

Joint e-IRG-ESFRI workshop, 2 April 2014, Athens



More than [70 participants](#) attended the joint e-IRG-ESFRI workshop in Athens on 2 April 2014. The workshop that lasted half a day took place in the framework of the International Conference on Research Infrastructures (ICRI 2014) organised during the Greek EU Presidency. The main objectives of the workshop were to examine how e-IRG and ESFRI can work closely together, in particular towards better supporting e-Science, and to identify the actions the two groups can undertake together to address and deliver e-Science requirements as an integral part of the European Research Infrastructure.

In summary, it was agreed that joint work and meetings can raise common understanding and build trust among the two groups' members. Further cross-representation in the different Working Groups and coordination between their secretariat functions is needed. It was also agreed that in the future the horizontal e-Infrastructure requirements would be part of Research Infrastructure proposals (including the ESFRI Roadmap 2016), for the evaluation of which appropriate expertise is needed that resides in e-IRG. The opportunities that can be provided by ESFRI clustered initiatives and horizontal e-Infrastructure services need to be better clarified. In addition, data is the glue that brings together e-IRG and ESFRI and empowers their cooperation. However, it will not happen automatically! Again better understanding and awareness on the needs and available services is needed, along with sharing and working on best practices.

Welcome address, Christos Vasilakos, General Secretary of Research and Technology, Greece

Christos Vasilakos stated that he was delighted to welcome this first joint e-IRG-ESFRI meeting on behalf of the Greek Presidency of the European Union, the Greek Government and the General Secretariat of Research and Technology, and that it is a great honour to receive such distinguished members of the Research Infrastructures and e-Infrastructure community in Athens. He added that with the ICRI 2014 conference and the ESFRI and e-IRG meetings it is a very prominent week for the research community. He made special reference on the European Charter for Access to Research Infrastructures that is being prepared and aspires to act as a reference document worldwide. He closed stating that he is delighted to see that ESFRI and e-IRG have been cooperating strongly together, mostly on the data management aspects, which are vital for both RIs and e-Infrastructures.

ESFRI presentation for e-IRG, John Womersley, ESFRI Chair

John Womersley started by highlighting the importance of RIs for the globalising knowledge economy, stressing that coordination at EU and global level is required. He explained the role of ESFRI in policy making on RIs and its mandate on the ESFRI Roadmap prioritising RIs. He further detailed on the ESFRI Roadmap process and history, stressing that Member States are the major source of funding for the approved roadmap projects, currently 48. He then referred to the Assessment Expert Group responsible for assessing the project and classifying them in categories depending on their financial and managerial maturity. Besides the ones that are already in implementation, there are 8 RIs rated as category 1 (ready for implementation in 2015), 11 rated as category 2 (might be able to achieve maturity by 2015, if substantial actions are implemented to address the bottlenecks and weaknesses) and 16 rated as category

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3 (minimal chances of achieving maturity by 2015 for various reasons). He also explained that the next ESFRI Roadmap update is planned for 2015-2016, emphasising that the new Roadmap will be more of a strategy document with new activities such as the analysis of the RI landscape and the gaps in the EU RI ecosystem. He closed by explaining the rules for the new roadmap, that only ~25 projects will be on the new roadmap, of which around 16 will be existing ones that will remain to be implemented and 8-10 will be new ones.

e-IRG presentation for ESFRI, Sverker Holmgren, e-IRG Chair

Sverker Holmgren started by introducing the e-Infrastructure (networking, computing, data infrastructures, software and other tools/services), stressing its wide horizontal scope to support all types of research and RIs. He then explained the strategic and advisory role of e-IRG on the development and policy making on the e-Infrastructure, and the structure and history of e-IRG. The e-IRG Chair then focused on the notion of the “e-Infrastructure Commons”, as initially described in the e-IRG Roadmap 2012¹ and further analysed in the White Paper 2013². The e-Infrastructure Commons is a living ecosystem that is open and accessible and continuously adapts to the changing requirements of research. It was explained why the Commons is needed, in particular to enhance coordination and integration of e-Infrastructure services, their visibility and sustainability. The risk of e-Infrastructure silos was highlighted and that the Commons will contribute towards coherent, cost-efficient and sustainable services. The homonymous e-IRG Working Group was then presented, along with the e-IRG ESFRI Overarching Working Group (OWG), i.e. the group gathering all e-IRG members participating in ESFRI SWGs. The e-IRG chair closed with a reference to the e-IRG White Paper 2014, aiming at producing recommendations on issues emerging in the OWG in the framework of the developing e-Infrastructure Commons.

e-Infrastructure needs for ESFRI projects, Alf Game, BBSRC, UK

Alf Game replaced Yannis Ioannidis and went through his presentation, concentrating on the e-Infrastructure needs of ESFRI projects. He stated that already many ESFRI projects are e-Infrastructures (such as CLARIN, DARIAH, ELIXIR and LIFEWATCH, while all ESFRI projects need e-Infrastructures. He then focused on common ESFRI needs for e-Infrastructure including single-sign-on access to electronic resources such as network, computing and data resources, persistent storage, long term preservation of data and its access and other data management services. Training, standards and global collaboration were also stressed. He explained that strategic decisions at all layers are needed (technical, financial, political, legal, social...) and then highlighted the 5Vs of big data, namely high volume, high velocity, great variety, lack of veracity (validity) and hard to extract value.

Summary and recommendations from ESFRI/e-IRG ad-hoc working group, Sverker Holmgren and Gelsomina Pappalardo, National Research Council of Italy

The presentation summarized the work of an ad-hoc working group between ESFRI, e-IRG and the EC (two members from each) which also used the work of the e-IRG Blue Paper on Data Management³. It was stated that RIs produce and are dependent on rapidly increasing amounts of data, which needs to be

¹ http://www.e-irg.eu/images/stories/publ/e-irg_roadmap_2012-final.pdf

² http://www.e-irg.eu/images/stories/dissemination/white-paper_2013.pdf

³ http://www.e-irg.eu/images/stories/dissemination/e-irg-blue_paper_on_data_management_v_final.pdf

managed, stored and preserved in a cost-efficient way, with appropriate quality and safety assurances, while access to the data across borders and domain boundaries must be secured. e-Infrastructures provide the versatile services and tools needed for both data management and access, driven by the needs of the researchers and stakeholders, while effort on RI policy and coordination is needed. The example of the environment discipline was brought up. The distributed nature of environmental RIs, and the need for coordination and integration of the data and services in the area was highlighted, along with appropriate interfaces. Interoperability among different disciplines was also stressed. Then the role of ESFRI cluster projects contributing in better coordination of the related projects and their data infrastructures in four key areas was underlined (Bio, Environment, Social Sciences and Humanities and Physics) and it was recommended that coordination among these 4 projects is established. Further recommendations encompassed the role of standardized data formats and of sufficient metadata (information about the data) to enable global use within and across disciplines, the adoption of a global, standardised low-level data infrastructure, including authentication and authorisation and persistent identifiers, along with the role of federated approaches, the move towards a second level data layer is utilised by multiple disciplines and RIs, and finally ensuring the quality of the e-infrastructure services along with data security at a level relevant to the data at hand.

Panel on “ESFRI/e-IRG's joint future role in support of e-Science, EC, e-IRG, ESFRI, Chair: Kees Neggers, Panelists: John Womersley, Sverker Holmgren, Alf Game, Gelsomina Pappalardo, Ana Arana Antelo (DG RTD), Augusto Burgueño Arjona (DG CNECT).

- **Position statement from ESFRI**

The ESFRI Chair, John Womersley, stressed that ESFRI should take into account and carefully assess the e-Infrastructures as part of their next roadmap exercise (2015-2016). He reminded that the scope of the ESFRI Roadmap 2016 is broader and that for assessing the e-Infrastructure requirements there is a need for expertise that resides in e-IRG.

Gelsomina Pappalardo stressed the need for close cooperation between ESFRI and e-IRG, which needs to be science-driven and not technology-driven and repeated the point of federated approach to have a sustainable and adapting system.

- **Position statement from e-IRG**

The e-IRG Chair, Sverker Holmgren, started by stating that first of all exchange of information is needed in planning regular joint workshops and meetings, exchange of news and good coordination of the secretariat functions. Then joint set-up of and work in WGs and joint production of documents such as the e-IRG White Paper 2014 is needed, which will result in increased understanding and trust. Awareness raising is needed in clarifying the meaning of e-Science requirements for research and RIs, including the relation to e-infrastructure (both service delivery and innovation). It is important to clarify how such needs should be presented. Discussion of e-Science requirements and services in RI assessment criteria such as readiness for implementation is required. The opportunities for research that can be provided by cluster initiatives and “horizontal” e-science services need to be clarified, along with the opportunities from Open Science/Science 2.0 provided by open access to research results, including the relation to e-Science services. Finally, the two groups need to deal with both real difficulties and misunderstandings.

- **Position statement from EC**

Ana Arana Antelo (DG RTD) and Augusto Burgueño Arjona (DG CNECT) stated that all of their points were covered besides innovation, underlining that interaction with industry is crucial (technology transfer, procurement, societal impact). The other points (that were covered) were the data, as a key glue between the two communities (generation, handling, meta-data, preservation, etc.), one-stop-shop services for the users (researchers) and the new business models for sustainability. The Research Data Alliance was mentioned as a key initiative for sharing and reusing data across boundaries.

- **Discussion: "What actions can ESFRI and e-IRG undertake together that will ensure that e-science requirements are addressed and delivered as an integral part of the European research infrastructure"**

In the short discussion that followed it was stated that the ESFRI data need to be made easily, openly but also securely available across boundaries through the use of e-Infrastructures, and that there is a need of sharing best practices along with consciousness raising. For that to materialise a joint effort between the two groups is needed.

The Chair of the session, Kees Neggers, summarised the main conclusions of the session:

- Joint work and meetings among the two groups can raise common understanding and build trust.
- Further cross-representation in the different Working Groups and coordination between their secretariat functions is needed.
- It was also agreed that in the future the horizontal e-Infrastructure requirements will be part of Research Infrastructure proposals. And this is a major achievement. In particular, ESFRI should take into account and carefully assess the e-Infrastructure requirements as part of their next roadmap exercise (2015-2016). For that better awareness and elaboration of e-Infrastructure services in the RI world and better elaboration and structured presentation of RI project needs towards e-Infrastructures is necessary.
- The opportunities that can be provided by ESFRI clustered initiatives and horizontal e-Infrastructure services need to be better clarified.
- Data is the glue that brings together e-IRG and ESFRI and empowers their cooperation. However, it will not happen automatically! Again better understanding and awareness on the needs and available services is needed, along with sharing and working on best practices.

The ESFRI chair, John Womersley, closed by stating that the e-IRG Overarching WG (with all e-IRG members in ESFRI SWGs) is a very good idea that we need to follow up. He also concluded that it was very positive bringing the two groups together.

Fotis Karayannis, e-IRGSP3