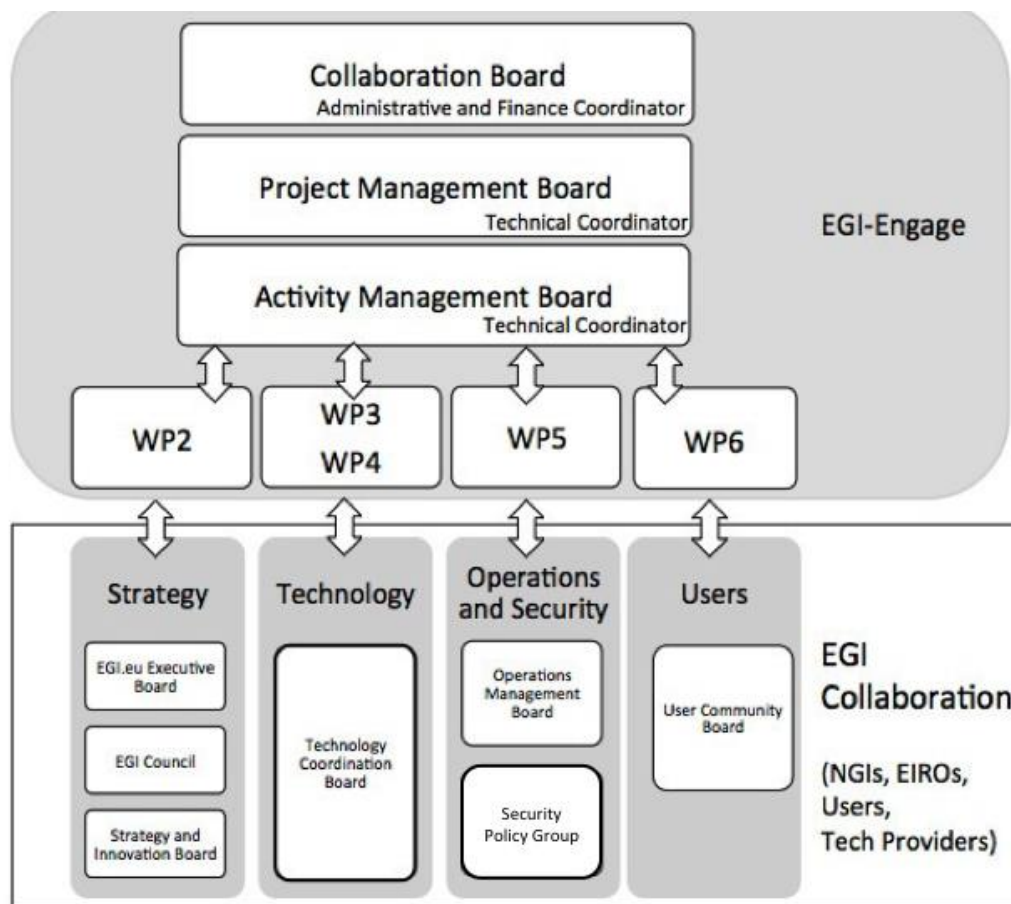
Figure 3: Relationship between the EGI-Engage management structure and the EGI Boards

3 Recent changes to the EGI.eu Statutes

A Governance Task Force was established to address the governance issues and opportunities in order to propose a set of structural changes for improvement. It ran from March 2014 to May 2015. The main objectives were to:

- Review and ultimately reinforce the value of EGI and EGI.eu to its participants
- Identify different types of stakeholders
- Define an alternate membership system and fee scheme
- Explore different options of legal structures e.g. public, private, and full commercial
- If required, revise the legal entity of EGI.eu and the VAT position.

The aim was to revisit the current mission statement taking also into account all the changes that current members have gone through over the last years. Among the tools and the ideas explored there were: benchmarking of other similar structure of European bodies; exploring the idea of increasing flexibility and permit Resource Centres to join directly without going through an NGI; and determining the nature and definition of in-kind contribution; improve user representation.

After some iteration, it was understood that minor changes were needed to address the current concerns in the short term. The adopted changes are expected to enable EGI to continue forward for the next one/two years as they would clean a number of exceptions in the fee payments that have become recurring, thus removing the sense of urgency and pressure for changes in the short term. The Council addressed also the re-framing of a long-term vision for the role of EGI in the e-Infrastructure e-Commons and the related suitable governance (e.g. ERIC). The result of the task force led to new statutes that were approved by the Council 22 May 2015. The main changes that were adopted are:

- New fee scheme based on six levels and linked to the GDP, with allocated number of votes
- Minimum fee level raised to 10K Euros per year
- Introduced the affiliation program
- All organisations eligible to become a participant in the EGI.eu foundation can opt either for an associated participant position (if interested only in the EGI.eu services) or also become full participants (if wanting to have voting rights and have an active role in influencing the future strategy)
- Participants and associated participants can also be ERIC organisations
- Membership open to non-European countries
- The Executive Board can include up to two members who are not part of the Council to bring in expertise not covered by the Council representatives.

4 Relationship to the ERIC legal framework

An ERIC is a legal framework set up by the European Commission in 2009 to be used for establishing new research infrastructures or for operating existing research infrastructures that consider it useful to change their legal structure to become an ERIC. An ERIC operates under a non-economic basis although it may carry out limited economic activities related to its principal task. The ERIC legal framework may be used for new or existing single-sited or distributed research infrastructures.

An ERIC, is seen as an easy-to-use legal tool providing: 1) flexibility to adapt to the specific requirements of each infrastructure; 2) some privileges typically available to intergovernmental organisations, such as VAT and custom duties exemption as well as for the possibility of adopting its own procurement procedures; 3) a faster and more cost-efficient process than creating an international organisation. Currently, 12 ERIC organisations have been established with 5 more applications being under evaluation[12].

Between 2011 and 2012, a dedicated task force within EGI carried out a study to evaluate the opportunity to adopt the ERIC legal framework for EGI. The first document released was "Alignment of EGI.eu with the ERIC Organisational Model"[13]. Few months later, a survey was conducted among the EGI.eu participants with a report issued in May 2011[14] and the following year a discussion document for the Council was produced[15]. At that time, most of the Council participants agreed that developing an ERIC organisation only for EGI was not ideal as other e-Infrastructures exist and would benefit from a similar legal structure. To simplify the relationships and negotiations with the goverments, it was decided to propose an overarching lightweight ERIC for the key pan-European e-Infrastructures, the so called DRI ERIC. An implementation plan was presented in November 2012[16], nevertheless there was no clear interest from the other e-Infrastructures in pursuing this path.

At the time of preparing the EGI-Engage project, we considered useful to reassess the ERIC opportunity, also based on the experience of other organisations that have implemented it. Given the recent changes applied to the EGI.eu statutes, it was considered premature to reopen the discussion during the first year of the project. Therefore, this section mainly summarises the previous investigations and re-state the changes to the EGI.eu statutes that were applied during 2015 to better align the EGI governance with the one of an ERIC.

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[12] https://ec.europa.eu/research/infrastructures/index_en.cfm?pg=eric#eric

[13] https://documents.egi.eu/document/244

[14] https://documents.egi.eu/document/674

[15] https://documents.egi.eu/document/1301

[16] https://documents.egi.eu/document/1339

4.1 ERIC vs. EGI.eu Statutes

In assessing the suitability of EGI for the ERIC model we define a number of issues within the text for further discussion. There are recorded below along with an assessment as to EGI.eu's alignment with these requirements. Research infrastructures must meet certain requirements to be established by an ERIC. In order to see whether EGI.eu comply with the ERIC requirements, Article 4 of the Council Regulation is analysed.

	ERIC Requirements relating to infrastructure[17]	EGI
(a)	It is necessary for the carrying out of European research programmes and projects, including for the efficient execution of Community research, technological development and demonstration programmes	Comply
(b)	It represents an added value in the strengthening and structuring of the European Research Area (ERA) and a significant improvement in the relevant scientific and technological fields at international level	Comply
(c)	Effective access, in accordance with the rules established in its Statutes, is granted to the European research community, composed of researchers from Member States and from associated countries	Access policies are generally open although vary from country to country
(d)	It contributes to the mobility of knowledge and/or researchers within the ERA and increases the use of intellectual potential throughout Europe	Comply
(e)	It contributes to the dissemination and optimisation of the results of activities in Community research, technological development and demonstration	Comply

Table 5 – Assessing ERIC requirements for the EGI infrastructure

Other aspects that should be considered when evaluating an ERIC are:

Non-profit status

The ERIC framework would allow EGI.eu to continue carrying out all the activities that are currently performed. Concerning the nature of activity in Article 3.1 it is stated: *"An ERIC shall pursue its principal tasks on a non-economic basis. However, it may carry out limited economic activities closely related to its task, provided that they are closely related to its principal task and that they do not jeopardise the achievement thereof"*. It is clear that infrastructure should stay non-profit oriented likewise in the current foundation framework. Nevertheless, potential implications related to future business model should be investigated, especially considering the push towards closer collaboration with the private sector for innovation and exploitation of research outputs.

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1   [17] ERIC practical guidelines, http://bookshop.europa.eu/en/eric-practical-guidelines-pbKI0114480/

Fast to create

The creation of a large structure with members (more than 30 of them for EGI.eu) from many countries can be quite lengthy. The ERIC legal framework requires a very formal, hence, lengthy establishment procedure. This, as well as the probable long internal process of reaching an agreement on specific mandate given by states to the NGIs, should be taken into account in calculating the timeline for establishing EGI.eu as an ERIC. Although the time for processing an ERIC application is structured and relatively short, considerable time will be needed to prepare the application. Specifically, it requires appropriate communication and lobbying with the potential member states in order to come up with the agreements needed for the content of the application. The EGI council will have an important role in trying to streamline this process. Thus, the formal application for setting-up an ERIC is just the final step of a long negotiation process not only between EGI.eu and potential members, but also between the potential ERIC members in order to agree to continue to operate a European research infrastructure together under this evolved legal structure. After the formal submission of the application to the European Commission, the Commission will need 3 to 9 months to make the final decision. It will therefore take at least 3 to 5 years to become an ERIC organisation.

Located in a EU member State

Article 8.1 states that: *"An ERIC shall have a statutory seat, which shall be located on the territory of a member which shall be a Member State or an associated country"*. Therefore, EGI.eu complies with this requirement.

Autonomous legal entity

It is of great importance to have a legal framework that can allow the EGI organisation to have a full legal capacity and independence in choosing a suitable governance model. Therefore, it is important to investigate what are the imposed governance constraints by ERIC in order to understand how this will affect the organisational and managerial structure.

"An ERIC is a legal entity with legal personality and full legal capacity recognised in all EU Member States. Its basic internal structure is very flexible, leaving the members to define in the statutes, case by case, membership rights and obligations, the bodies of the ERIC and their competences".

In general, it is claimed that the ERIC legal framework does not impose organisational and governance rules. However, looking more in details into the Council regulation, it can be appreciated that any change to key elements of the statutes must pass through the same procedure as the setup of the ERIC itself. Such key elements are clearly identified and are:

- The name of the ERIC in compliance with Article 8(2);
- The liability regime, in compliance with Article 14(2);
- The basic principles covering: the access policy for users, the scientific evaluation policy, the dissemination policy, the intellectual property rights policy, the employment policy, including equal opportunities, the procurement policy respecting the principles of transparency, non-discrimination and competition.

Any changes to the above elements would require the European Commission's approval reducing the flexibility and independence currently provided by the Stichting model.

5 Conclusion and Next Steps

This document presented an overview of the EGI governance structure with a detailed analysis on the recent changes to the EGI.eu statutes. With the growing complexity of EGI and the aim of including the voice and will of all participants, yet be flexible enough, the governance model was improved on the following key aspects: nature and role of participants, geographical coverage, fee model.

The new statutes still envision two roles of participation: full and associate participations. Nevertheless the conditions have changed as now Participants and Associated Participants can also be EIROs, ERICs and such other legal entities, in their own capacity or as a representative of a consortium, that contribute to the objective of the EGI Foundation. This would allow user communities to be represented in the decision making process of the e-Infrastructure. In addition, participation is now open to non-European Countries. This enables part of the EGI strategy to open up at a Pan-European level, thus acquiring a global role. An affiliation partner program was also introduced to give a temporary role and try out the participation in EGI.

The feel model was also improved to increase fairness. It is now defined based on a new scale of 6 levels, depending on the country of origin and links to the number of votes. Associated participants pay 50% of the fee indicated by the corresponding fee level.

Finally, an important result of the new changes has been making the new governance model more compliant with the ERIC structure. This will simplify the transition to an ERIC if such a decision will be taken in the future.

This document presents the EGI governance model and highlights the recent changes to the EGI.eu statutes implemented to increase flexibility, fairness and to align the structure to the ERIC legal framework.

As these changes were completed during the first year of the EGI-Engage project, a major discussion on further evolution of the EGI governance was not reopened with the key stakeholders. Therefore, this document does not provide recommendations as planned at the time of the proposal. The governance evolution of EGI will be reassessed during 2016 based on the experience of operating under the new changes and in relationship with the development of ne policy initiatives such as the European Open Science Cloud.

Appendix I. Structure of governance bodies

Body	Composition	Meeting	Decision making and voting	Minutes
Council	The core participants of the Council consist of national based e-Infrastructure federations called NGIs. Countries (be they EU member states, associate countries or third countries – as recognised by the European Commission) may become members of the Council represented by the lead or other appropriate organisation within a given NGI. International Research Infrastructures (e.g. EIROs, ESFRIs) may also become members of the Council where there is a legally recognised Intergovernmental Organisation such as an ERIC or an EIRO.	The Council meets at least twice a year, face-to-face: first within six months after the expiry of any financial year in order to adopt the annual account of the past year and then in the second six month period in order to approve the budget for the following calendar year. The Council will furthermore meet whenever deemed necessary by the chairperson, or by two representatives of Participants or a member of the Executive Board. Virtual meetings are not possible, only face-to-face meetings are envisioned.	Generally by consensus with a required quorum in some cases. 1 vote submission per representative (number of votes counted per submission differ by participation level).	In writing, to be signed by one appointed note-taker and approved by all partners.
Executive Board	The Council will appoint, suspend and dismiss the members of the Executive Board. The Executive Board shall consist of minimally five (5) and maximally nine (9) members, currently comprised of 7 members. The members of the Executive Board are natural persons within EGI.eu. The Council determines the number of	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place monthly. The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners

	members of the Executive Board.			
Strategy and Innovation Board (SIB)	The Group is composed by 9 members. Membership should involve high-level representatives of the following sectors: • Public research: 3 members • Computing/Data: 2 members • Big industry: 1 member • SMEs: 1 member • Policy makers/advisors: 2 members	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place monthly, however virtual meetings may be less frequent after the initial version. It is also foreseen that there will be a face-to-face meeting at least annually (for example collocated with the EGI Conference/Forum). The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners
User and Community Board (UCB)	The UCB is formed by: • VRC representatives (via MoU) • Large research communities representatives • Competence Centre representatives • Champions representatives	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place every 3 months.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners
Operations Management Board (OMB)	The OMB is formed by: • Operations Manager for each NGI and integrated/peer infrastructure • Virtual Research Communities (VRC) representatives	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place once a month. The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners
Technical Coordination Board (TCB)	The Technical Coordination Board has the scope of: • Manage a forum of technology	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place once	Generally by consensus 1 vote per	In writing, to be signed by one appointed note-taker and approved by

		every 3 months. The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	representative	all partners
Services and Solutions Board (SSB)	The SSB is formed by: • Service Owners • EGI ITSM Process Owners, mainly SPM, SLM, CRM and SUPPM Appointed representative from the UCB, TCB and OMB (one per board)	Regular virtual meetings (via telephone and web conferencing) will take place. These meetings will take place once a month. The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners
Security Policy Group (SPG)	The SPG is formed by: • Participants and Associate Participants of EGI.eu	The Group will meet as often as the work requires but this will be at least twice per year, at least one of which will be face to face (ideally during the annual EGI technical forum) The Group deliberations happen by face-to-face meetings, phone/video conferences or via the Group mailing list.	Generally by consensus 1 vote per representative	In writing, to be signed by one appointed note-taker and approved by all partners