



# e-IRG White Paper 2013

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**Roadmap 2012:** Outlines Europe's need for a single "e-Infrastructure Commons"

**White Paper 2013:** Further discussion and recommendations

**Draft version of WP 2013 currently open for public consultation**

**Dublin Workshop May 22-23** – issues in the WP discussed

- European services on data
- Coordination of e-Infrastructures

Aim of recommendations: a single “e-Infrastructure Commons” for knowledge, science and innovation

- open and accessible continuously adapting to the changing requirements of research
- open to new technological opportunities
- meet the challenges of implementing the EU’s 2020 Strategy.

## Key elements of the e-Infrastructure commons:

- high quality e-Infrastructure services that are well managed and seamlessly integrated from a users' point of view.
- services that are flexible and can change dynamically, efficiently and in a future-proof manner.

**Commons: Resources (including management system, governance etc) accessible to all members of a community.**

Example: current Internet provides a common user interface and access mechanism to functionally common services provided by a huge variety of physical networks and inhomogeneous network management domains.

# Why is this needed?

## **Researchers are often confused by the current complex e-Infrastructure landscape**

- insufficient coordination, collaboration, and integration of e-Infrastructures services
- legal issues
- lack of “visibility” of European e-Infrastructure services
  - but high awareness by users of borders, interfaces, and technologies of the individual components
- Lack of business models for sustainability
- Lack of models for integration with commercial providers
- lack of coherence from many user communities

Establish the e-Infrastructure Commons through a joint and truly common strategic effort between users and primary strategic actors and suppliers.

- a common strategic vision should not form a barrier to innovation in any of the individual (existing) services.
- users need to become more directly involved in strategy, coordination and innovation activities
- users need be prepared and empowered to pay for e-infrastructure services.

Three distinct core functions:

- 1. Community building, high level strategy and coordination:** a single organisation with a central role for user communities
- 2. Service provision:** a flexible, open, and competitive approach to national, European, and global service provision; with advanced collaboration among the interested public and commercial service providers.
- 3. Innovation:** Implementation of major innovation projects through the best consortia including e-Infrastructure suppliers, industry, users and academia.

The position of user communities in e-Infrastructure governance will have to be strengthened:

- **Strategy:** Internal organisation to drive the long-term development
- **Service provisioning:** Use joint purchasing power to acquire services in a competitive market
- **Innovation:** support the specification and real life testing of new e-Infrastructure components.
- **Standardisation:** contributions to the process of setting and implementing the international standards

Provide a platform for strategy and coordination bodies of the various e-infrastructure components to discuss:

- Expanding the user base
- Avoiding Digital Divide
- Promoting sustainable business models
- Promoting effective structures for international governance
- Separating out business models for operations, support and innovation
- Promoting effective governance models, giving user communities of all types proper roles

**International user communities** need to organize themselves to be able to address the challenges in their future roles:

- drive the long term strategy for their e-infrastructure needs
- learn to use their purchasing power
- participate in and drive innovation of e-infrastructure services
- contribute to standards

**International organizations of eRIs** need to join forces and share their common challenges towards serving the European user communities, thereby avoiding as much as possible any duplication of efforts:

- outreach to and involvement of user communities
- services registry, discovery and provisioning
- financial, legal, business development and procurement issues

## **National governments** need to:

- provide a basic funding level for national e-infrastructure
- empower and fund their national user communities, enabling them to influence the development and use of the national e-infrastructure
- remove existing national regulatory or political constraints for accessing public funded e-Infrastructures
- encourage their national e-infrastructure to collaborate and join forces with their counterparts in other countries and at EU level

- The EU** should strengthen the actions of the national governments by
- harmonizing European and international regulatory conditions
  - encouraging a sustainable e-infrastructure offering in Europe.
  - establishing a harmonised framework for the funding of e-Infrastructure innovation
  - empowering and funding European user communities to influence the development and use of European eRI

**The EU** should strengthen the actions of the national governments by

- promoting the use of Structural Funds for eRI development in less favoured areas
- striving towards harmonisation so that regulatory conflicts can be avoided, e.g. with regards to competition;
- providing clear guidelines for use and in the supply of e-Infrastructure services for private research;

# Follow-up aspects in White Paper 2013

- e-Infrastructures in support of Open Science
- Data Policy Recommendations for Large-Scale Research Projects
- Big Data Access and Standards
- Cloud Computing
- Legal Barriers to Commercial Use of e-Infrastructures

Each topic comes with recommendations

# Data Policy Recommendations

Result of a joint e-IRG/ESFRI working group, established on request by ESFRI to summarize policy recommendations from the e-IRG Blue Paper on Data Management

**Policy makers** are recommended to ensure that:

- Roles (e.g. end users, data owners, infrastructure providers, service providers, and researchers on data management) are identified and, when appropriate, partitioned between different actors
- Governance and mandates for different actors are clarified and their way of interacting is sufficiently formalised.
- Costs for different services and procedures are made transparent and that different options for implementing them are investigated.

- RIs and eRIs** are recommended to take appropriate steps to:
- Ensure that data formats are standardised and contain sufficient metadata
  - Build e-Infrastructure solutions consisting of multiple layers and standardised interfaces.
  - Adopt a global, standardised lowest level data infrastructure layer
  - Define and successively move towards a common second-level data storage layer to enhance cost-efficiency and quality.
  - Ensure that quality of the e-Infrastructure services and the data security is delivered at the right level