



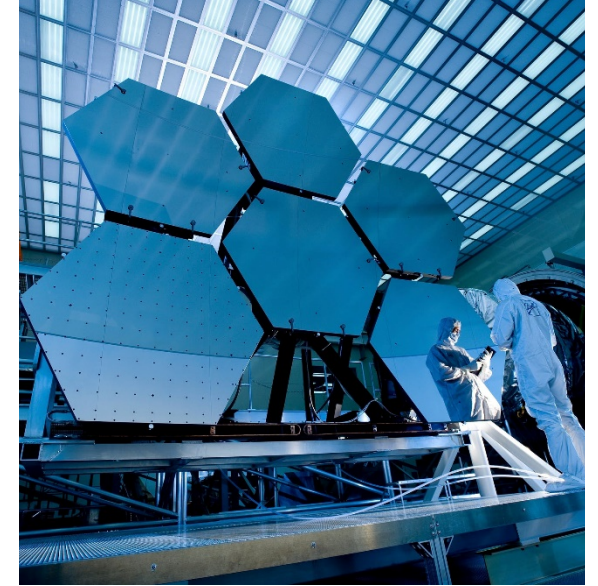
European Strategy Forum
on Research Infrastructures

The 2021 RM and ERICs' role in the new ESFRI Stakeholder Forum

ERIC Forum meeting 2021
26th January 2021

Jan Hrušák

(NEW) ESFRI VISION



Equipping Europe with infrastructures for ground-breaking research

ESFRI (Roadmapping) concept evolution

2002

2006

2008

2010

2016

2018

2021



Hans Chang

ESFRI Creation
established with
a mandate from
the Council of
the EU



John Wood

1st ROADMAP for
the construction
and development
of the next
generation of pan-
European RIs



Carlo Rizzuto

1st UPDATE
Increasing the
number of RIs
of pan-
European
relevance



Beatrix
Vierkorn-
Rudolph

2nd UPDATE
focusing on
Energy, Food and
Biology



John
Womersley

Update process
identified
projects expected
to move to
implementation in
<10 years from
their first inclusion
on the Roadmap.



Giorgio
Rossi

Consolidation
& incorporation
of the mandates
of Council:
sustainability,
innovation, and
hub of funders
of e-infra



Jan
Hrušák

Integration
& relevance
strategic
positioning
in ERA;
paradigm
shift from
planning to
operation

Contribution of RIs to European Policy Objectives

The new ERA vision strongly supports the EU's wider policy objectives with a special focus on research and innovation performance

The new emphasis on the socioeconomic goals:

- digitization of European industry
- preservation of biodiversity
- securing water supply and healthy food production
- development of innovative medicines and treatments against infectious diseases
- ensuring of energy security
- mitigation of climate change
- facing aging or societal inequalities

Precondition to achieve these goals:

- **Joint strategic efforts aiming for a integrated European research infrastructure Ecosystem**
- **Culture change in the entire Research infrastructure domain / OS & Data interoperability**

ESFRI will support the RIs ecosystem in growing and optimizing its alignment with the European strategic agendas, across borders of sectorial domains and it will voice the RI needs

The Policy context

White Paper Scope

An innovative European RIs vision for post-2020

The White Paper is ESFRI's response to the new challenges lying ahead of Europe.

It shows how RIs contribute to the main priorities of the renewed ERA such as **increasing Europe's competitiveness and identifying significant solutions to global challenges.**



A new ambition of RIs and ESFRI contribution to the ERA discussion

TO WHOM IS IT DEDICATED?



Main Messages from the White Paper

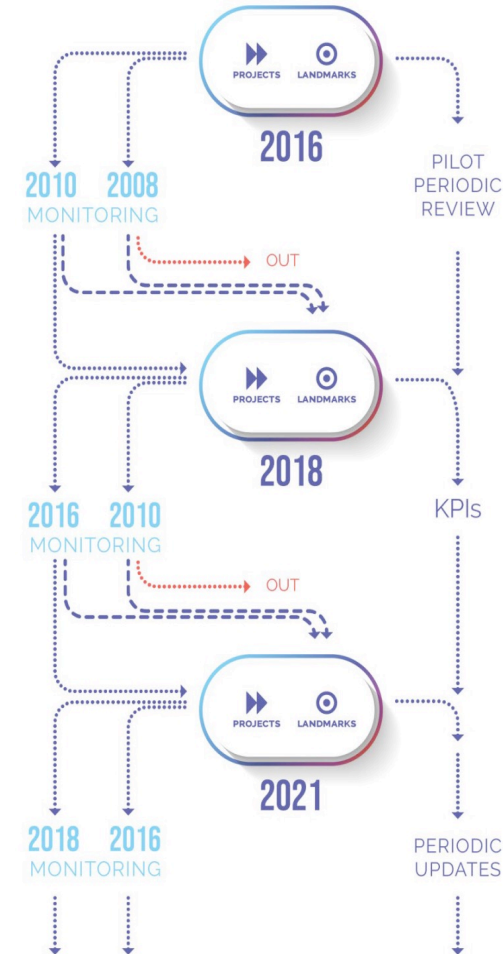
1)	RIs as essential pillar of the ERA => Ecosystem striving for scientific excellence, transnational services, education and skills	(ERA COM, Council Conclusions 12/2020)
2)	RIs as strategic investments => Research with impact that addresses complex societal challenges	(National commitment, HEU, ESIF,...)
3)	RIs as knowledge and Innovation hubs => Basis of European competitiveness, with regional impact and global outreach	(Research with impact)
4)	Coherence of European, national and regional priorities => Research Infrastructures for sustainable development and funding	(Cross-sectorial outreach)
5)	Infrastructures as major promoters of Open Science Research => Interconnected services providing FAIR and quality certified Open Data	(Data Quality)
6)	ESFRI's contribution to RIs policy => Ensure appropriate capacity	(Openness, Monitoring, ERA governance ...)

ESFRI Roadmap 2021

1. Update of the Landscape analyses
2. Monitoring of the Projects -2010, 2016
3. Evaluate new proposals and decide upon new Projects 2021
4. Monitoring and evaluation of the methods and procedures

Content of the Roadmap

- **Landscape of RIs in Europe and globally**
 - Gaps in European RI ecosystem
 - Links between and integration of RIs **towards a global RI ecosystem**
 - e-Infrastructure needs and **integration of RI in open e-networks (EOSC)**
- **List new pan-European RI projects and operational RIs (Landmarks)**
 - Continuous upgrade, **long-term sustainability and end of lifecycle perspectives (if necessary)**
 - Synergies with regional, national, European and international RI and strategies **and beyond** for optimal use
- **ESFRI strategic perspective**
 - Innovation potential and **socio-economic benefit analysis**
 - Global opportunities and **science diplomacy aspects** – where appropriate
- **Methodology:** Iteration with ESFRI, feedback form SWGs and **RIs community**



Landscape Analyses (2021 ESFRI Roadmap)

The Landscape Analysis is a key ingredient of the Roadmap 2021

The *Landscape Analysis* is broadening the view of ESFRI beyond the RIs in its Roadmap. It provides an overview of the European RI ecosystem by identifying the main RIs **operating transnational access in Europe**, in all fields of research, and major new or ongoing projects, as well as an outlook to the global landscape of relevance. **(Strategic positioning)**

The thorough knowledge of the RI Landscape and of its dynamics is a prerequisite for developing optimal strategies in the field of RI aimed at strengthening the competitiveness and value (**excellence and impact**) of European research and **building ERA**

But yet a disclaimer - **The *Landscape Analysis* is a reference document and does not imply a prioritisation by ESFRI nor any national financial and political commitments**

Landscape Analyses (2021 ESFRI Roadmap)

LA will be more strategic oriented report

SECTION 1: Short analysis of the RI landscape and gaps in each domain (SWG, RIs)

- Identified more general scientific trends within domains => research directions
- Identified scientific challenges that require optimization of the European landscape

SECTION 2: Identified interconnections among RIs across the six fields (SWG, RIs)

- Indication of the areas where the different RIs are linked / could work together, and their needs/deficits can be addressed
- Identify and understand scientific trends

SECTION 3: Focus on the Pan EU RIs' services and their broader impacts (ESFRI, RIs)

- The analysis of the relevance of ESFRI RIs for Sustainable Development Goals (SDGs)
- The analysis of capacity of RIs to respond to emergencies (eg. the COVID-19 crisis)
- The contribution of ESFRI RIs to the digital transformation (incl. EOSC)

Monitoring

Welcome to the
ESFRI Monitoring
System



THE OBJECTIVE: Evaluation description of the scientific case and of the implementation case and the Projects on the Roadmap

- **Monitoring of ESFRI projects (2010, 2016) – tasks:**
 - Check the overall progress towards implementation (the minimal key requirements for the phases of lifecycle; plans for reaching full implementation)
 - Addressing the conclusions and following up on the recommendations from the previous evaluation
 - Conclusions and recommendations on the Projects (incl. the possible transition from Project to Landmark)
- **Monitoring of ESFRI Landmarks => start autumn 2021**
 - Decision on implementation of monitoring taken
 - Working Group on Monitoring implementation proposal established by the ESFRI Forum in December 2020,
 - Gather experience on RIs using the KPIs from the MG report (Taylor made solutions)
- **MoS+**
 - The monitoring system for the management of the new proposals and the existing ESFRI projects

ESFRI Stakeholder Forum

ESFRI White Paper, 2020:

- 1) **The dialogue and the exchange of knowledge, experience and good practice** between ESFRI and European RIs at all levels contributing to Europe's competitiveness, tackling the SDGs
- 2) Organization of **a platform for the regular discussion** among the different European RI stakeholders

Objectives

To build a **structural dialogue** of ESFRI with the RIs and between RIs;

To **share ideas**, necessities and good practices between stakeholders;

To increase **understanding and cooperation** between different stakeholders;

To improve the **overall satisfaction** of stakeholders with the operation and performance of the RIs;

To identify and effectively **solve common problems** of RIs including the communication between stakeholders and RIs;

To gather comments of RIs to **overall strategic considerations** on the development of the research landscape.
(ESFRI) **to better communicate**, explain and ask for feedback on its strategy and way of working.

ESFRI Stakeholder Forum

- **The 1st Stakeholder Forum will be organized in the 4Q 2021** during the Slovenian presidency
- **Stakeholder Forum meetings** are preferred F2F but hybrid/online meeting will be an option
- **Identification of the stakeholders** for various domains (RIs, Clusters, ERICs, ...)
- **Examples of the topics to be selected:**
 - *The RIs in new ERA*: financing mechanisms; long term sustainability; all aspects of human resources; responds of priorities of ERA (e.g. Green Deal)
 - *Impact on the RIs*
 - *Open Science* – to built on the outcomes of the previous ESFRI workshops:
 - ESFRI WS on the Future of RIs in the ERA, La Palma, 6/2020
 - ESFRI RIs and EOSC WS, London 1/2019

Consolidation, socioeconomic benefits and impacts of RIs

Research

- Extending **RDI capabilities**
- Increasing **the attractiveness of the ERA** for researchers, industrial users and international partners

Innovation

- Accelerate the exploitation of European RIs as **knowledge and innovation hubs**
- Boosting RIs role as **drivers of economic growth**, social and environmental transitions, and place-based innovation

Education

- Engage RIs and higher **education institutions in specialized training** of students, young academics and industrial scientists on next-generation technologies, inter-disciplinary methodologies and data management skills

Policies

- Increase coherence between European, national and regional priorities and policies for RIs development and funding
- Effective synergies with other European policies and funding instruments

Data

- Exploit the data science and data engineering expertise of RIs for the development of the EOSC

Long term research sustainability



- Contribution to **the economies of scale**
- **Sustainable resources use**
 - financial resources + people + management of RIs + data management
- **Open science** as a solution for more effective science
 - **speed up sharing knowledge**
 - support the transparency and reproducibility
 - produce comparable and reusable data
 - **support the science quality**
- **Connect RIs together and use what have been already created**
- Added value is **interdisciplinary research** – needs of all research disciplines should be included
- **Secure and regulated working environment**
- **Minimum restriction and obstacles to keep EOSC open for all researchers**



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Thank you for you attention.
