

Summary report: ESFRI Workshop on the Future of Research Infrastructures in the European Research Area

6-8 November 2019, Los Cancajos, La Palma, Canary Islands

Session 2. Consolidation of the Research Infrastructure landscape – how to make the most impact

Session Chair: Gelsomina Pappalardo

Session Objectives

(As formulated in the program)

The landscape of Research Infrastructures is more and more mature, developed and interconnected, equipping European scientists with state-of-the-art facilities to conduct world-class research and foster innovation. This session will discuss how to foster a more integrated, ecosystem approach in order to enable the RIs to help effectively address the common challenges that Europe is facing, and which increasingly require a multidimensional approach.

Session Presentations

- *Introduction – 4', Gelsomina Pappalardo, ESFRI Executive Board Member ([download the presentation](#))*
- *Landscape of the European Research Infrastructures– 7', Jose Luis Martinez, Chair of ESFRI Strategy Working Group on Physical Sciences and Engineering ([download the presentation](#))*
- *Joint activities across RIs: opportunities and challenges – 7', Rory Fitzgerald, Director, European Social Survey ERIC*
- *Consolidation initiatives among European RIs - 7', Francesco Florindi, Strategy & Partnership Manager, BBMRI ERIC ([download the presentation](#))*

Round-tables introduction

The Research Infrastructure Landscape is a complex subject and the questions posed in the session. Participants were actively engaged in discussions and gave full consideration to the issues as a whole, and consequently the table responses reflect the complexity and inter-connectivity of the topic. In analyzing the responses, an attempt has been made to focus the summary in order to address the relevant question and the objectives as a whole, however, we must also take care to avoid over-simplification of this challenging and multi-faceted subject.

Round-table discussion focus

There were around 100 participants across Europe, who were grouped in tables of around 10 persons in each table. Participants were asked to engage in round table discussions focused on the following 3 questions. Note not all questions were discussed by all tables.

- 1. ESFRI role as incubator across the RI lifecycle – how can it be improved?**

The term “incubator” suggests permanent care. It would be better to use the words “facilitator” or “strategic development” than “incubator“. If term incubator cannot be changed, it’s essential to come up with a very clear definition. Incubation and evaluation should be strongly linked and made regularly. ESFRI should have the role of mentoring, sharing implementation experience; shift from an incubating role to a rather guiding, advising and monitoring role jointly towards Member States, Associated Countries and European Commission.

ESFRI has a role in monitoring the full lifecycle. ESFRI should continue to monitor projects and landmarks. It should be an early warning system to ensure quality. Early intervention should occur when required, and ESFRI should not be concerned about removing projects and landmarks at any time when standards fall below a limit. The ESFRI quality mark must not be watered down. ESFRI role as incubator should focus also in the first stages of the RIs. There are problems in the pre-ESFRI phase. A mismatch between the scientific community and how to get it to the policy level. Good contact with the national authorities is desired from the very beginning. There are also problems in the ESFRI timeline regarding the implementation phase, because not every country will indeed become a member and will not contribute as calculated during the preparatory phase. Early operation costs are often absorbed by the construction phase. It is crucial to set up a cost book with the risks. In the RI implementation the ESFRI Project label is very important, ESFRI needs to make sure it continues to ensure the quality and recognition of this label. There is a need to follow-up the ESFRI Landmarks and ESFRI should also play a role in the termination phase.

The main ESFRI role should be fostering, promotion, interconnecting and monitoring, but not more beyond that. ESFRI should not be an administrative supervisor. ESFRI provides stamp for cross boarder value and it enables discussion among RIs. Having an ESFRI label is extremely important. ESFRI must define clearly its services and in what stages of RI life cycle it should be involved; it is recommended to accompany RIs closer to identify where are problems and how they could overcome. Exchange of experience workshop, throughout the lifecycle (not just new projects on the ESFRI Roadmap) are strongly recommended. ESFRI should increase awareness on RIs to be seen by every scientist and inform broadly. ESFRI need to provide the means (funding and networking possibilities) to facilitate “RI thinking” for all thematic disciplines. ESFRI could help to strengthen link between ESFRI RIs and national RIs. An ESFRI stakeholder forum should be established.

2. How to foster interconnections among the RIs, within a single scientific domain and across different scientific domains, for supporting interdisciplinary and multidisciplinary research for new research frontiers?

ESFRI should foster a more integrated, ecosystem approach in order to enable the RIs to help effectively address the common challenges that Europe is facing, and which increasingly require a multidimensional approach. Open Data will help stimulate inter-disciplinarily. Inter-disciplinarily should be science driven but of course incentives are necessary. It is necessary a combination of top down and bottom up approach.

There could be greater use of a challenge driven approach, linked to funding calls. For example, using the Missions of Horizon Europe, by specifically including RIs in a call this could foster greater cross-disciplinary working. There could be cluster projects using this approach for a specific mission. There could also be a greater use of workshops organized by ESFRI. These could be on multiple levels. One would be to involve researchers from two or more areas to come together to generate ideas for a bottom up approach.

ESFRI should have a role to support the similar RIs to work together and also promote cluster projects across scientific domains, in order to address future joint challenges. ESFRI should foster the RIs reuse/adopt services rather than build their own. Each ESFRI infrastructure should make the list of their services publicly available (online). Building common services to different RIs within the cluster; signing collaboration agreements to reference services of the different RIs should be promoted. ESFRI should contribute to create a discussion space, reinforce exchange of experience.

3. What relationship should ESFRI have with sectorial initiatives, international networks, other RIs not included in the ESFRI Roadmap as well as with national and regional RIs?

ESFRI should explore the possibility of setting up a stakeholder forum to include new initiatives and existing non-ESFRI projects. ESFRI should facilitate a coherent ecosystem, incl. link with sectorial initiatives and regional links.

ESFRI should know about all initiatives and decline a strategy more than trying to drive. There could be greater emphasis on working with global organizations. For example, with the GSO who are doing work on internationalizing top national infrastructures and with international organization as those existing for the environment and health and food domains. ESFRI Forum should be more proactive and monitor initiatives (national). Landscape analysis should consider also not ESFRI RIs and relevant international, national and regional initiatives.

Discussion summary and evaluation

Q1: ESFRI role as incubator across the RI lifecycle – how can it be improved?

There has not been clearly defined the role of ESFRI as the incubator. Furthermore, it should be specified ESFRI involvement in projects and landmarks monitoring. The visibility of ESFRI label should be supported to be recognized as a sign of quality. There are some points to be considered:

Incubator role

- The use of the term *incubator* considered or clearly defined.
- Incubation and evaluation should be strongly linked and regular.
- ESFRI should considered guiding, advising and monitoring role.
- ESFRI role as incubator should focus also on the first stages of the RIs.

Monitoring

- ESFRI has a role in monitoring the full lifecycle.
- ESFRI should continue to monitor projects and landmarks but not be involved in removing projects and landmarks not meeting limits.
- It should be introduced and early warning system.

Project implementation

- The implementation deals with
 - 1) a mismatch during pre-ESFRI phase between the scientific community and related policy level.
 - 2) meeting the ESFRI timeline related to the implementation phase
- ESFRI should play a role in the termination phase (landmarks)
- Clear definition of services provided by ESFRI and its involvement in stages of RI life cycle
- ESFRI should increase awareness on RIs among the scientist community.
- ESFRI Project label is very important as a sign of quality.
- ESFRI provides stamp for cross boarder value and it enables discussion among RIs.
- ESFRI could help to strengthen link between ESFRI RIs and national RIs.
- Exchange of experience workshop are strongly supported across thematic disciplines.
- ESFRI stakeholder forum should be established.

Q2: How to foster interconnections among the RIs, within a single scientific domain and across different scientific domains, for supporting interdisciplinary and multidisciplinary research for new research frontiers?

Table responses demonstrate that integrated ecosystem approach is a key issue regarding interconnection among the RIs covering different scientific domains. The aspects to be considered are:

- Integrated ecosystem approach is a tool to enable the RIs to effectively address the common challenges in Europe required a multidimensional approach.
- Open Data will help stimulate inter-disciplinarily which should be science driven
- It is necessary a combination of top down and bottom up approach.
- ESFRI should support clustering of RIs and projects across scientific domains.
- ESFRI should foster the RIs reuse/adopt services.
- ESFRI should contribute to create a discussion space and reinforce exchange of experience.

Q3: What relationship should ESFRI have with sectorial initiatives, international networks, other RIs not included in the ESFRI Roadmap as well as with national and regional RIs?

- ESFRI should explore the possibility of setting up a stakeholder forum.

- ESFRI should facilitate a coherent ecosystem incl. sectorial initiatives and regional links.
- ESFRI should have an overview about all initiatives.
- A greater emphasis on work with global organizations.
- ESFRI Forum should be more proactive and monitor (national) initiatives.
- Landscape analysis should consider relevant international, national and regional initiatives.