EGI Position Paper on the ERA Framework

EGI integrates almost 260,000 cores and more than 122 PB disk and 127 PB tape of storage space located at 350 sites in more than 40 national resource providers. The total of integrated and peer resources includes more than 400 sites and 350,000 cores. This production quality platform provides a flexible solution for many distributed storage and computing use cases. EGI currently supports over 18,000 researchers in their intensive data analysis needs in almost every e-Science discipline, and can extend this support to other e-Science communities and beyond to areas such as e-Government. EGI's innovative technology and procedures address many of the issues identified in the Digital Agenda for Europe. Through its European wide federation of national resource providers it is ideally placed to provide an e-Infrastructure (grids of computing, storage and cloud resources) for the general benefit of society.

EGI.eu welcomes the opportunity to participate in the public consultation on the ERA Framework: Areas of untapped potential for the development of the European Research Area (ERA).[1] This position paper contributes to the information gathering aimed by the online questionnaire addressing the topic of e-Infrastructures and the mechanisms by which they can promote EU Research and Innovation.[2] Full version of EGI Position Paper on ERA Framework can be found at ERA website.[3]

In order for Europe to fully realise its research and innovation potential, the ERA needs to fully accommodate e-Infrastructures into the ERA Framework, or in the words of the EC: "e-Infrastructures foster the emergence of e-Science, i.e. new working methods based on the shared use of ICT tools and resources across different disciplines and technology domains. Furthermore, e-Infrastructures enable the circulation of knowledge in Europe online and therefore constitute an essential building block for the European Research Area (ERA)".[4] Up to now, discussions about the ERA have not paid sufficient attention to e-Infrastructures. However, only when e-Infrastructures are cornerstones of world-class research, can Europe achieve the vision of ERA 2020, i.e., the full accomplishment of "fifth freedom" and "free circulation of researchers, knowledge and technology". Fostering remote access to research facilities, e.g. through the efficient development of appropriate e-Infrastructures will enable faster circulation of knowledge and technology across Europe. EGI is committed to this vision and it needs stronger support from the EC in order to act as a major stakeholder that will give its substantial contribution in enabling it.

E-Infrastructures are now an essential foundation for research and innovation and it is vital that Europe continues to invest in this area at a National and European level. Through its network of federated data centres, EGI aims to provide its user communities with the means to deploy the software environments they need flexibly – where they need them and when they need them. Virtualisation technologies will provide the foundation for this operational model, enabling the research community to access a cloud environment that is tuned to their ever-changing requirements for data-intensive analysis. EC support can provide the means to accelerate the move towards an e-Infrastructure that is able to flexibly and responsively meet the needs of diverse user communities by addressing the following issues described in detail earlier.

Accelerating the development of e-Infrastructures in Europe will be a key enabler of the Europe 2020 Strategy. E-Infrastructures can provide an open platform for innovation where new technologies are created, new services are delivered, new business models are explored and new research results are generated. These innovations will help European researchers harness the data deluge and derive the knowledge they need to provide answers to the societal challenges facing Europe both now and in the future, while contributing to the key actions of the Innovation Union, Digital Agenda for Europe and other key flagship initiatives.

---

[1] http://ec.europa.eu/research/consultations/era/consultation_en.htm
[2] All key recommendations are listed in Table 1.
[3] http://ec.europa.eu/research/era/pdf/contributions/egi-position-era_en.pdf
[4] http://cordis.europa.eu/fp7/ict/e-infrastructure/home_en.html

Table 1

	Key recommendations for ERA framework
1	EC should provide information (e.g. through Eurostat) on how many researchers need access to distributed digital resources as part of their daily professional activities and how many researchers could benefit from improved access to digital resources.
2	EC should support the establishment of social networking tools to help researchers to connect with each other and advertise/discover research groups. This could be bound to services like OpenAIRE where publications, scientific data and research groups are discoverable and such collaborations used to govern access to e-Infrastructure services.
3	The EC should support applied science communities with funding to develop domain specific platforms to be deployed on e-Infrastructures, thereby offering new innovative services to a community's researchers in other disciplines.
4	EC should disseminate the EGI success story to other national and European RIs in order to demonstrate a possible way of achieving successful cross-border collaborative operation of e-resources for researchers.
5	EC should support the integration of European e-Infrastructures across different resource types (grids of HTC, HPC, petascale, virtualised, data and networking resources) in order to provide a coherent technical and policy structure. If achieved, this integration would enable new capabilities for new innovation within Europe (e.g. multiscale modelling)
6	Establish a specific dedicated technical working group under the ERA framework to help remove the potential barriers and bottlenecks that hinder collaboration between RIs and e-Infrastructures. To disseminate working group's yearly activities, the EC should facilitate an annual forum between RIs and e-Infrastructures that would review the activities of the working group and discuss and adopt its proposals
7	One of the expected outputs from ESFRI projects in the construction and implementation phases should be to formally evaluate the services, capacity and data needed from e-Infrastructures for their research needs and to report this information to the e-Infrastructures.
8	The EC should build an ERA Compendium/Knowledge base with all European RI, ESFRI projects, national and European research groups. A compendium/knowledge base should also describe the assets (e.g. people, services) in the RIs that are part of ERA. Having this structured collection of information would help the research communities to build collaboration and e-Infrastructures and other stakeholders to support their needs. The EC should provide a tool that would enable RIs to update the information anytime.
9	The EC, together with e-Infrastructures, should develop the long-term roadmap for integrated e-Infrastructures aimed at a sustainable operation and evolution of e-Infrastructure services.
10	The EC should tackle the legislative uncertainty around commercial use and collaboration with e-Infrastructures
11	The EC should support EGI in leading the development of a European cloud built from federated virtualised resources from public and commercial providers and not to duplicate and fragment national efforts.
12	The EC should strengthen the relationships between the funding agencies of key foreign countries to develop common policies for better integration of the respective e-Infrastructures. This would have the beneficial side effect of enabling the respective research groups to discover each other and collaborate. Furthermore, researchers would have access to more scientific data and computing capacity as well as to knowledge and expertise
13	The EC should strengthen the relationships with the funding agencies of key foreign countries to develop policies to stimulate the definition of joint standardisation roadmaps encompassing the full standards development life-cycle. This would allow the e-Infrastructure community to remove the remaining interoperability barriers and to provide a seamless set of interoperable services that can underpin the Digital Agenda in Europe.
14	The EC should enable stakeholders' participation in the ERA governance and policy development. In addition, the EC should establish an ERA stakeholders' platform and dedicated working groups that will discuss specific policy issues. This should result in the development of an ERA roadmap.
15	Ensure that there is a closer collaboration between the Directorate General (DG) for Information Society and Media and the DG for Research.