

ESFRI

European Strategy Forum
on Research Infrastructures

ESFRI LANDMARK MONITORING GUIDE

PUBLIC

September 2022

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BACKGROUND

ESFRI Landmarks were introduced in the ESFRI Roadmap 2016 as reference RIs and are pillars in the ERA landscape offering not only services to academic research, but also supporting development and innovation. Guaranteeing the excellence of the Landmark label, ESFRI has responsibility for monitoring the quality of the RIs listed in the ESFRI roadmap as Landmarks.

In the follow-up to the Competitiveness Council Conclusions of May 2018¹, and the pilot review of four Landmarks assessing the scientific status and their implementation, ESFRI has set up an *ad hoc* Working Group on “*Monitoring of Research Infrastructures Performance*”². It prepared a final report containing general criteria for Landmark and RI assessment and considerations for implementing an appropriate methodology in the future. This report addressed various aspects of Landmarks and developed a set of KPIs. The report was approved and published by ESFRI in December 2019³.

The *ad hoc* Working Group also recommended a quality standard for Key Performance Indicators (the “RACER-Criteria”)⁴ and a dialogue process between the RIs and the evaluating organisations to define the most appropriate KPIs that would at the same time fulfil the objectives of the ESFRI assessment.

In order to prepare and implement a fully consistent procedure for monitoring of ESFRI Landmarks, ESFRI has set up another working group, namely the “Monitoring Implementation Group”, with the mandate to propose a methodology for the monitoring of Landmarks on the ESFRI Roadmap. The working group has prepared a report, which identified options for implementation of Landmark monitoring by ESFRI and provided directions for further development of the ESFRI monitoring framework and for uptake of the ESFRI monitoring approach beyond the Landmarks⁵.

KEY FEATURES OF THE LANDMARK MONITORING PROCESS

Landmark monitoring by ESFRI has the following objectives:

- enabling regular exchange between ESFRI and Landmarks on their long-term development;
- assessing the quality of each individual Landmark;
- identification of possible problems and supporting the Landmarks to take appropriate actions;
- gathering information on the performance, outputs and impacts of the Landmarks.

¹ Conclusions of the Council of the European Union of 29 May 2018 on Accelerating knowledge circulation in the EU. Doc 9507/18

<http://data.consilium.europa.eu/doc/document/ST-9507-2018-INIT/en/pdf>

² Ad hoc Working Group on Monitoring, June 2018

<https://www.esfri.eu/working-groups/monitoring>

³ Monitoring of Research Infrastructures Performance – ESFRI ad hoc Working Group Report, December 2019

https://www.esfri.eu/sites/default/files/ESFRI_WG_Monitoring_Report.pdf

⁴ All KPIs should be aligned with the objectives of RIs and fulfil RACER criteria: Relevant, Accepted, Credible, Easy to monitor, Robust. Each KPI should be accompanied by a reference sheet that provides a definition, data source(s), method of calculation, and other information concerning calculation or applicability – Recommendation 1, *ibidem*, pg. 4.

⁵ Proposal for the Implementation of the ESFRI Monitoring Approach, December 2021

[Microsoft Word - 13 FI21-77-10_ESFRI Landmark Monitoring Approach.docx](#)

Additionally, the outcomes of the Landmark monitoring exercise will provide insights into the functioning of the European RI ecosystem as a whole and will contribute to the identification of gaps in the European landscape and future opportunities for the RIs in Europe.

Each Landmark shall be monitored at regular intervals of about five years. Monitoring will be based on qualitative information gathered through a questionnaire and quantitative information represented by KPIs. In line with the two ESFRI monitoring reports mentioned in the previous chapter, RIs are invited to use the ESFRI KPIs, however, they may be replaced or complemented by other KPIs, which capture specific objectives of the Landmarks. The obtained information will be complemented by hearings (virtual) and site visits (if considered necessary by the Monitoring Panels), as relevant. The monitoring should be based as much as possible on the information already available, which Landmarks prepare for their governing bodies and the broader public.

Monitoring will cover Landmarks which have already started their operational phase and actively provide services. All eligible Landmarks will be monitored before the end of 2024, in three batches. Monitoring of the first batch will start in September 2022, after preparatory work starting from June 2022.

The Landmark monitoring process is coordinated by the ESFRI Monitoring Committee, while each Landmark will be analysed by a dedicated Monitoring Panel.

ROLE OF THE MONITORING COMMITTEE

The Monitoring Committee is responsible for the oversight of the monitoring process on behalf of ESFRI. It is composed of the Chairs of all SWGs, the Chair of the IG, selected EB Members and Delegates, as well as an EC representative. The Committee draws up the monitoring methodology, prepares general templates of the questionnaire and the monitoring report, proposes the timeline as well as coordinates its implementation.

MONITORING PANELS

The monitoring of individual Landmarks is carried out by dedicated Monitoring Panels. The Panels are established by the relevant SWGs and the IG.

The Panels are composed of 3-4 Members of the relevant SWGs (including at least one Member of SWG DIGIT to address the digital dimension of the RI), 1-2 Members of the IG. A representative of the European Commission may participate in the Panel as observer.

The Panels are advised by 2-3 external experts, at least one of which is identified by the involved SWGs and one by the IG. The external experts must have relevant experience and expertise in research infrastructures.

The Landmark will be informed about the names of the members of the Monitoring Panel and of the external experts.

The Panels should be established sufficiently in advance of the start of the monitoring of a particular Landmark. Each Panel should identify a Chair from among its members to organise and facilitate the work.

The Panels are responsible for engaging with the Landmarks throughout the monitoring process, discussing the KPIs used by the Landmark (checking what KPIs they use, to which extent they are consistent with ESFRI KPIs and the RACER criteria). If necessary, the Panels customise the questionnaires to be provided to each Landmark. The Panels are then responsible to analyse the gathered information, as well as to organise hearings (remotely) and site visits as relevant. The Panels draw up a monitoring report for each Landmark.

The collection of information through customised questionnaires and data feeding the KPIs is facilitated by the ESFRI MOS platform. The Landmark will electronically submit all the required data through the ESFRI MOS platform, using dedicated credentials provided.

PRINCIPLES, CONFLICT OF INTEREST (COI) AND CONFIDENTIALITY

Monitoring must comply with the following four principles:

- **Independence**, i.e. involved persons carry out the monitoring in a personal capacity and they represent neither their employer nor their country.
- **Impartiality**, i.e. involved persons must treat all Landmarks equally and assess them impartially on their merits, irrespective of their origin or the identity of the partners in the RI.
- **Objectivity**, i.e. involved persons carry out the monitoring based on the individual merit of each Landmark, refraining from any comparisons with other Landmarks.
- **Accuracy**, i.e. involved persons carry out the monitoring strictly in line with the agreed methodology and the relevant ESFRI documentation.

Each member of a Monitoring Panel must sign a declaration of the absence of conflict of interest (CoI) and a confidentiality declaration.

The Monitoring Committee checks any potential CoI of Panel members based on the self-declaration of the Panel members in advance of the exercise and confirms no CoI exists in the Panels. A CoI may arise, in particular, due to science competition, scientific and economic interests, political or national affinities, family or emotional ties, or any other relevant connection or shared interest.

Strict confidentiality rules apply. Any information obtained during the monitoring process beyond the agreed content of the Monitoring Reports must be kept confidential and may not be used for any other purpose. For each assessment, only the relevant persons will have access to a repository of all confidential documents.

IMPLEMENTATION OF THE MONITORING PROCESS

The first cycle of Landmarks monitoring will be implemented from September 2022 until December 2024. It will cover all the ESFRI Landmarks listed in the 2018 Roadmap, which have entered the operational phase. It will thus not cover the new Landmarks from the 2021 Roadmap. Including non-operational Landmarks may be considered in duly justified cases.

The monitoring process will consist of the following steps:

- Agreement on the overall schedule of the whole monitoring cycle, including periods when each Landmark will be monitored, based on the proposal from the ESFRI Working Groups and in consultation with the concerned Landmarks.
- Establishment of the monitoring panel for each Landmark, including external experts. The names will be communicated to Landmarks for information.
- Agreement with each Landmark on the list of additional documents the Landmark will submit (e.g. strategic plans and research agendas, annual reports, catalogues of services, etc.), the KPIs they will use as well as on the individual timeline.
- Opening of the ESFRI MOS system.
- Submission of the questionnaire, KPI data and other agreed documents by the Landmarks.
- Initial analysis of the documents and agreement on follow-up questions.
- Organisation of hearings and/or site visits.
- Preparation of a draft report containing an analysis of all the elements requested to each Landmark.
- Factual check of the draft report by the concerned Landmark.
- Preparation of the final monitoring report for each Landmark, for approval of the Forum.
- Preparation of the final report from the first Landmark monitoring cycle 2022-2024, for approval of the Forum.

The individual reports will indicate whether the RIs should retain their Landmark quality mark. In case of significant issues found for a particular Research Infrastructure that could impact its Landmark status, a follow-up review focusing on the implementation of the recommendations will be scheduled within two years, after which the Forum will take a final decision, taking into account the recommendations of the second review.

After the first batch, the Monitoring Committee will consider if any adjustments to the monitoring process are necessary. At the end of the first monitoring cycle, ESFRI will carry out an in-depth evaluation of the monitoring system and procedures.

TIMELINE

Timeline for the monitoring of the first batch of the Landmarks.

STEPS	DATE / DEADLINE
Establishment of Monitoring Panels	By 15 September 2022
Kick-off meeting with Landmarks	16 September 2022
Identification of external experts for each Landmark	October 2022
Agreement with Landmarks on the list of KPIs and on monitoring documents	October 2022
Opening of the MOS+ system for Landmarks	November 2022
Submission of documents by Landmarks	31 January 2023
External experts reports	28 February 2023
Initial analysis of the documents and agreement on follow-up questions	31 March 2023
Hearings / Site visits	1 - 30 April 2023
Draft Reports by Monitoring Panels	15 May 2023
Factual check by the Landmarks	22 May 2023
Draft Final reports by Monitoring Panels	31 May 2023
Review of the reports by the Monitoring Committee	10 June 2023
Final reports by Monitoring Panels for approval of the Forum	20 June 2023
Approval of the Forum	By 15 July 2023
Lessons learnt from the first batch and adapted monitoring procedure	15 September 2023

ATTRIBUTION OF LANDMARKS TO MONITORING BATCHES

Domain	Name	Full name	Roadmap (Y)	Landmark (Y)	Operation start (Y)	Monitoring Year
SCI	ESS ERIC	European Social Survey	2006	2016	2013	2022
SCI	CLARIN ERIC	Common Language Resources and Technology Infrastructure	2006	2016	2012	2022
SCI	SHARE ERIC	Survey of Health, Ageing and Retirement in Europe	2006	2016	2011	2023
SCI	CESSDA ERIC	Consortium of European Social Science Data Archives	2006	2016	2013	2023
SCI	DARIAH ERIC	Digital Research Infrastructure for the Arts and Humanities	2006	2016	2019	2023
ENV	ICOS ERIC	Integrated Carbon Observation System	2006	2016	2016	2022
ENV	EURO-ARGO ERIC	European contribution to the international Argo Programme	2006	2016	2014	2022
ENV	EPOS ERIC	European Plate Observing System	2008	2018	2023	2023
ENV	EMSO ERIC	European Multidisciplinary Seafloor and water-column Observatory	2006	2016	2016	2023
ENV	IAGOS	In-service Aircraft for a Global Observing System	2006	2016	2014	2023
ENV	LifeWatch ERIC	e-Infrastructure for Biodiversity and Ecosystem Research	2006	2016	2017	2024
ENV	EISCAT_3D	Next generation European Incoherent Scatter radar system	2008	2018	2023	2024
H&F	BBMRI ERIC	Biobanking and BioMolecular Resources Research Infrastructure	2006	2016	2014	2022
H&F	ECRIN ERIC	European Clinical Research Infrastructure Network	2006	2016	2014	2022
H&F	EATRIS ERIC	European Advanced Translational Research Infrastructure in Medicine	2006	2016	2013	2022
H&F	ELIXIR	A distributed infrastructure for life-science information	2006	2016	2014	2022
H&F	INFRAFRONTIER	European Research Infrastructure for the generation, phenotyping, archiving and distribution of mouse disease models	2006	2016	2013	2023
H&F	INSTRUCT ERIC	Integrated Structural Biology Infrastructure	2006	2016	2017	2023
H&F	Euro-Biolmaging ERIC	European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences	2008	2018	2016	2023
H&F	EMBRC ERIC	European Marine Biological Resource Centre	2008	2018	2017	2023

Domain	Name	Full name	Roadmap (Y)	Landmark (Y)	Operation start (Y)	Monitoring Year
H&F	EU-OPENSREEN ERIC	European Infrastructure of Open Screening Platforms for Chemical Biology	2008	2018	2021	2024
H&F	ERINHA	European Research Infrastructure on Highly Pathogenic Agents	2008	2018	2018	2024
ENE	ECCSEL ERIC	European Carbon Dioxide Capture and Storage Laboratory Infrastructure	2008	2018	2016	2022
DIGIT	PRACE	Partnership for Advanced Computing in Europe	2006	2016	2010	2022
PSE	ESRF EBS	European Synchrotron Radiation Facility Extremely Brilliant Source	2006	2016	2020	2022
PSE	SPIRAL2	Système de Production d'Ions Radioactifs en Ligne de 2e génération	2006	2016	2019	2022
PSE	ILL	Institut Max von Laue-Paul Langevin	2006	2016	NA	2023
PSE	EMFL	European Magnetic Field Laboratory	2008	2016	2014	2023
PSE	European XFEL	European X-Ray Free-Electron Laser Facility	2006	2016	2017	2024
PSE	ELI ERIC	Extreme Light Infrastructure	2006	2016	2018	2024
TOTAL			2022	2023	2024	
			12	12	6	