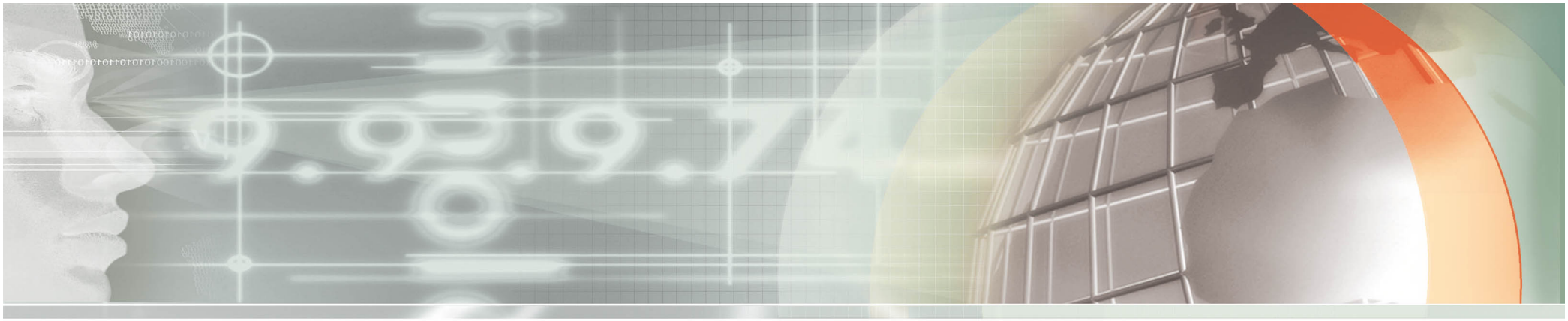

Open e-IRG Workshop

Breakout session on the e-Infrastructure Commons

Group [1 …6]

e-IRG
e-Infrastructure Reflection Group

Question 1- Group 1

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

- Improvement of the concept e-infrastructure commons: To integrate the existing e-infrastructure services into a commons with interoperability and intergatability. Steer the einfrastructures towards a common integrated approach - ref EC WP approach.This needs to be driven by the member states or EC (money = power).
- The difference is: Cloud is the way we use the commons to serve open science. Open science (is flexible, adaptable) cloud is available for different user needs, it has reproductability, a business model.
- It is for research, education, public and private.
- E-Infrastructure commons is part of the building blocks for open science cloud.

Question 1 – Group 2

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

- *Cloud: includes generic **and** thematic (discipline specific) environments. Cloud: user perspective.*
- *Much confusion about what the open science cloud is: EC should clear up the discussion!*
- *Both are about serving the (European) researchers*

Question 1 – Group 3

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

[Note: Vast majority of members were from e-Infra service providers]

- Overall **agreement on the vision of the Commons**
  → better integration of services!
- **1a: Improvements:**
  - **Services should be able to be presented and used as being integrated! I.e. Meaningful integration.**
  - **Support the whole research process, i.e. being beneficial for the actual users/researchers!**
    - Researcher being able to control his/her results and improve his/her position/profile: Use good practices and policies of Research Data Management being able to cite, anonymise data, etc.

Question 1 – Group 3

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

[Note: Vast majority of members were from e-Infra service providers]

- **1b: Difference with OSC:**
  - The Open Science Cloud is an **instantiation** or a **subset** of the Commons
    - Depends on the definition of OSC (no formal definition; EIROForum paper; EC: OSC=pilot action)

Question 1 – Group 4

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

- Clarify the concept and the definition and the interactions with other elements
  - Provide examples of what it is and what it does
  - Identify the elements and stakeholders
  - Include Users in the Definition, Define Users and Use Cases
- Define clearly the Concept of the Science Cloud – this concept is even less clear than the Commons (provide examples, identify the elements)
- E.g. the Commons is the provision and the e-Infrastructures could the elements of the Cloud)

Question 1 – Group 5

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

- IC gives an idea of sharing services, but no hint to governance. They perceive ESC as a technology which is not the case.
- ESC is the first step towards implementation of the Infra commons.
- Commons is at a higher (perhaps meta-level).
- The infrastructure commons should be focused in all end users having access to services.
- ESC can be seen as the mechanism to do research. This is beyond IC.

Question 1 – Group 6

What could we do to improve the concept of the e-infrastructure commons? And: what is the difference with the European Science Cloud?

- IPR to be addressed by the EC. Can be conflictig with commercial.
- Interesting is where vertical layers meet the horizontal. Discussion needed between researchers and providers.
- Difference between scientists and providers in objectives/goals and what happens after the goals have been reached. Different time scales. Dialog needed.

Question 2 – Group 1

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with ‘interoperable and integrated services’?

- Elements: networking, computing, open data, data processing, authorisation, training, sofisticated software to manage, discoverabilty, cloud hpc, accounting, federating, dockers, identification, open source, collaboration tools.
- Interoperable and Integrated services: the choice which one you can use. Identification services AAAA. Interoperable is horizontal acrross the services, Commons has to have an entry reguirements and open regulations. One service value to other services.

Question 2 - Group 2

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services?

- *connectivity, data, computing, tools, federated access, security, policies, legal and ethical issues, human networks*

What do we mean with ‘interoperable and integrated services’?

- *From a user perspective: something that just works!*
- *Prerequisite: standards and conventions*
- *Integrated: implies co-design from the start and common procedures for purchasing, developing, managing services;*

Question 2 – Group 3

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with 'interoperable and integrated services'?

- **2a – Essential elements of the Commons**
  - Being able to **find** and **access the services**
  - **A payment framework** for commercial ones (or others)
  - **Training / skills development**
  - **Career development process** for new data professions: being **recognised as a data scientist!**
    - Current Research Information System (CRIS)-compliant (store data about research conducted at an institution)
  - **New technical components**: Research Data Management (RDM), Research Data Sharing, Big Data processing for HPC

Question 2 – Group 3

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with ‘interoperable and integrated services’?

- **2b: Interoperable vs. Integrated**
  - **Integrated:** Not a monolithic approach, rather a **federated** one!
    - Due to the heterogeneous nature of the resources/funding/policies/legal frameworks; The main issues in the integration are political rather than technical!
    - **User-centric integration;** Being driven by user needs
  - **Interoperable services:** All providers should **virtualise and publisize their resources** in a **stardard - common or interoperable way**
  - **More collaboration** between providers at technical but also political and admin levels!

Question 2 – Group 4

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with ‘interoperable and integrated services’?

- E.g. Date-related services
- User communities need to define the requirements
- Define the entry point for various disciplines/per community
- Service Levels for the entry points needs to be determined

Question 2 – Group 5

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with ‘interoperable and integrated services’?

- Should be it the whole set of services, or services at a national level?
- IC at all levels might be too difficult.
- IC should make funding streams and mechanisms clear.
- IC should have a pan-european scope. Local servicecs should not be part of IC.
- Services and the catalogue of services should be sustainable and maintained.

Question 2 –Group 6

What do you believe are essential elements of an e-infrastructure commons in terms of e-infrastructure services? What do we mean with ‘interoperable and integrated services’?

- Interoperable and integrated services is common ground, make it possible to speak to each other.
- Layer needed where you don't see what is below.
- Difficult to say which building blocks are needed. Some building blocks were built bottom-up. Replicate best practices to satisfy 80% of users.
- EC says all software has to be open source. Tendency to be open has to be in the culture.
- Metadata is missing. How to use data is the question.
- There are very different classes of services: some have to be there (e.g. network). Other services are very specific.
- many different types at organisational level

Question 3 – Group 1

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- Central governance: top down.
- There needs to be a clear governance to ensure harmonisation and real convergence. The member states should as well as the EC to be part of the governance.

So the answer is YES, a single European einfrastructure organisation is needed.

Question 3 – Group 2

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- *Common multi stakeholder Council dealing with policies, processes and standards (like it’s done in the internet). This is more important than having one single provider organization.*

Question 3 – Group 3

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- Coordination at EU-level
  - Facilitate the Commons in a user-driven approach (bottom-up),
    - Engage with users: Either as a co-design approach with providers or user-push.
    - Users need to be informed and trained (not always know)
  - More coordination at the EC level
  - Who will pay: Funding sharing?

Question 3 – Group 3

How should we coordinate that on the European level? What about a single coordinating 'European e-infrastructure organization'?

- Single Coordinating Organisation?
  - Difficult: No organisation has sufficient authority!
  - Required roles: Central portal (presentation) role, Broker (mediation) role, trusted third party
  - Do we need more national e-Science Centers (like the Dutch one)?
  - Hub and spoke approach between service providers (RIs-e-Infras) and User Communities

Question 3 – Group 4

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- We should avoid beauracracy and stick to the domain specific entry points
- Users need to govern the organisation
- Governance needs to be defined
- Use the exisiting organisations to organise this concept
- The ‘umbrella’ might be good if executed properly

Question 3 – Group 5

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- ERIC for all e-infra is good for sustainability.
- If you have only one organization you would need a lot of differenet expert groups. You need a cooperating task force to achieve the IC.

Question 3 – Group 6

How should we coordinate that on the European level? What about a single coordinating ‘European e-infrastructure organization’?

- Ensure that all organisations interact with each other.
- Scientists should be able to use what they need.
- For many public funded organisations there are national restrictions. There have to be rules when commercial parties are involved.
- If coordination is ensuring the same interfaces OK, else not

Recommendations to National governments / research funding agencies (1) – Group 1

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- The national actors need to find ways to collaborate within the member state. There should be national incentives for the national providers to collaborate and be part of the commons.
- National funding should be an enabler for participation in the commons for the national einfrastructures.
- The member states should be active lu participating in the European level policy making and decisions in the commons - ref the governance model.

Recommendations to National governments / research funding agencies (1) – Group 5

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- Make a 10 year plan. And a multi year funding plan.

BONUS Recommendations to actor 1: National Governments/Funding Agencies Group 3

- Sustain national e-Infrastructures for research! (one step ahead of commercial)

Recommendations to European Commission (2) - Group 2

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- *Remove as many as possible of the current advisory bodies, working groups, expert groups; these could all be replaced by this high level e-infrastructure Council;*
- *Develop resource granting mechanisms on the European level to address European wide research challenges;*

Recommendations to European Commission (2) - Group 6

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

1. EC should set rules/regulations for commercial providers (e.g. on interoperability).
2. EC should promote interoperability

Recommendations to National (public) e-infrastructure providers (3) – Group 1

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- They should fundinding and be a part of it. Push users forward. Use providers. Incentive. Govening body should be involved.
- Commons to achieve: integrated programme at national level, integrate at national and European level. Collaborate with other nationalities.

Recommendations to National (public) e-infrastructure providers (3) – Group 3

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- Virtualise/abstract and make available/publicize their resources in a stardard/common/interoperable way
- Being able to explain the differences between their offerings and commercial offerings
- Identify science drivers in each country
  - Something like the smart specialisation per country
- Support the whole range of user needs: from big sciences to the long tail!
  - Danger of creation of an artificial separation between the two!

Recommendations to European (public) e-infrastructure providers (4) – Group 2

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- *Work together on policies;*
- *Do a shared gap analysis;*
- *Better integration of your services;*
- *Develop cost models and demonstrate your added value compared to commercial providers;*

Recommendations to European (public) e-infrastructure providers (4) – Group 4

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

1. Put themselves in a situation when they are controled by their users
2. Not allowing all stakeholders (end-users) to talk to each other will make the whole concept very inefficient
3. We need an incentive structure which will make the infrastructures accountable to the end user

Recommendations to European / international Research Communities (5) – Group 3

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- Cooperate with e-Infra Service providers and be able to separate the generic services from the thematic ones; Re-use generic ones!
- Closely collaborate with other stakeholders (incl. e-Infra providers): Become or stay engaged in strategy-setting! (Open approach)

Recommendations to European / international Research Communities (5) – Group 5

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

- Should be building up on existing infras

Recommendations to Commercial e-infrastructure providers (6) – Group 4

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

1. The researcher communities should have the possibility of choosing between commercial and public providers
2. Beware of market failures that might jeopardise long-term project sustainability

Recommendations to Commercial e-infrastructure providers (6) – Group 6

Assuming the ‘e-infrastructure Commons’ is a vision worth working towards, what would then be the group’s recommendations to the various actors?

Difficult to recommend, they don‘t have to adhere.

1. Interoperability at the e-Infrastructure level (not at all levels)