



ESFRI

Landmark Monitoring

2022-2024

First Batch Report

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OBJECTIVES AND GENERAL REMARKS

ESFRI Landmarks were introduced in the ESFRI Roadmap 2016 as reference Research Infrastructures (RIs) and are pillars in the ERA landscape, offering not only services to academic research but also supporting development and innovation.

In order to support the further development of the Landmarks and to achieve further insights into the functioning of the European RI ecosystem, the Forum has assigned the Monitoring Committee (MC) with the task of conducting a monitoring of all operational ESFRI Landmarks.

The Monitoring should further enable regular exchange between ESFRI and Landmarks on their long-term development, assess the quality of each individual Landmark, identify possible problems and support the Landmarks to take appropriate actions. It shall also provide information on the performance, outputs and impacts of the Landmarks.

The Monitoring started with a Kick-Off Workshop on 16th September 2022 in Brussels, involving interested stakeholders.

This report summarises the results of the Monitoring of the first 12 Landmarks. The main generic findings are described in chapter two, while the first experiences with the Monitoring are described in chapter three. It shows that the concept worked well in general, and no major changes need to be implemented for the next batches. Some of the main practical issues were solved in the course of the process. However, the early availability of information for Panels, Landmarks and external experts needs to be addressed. Also, ESFRI needs to consider the workload on the Working Groups and Panels, especially considering that other important activities involving these groups, such as the Landscape Analysis or the ESFRI roadmap process, might run simultaneously.

The MC will also report about the Monitoring of the second and third batch of Landmarks. A final report shall be delivered after the completion of the Monitoring of all the Landmarks included in this round, expected by the end of 2024.

The individual reports will be accessible to delegations via CIRCABC.

The individual reports shall be kept confidential within ESFRI (Forum and Working Groups) and not be made publicly available due to the sensitive information they contain. The Landmarks shall receive the reports and may distribute them further if they decide to do so.

The Monitoring Committee suggests publishing this report on the ESFRI website.

An updated schedule for the Monitoring of the second and third batches is annexed.

MAIN FINDINGS OF THE LANDMARK MONITORING (2022)

Most RIs have worked together with the monitoring panels in an open and constructive way. Some of the RIs have rightfully remarked that there was no sufficient time to provide all the requested information (this will go into the lessons learnt). Several RIs have mentioned the usefulness of the Landmark Monitoring and the usefulness of the LM Monitoring report for e.g. their authorities and/or funding agencies.

One Landmark was not in the position to provide the necessary information due to a major transformation process. This RI shall be revisited during the ongoing Monitoring process in 2024.

In another case, the panel strongly recommended revisiting the Landmark after a couple of years (e.g. early in the next round) due to some uncertainties and missing KPI data.

- In general, the scientific excellence of the RIs is considered very good or even excellent.
- The Pan-European relevance is good for all, and in several cases, this extends to the global relevance.
- E-needs are well taken care of. The RIs have data management plans and live up to the FAIR principles etc.
- Some of the RIs are in partnership with other RIs, leading to very useful collaboration, thereby enhancing the impact of the single infrastructures.
- Most RIs have shown remarkable resilience during the COVID-19 crisis and have endeavoured to minimise the negative effects of the lockdown periods. Some RIs have been very quick to offer their unique assets to contribute to a better understanding of the origins, spreading and scientific details of the pandemic and to contribute to ways to control it. It is also clear that the COVID crisis has triggered a quicker implementation of novel access schemes. Some of these ideas about alternative access schemes had been under discussion already before the COVID crisis, but then they were forcibly implemented.
- Overall, it is clear that many RIs are working on dealing with KPIs, at different levels. Many RIs have KPIs suited for their own purposes. Some are adapting their KPIs given the ESFRI KPIs. Some RIs have KPIs for a long period, but most RIs only started this effort a few years ago. Some RIs will need to invest more in collecting and categorising relevant data (related to numbers and origins of their users, publications, outreach, impact etc.). Some RIs have difficulties in selecting what are good KPIs that can reflect well the activities of their organisation.
- The main threat to the RIs (as perceived from their side) is their sustainability, e.g. in terms of insecurity about (long-term) membership of organisations and/or countries as well as the secured availability of funding. It is sometimes difficult for RIs to develop a policy in an environment where there is extremely strong competition for funding and where there is a lot of uncertainty about the evolutions in the funding and support landscape, in particular, because RIs depend strongly on a long-term vision. It can be mentioned that governance, management and HR policies are sound for the RIs, as is annual reporting, finances and audit etc.
- It may be difficult for RIs to find an overall aim or strategy in a quickly evolving society. RIs are expected to contribute strongly to relevant societal problems, but often they do not receive adequate extra funding (and time) to build up that expertise, or activities must be done at the expense of shutting down other lines of research or expertise.
- Socio-economic impact is difficult to measure for many of the RIs, but they all provide evidence.
- The Russian invasion in Ukraine has already had a serious impact on some RIs, in different ways (funding, collaborations that have been put on hold...).

FIRST EXPERIENCES AND LESSONS LEARNT FROM THE FIRST BATCH OF ESFRI LANDMARK MONITORING

The MC collected the first experiences with the Landmark Monitoring procedure. The results show that besides timing issues and workload, the process worked well. A number of open issues were solved in the course of the process. For the next two batches, early and clear information for the Panels, experts and Landmarks is necessary. Some personal continuity would be an advantage to smoothly finalise the first round of Landmark Monitoring. Changes in the Public Guide will not be necessary at this stage but should be considered when reviewing the complete first round of 2022 – 2024.

Organisation

Monitoring the first batch of ESFRI Landmarks was the first exercise for ESFRI, and it was well prepared, keeping in mind the experiences in ESFRI with the evaluations and monitoring of Projects.

For each Landmark, a monitoring panel was set up with a Chair from the SWG and members from relevant Strategy Working Groups (SWG), the DIGIT SWG and the Implementation Group (IG). Guidelines for the process, including timelines, document templates and questionnaires, were set up. The procedure was explained at a well-attended workshop held in Brussels in September. In addition, a number of online sessions were organised to update everyone (external experts, monitoring panels) about the monitoring process, but it should be clearer for the next round of monitoring which sessions are targeted to which audiences so any duplication is avoided. Since the procedure is tested and the documents are available, some online sessions might not be needed for the next round.

Timing and interaction with Landmarks

The monitoring panels contacted the Landmarks in October/November 2022, and discussed the KPIs that the Landmarks provided. The Landmarks received the Monitoring questionnaire to fill out and send them in with supporting documents in January 2023. The procedure worked out quite well, and uploading in MOS+ and later on, of the reports in CIRCABC went smoothly in general. The external experts (for both Science Case and Implementation Case) were contracted in January 2023, and they provided their assessment reports by the end of February 2023. The reports were analysed by the monitoring panels, and additional questions were drafted for the hearing of the Landmark. The hearings took place by the end of April 2023. If necessary, a site visit was possible, but only one site visit of a Landmark took place. After the hearings, the monitoring panels drafted their reports and sent them to the Landmarks to check for any factual errors, following which the reports were finalised in early June. As can be seen, the timing was quite tight, especially when there were a number of Landmarks to be monitored in one Strategic Working Group. Also, for the members of the IG, present in all monitoring panels and each of them therefore involved in three monitoring panels, timing was challenging. In addition, the monitoring process took part at the same time as the new Landscape analysis so resources were very stretched also for the Landmarks, but most were able to work to this timeline. However, it is clear that the timeframe is too tight for all parties involved and for subsequent monitoring exercises, there should be more time and ESFRI should spread out the planning of events and requests a little more.

LESSONS LEARNED

Questionnaire and format

- There was a delay with the format of the questionnaire, and this affected the time the Landmarks were given to fill out the questionnaire. This was also due to a long-term discussion on whether or not it should be tailored for each LM. It was decided to have the same questionnaire that was general enough for all Landmarks to fill out and give the opportunity to add supporting documents. This worked out well.
- It was positive that the panels could discuss the KPIs before the Landmarks filled out the questionnaire. The prior discussion allowed the monitoring exercise to be put in perspective, and more time should be allowed for this step in the future.

Monitoring Panels

- The composition of the monitoring panels should be established and communicated to the Chair and all the members of the monitoring panel at an early stage. It should be made very clear to the Chairs that the panels also include members of the Implementation Group (IG) and DIGIT.
- The expectations of panel members, experts and Landmarks should be clearly communicated to and by the panel chairs so that any doubts about process and timing can be resolved quickly and clarifications provided. For example, it was unclear what type of recommendation was expected: a simple Yes or No, or recommendations that can help the Landmark.
- The Chairs of the panels acted very differently, and within some panels, the IG members were not always included in the communication at the start. The Chairs of the panels should be guided to work in a more harmonious way.
- The process requires a high level of commitment from the SWG (especially DIGIT) and IG members who are involved in the monitoring panels.
- The capacity of the IG was not really sufficient to be able to do the work. The fact that during the monitoring, people left and were added did not help, and it would be more productive if the IG was more stable and there was a sufficient number of members of the IG.
- The IG could not always easily allocate an IG member to each Landmark without having some conflict of interest (CoI).
- It was perceived positively that the members from the SGW and IG were working together early on, which was not always the case for the previous Roadmap update.
- The Landmark monitoring reports should be more consistently shared within the SGWs.

External experts

- The appointment and involvement of the external experts should be communicated to the Chair of the monitoring panels and the IG representative as early as possible.
- There are not many external experts involved in the process. If possible, external experts should be from different countries.

- In general, each external expert on behalf of the IG wrote only one report, with the exception of one person who wrote two reports. It is still undecided whether to approach only a few people who would write multiple reports or divide the workload among more experts. This should be decided after the second batch of monitoring.
- The IG kept in touch with the external experts until the Col form was submitted and the material from the RIs was uploaded on CIRCABC. From then onwards, StR-ESFRI and the chairs of the monitoring panel dealt with the individual external experts. The ways the chairs of the monitoring panels contacted the experts were not always the same, and this should be harmonised.
- Up until the present, the quality of the expert reports has not been noted for future purposes. It should be decided if this needs to take place.

The monitoring report

- Landmarks should be informed about what will happen with the report, who has access, and who is the owner.
- It should be clear, if and when the Landmarks can distribute it if they wish to do so.

ANNEX

Timeline for the Second Batch

STEPS	DATE / DEADLINE
INTERNAL: Review of Guidelines and Templates (If necessary)	By 15 September 2023
Establishment of Monitoring Panels	By 15 September 2023
Kick-off meeting with Landmarks Information meeting for Panels	By 20 September 2023
Identification of external experts for each Landmark	October 2023
Agreement with Landmarks on the list of KPIs and of monitoring documents	October 2023
Opening of the MOS+ system for Landmarks	10 November 2023
Submission of documents by Landmarks	31 December 2023
External experts reports	15 February 2024
Initial analysis of the documents and agreement on follow-up questions	15 March 2024
Hearings / Site visits	15 March - 15 April 2024
Draft Reports by Monitoring Panels	30 April 2024
Factual check by the Landmarks	10 May 2024
Draft Final reports by Monitoring Panels	24 May 2024
Review of the reports by the Monitoring Committee	10 June 2024
Final reports by Monitoring Panels for approval of the Forum	20 June 2024
Approval of the Forum	By 15 July 2024
Lessons learnt from the second batch and adapted monitoring procedure	Parallel proceeding of third batch!

Attribution of Landmarks to the Second Batch

Domain	Name	Full name	Roadmap (Y)	Landmark (Y)	Operation start (Y)	Monitoring Year
ENV	EPOS	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
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
PSE	ILL	Institut Max von Laue-Paul Langevin	2006	2016	NA	2023
PSE	EMFL	European Magnetic Field Laboratory	2008	2016	2014	2023
SCI	SHARE ERIC	Survey of Health, Ageing and Retirement in Europe	2006	2016	2011	2023
SCI	DARIAH ERIC	Digital Research Infrastructure for the Arts and Humanities	2006	2016	2019	2023

Timeline for the Third Batch

STEPS	DATE / DEADLINE
Establishment of Monitoring Panels	By 01 December 2023
Kick-off meeting with Landmarks	December 2023
Identification of external experts for each Landmark	January 2024
Agreement with Landmarks on the list of KPIs and of monitoring documents	January 2024
Opening of the MOS+ system for Landmarks	February 2024
Submission of documents by Landmarks	15 May 2024
External experts reports	27 July 2024
Initial analysis of the documents and agreement on follow-up questions	01 September 2024
Hearings / Site visits	1 - 27 September 2024
Draft Reports by Monitoring Panels	11 October 2024
Factual check by the Landmarks	18 October 2024
Draft Final reports by Monitoring Panels	31 October 2024
Review of the reports by the Monitoring Committee	15 November 2024
Final reports by Monitoring Panels for approval of the Forum	30 November 2024
Approval of the Forum	December 2024
Review of the Procedure	1 st quarter 2025

Attribution of Landmarks to the Third Batch

Domain	Name	Full name	Roadmap (Y)	Landmark (Y)	Operation start (Y)	Monitoring Year
DIGIT	TO BE DISCUSSED PRACE	Partnership for Advanced Computing in Europe	2006	2016	2010	Not done in 2022
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	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
PSE	European XFEL	European X-Ray Free-Electron Laser Facility	2006	2016	2017	2024
PSE	ELI ERIC	Extreme Light Infrastructure	2006	2016	2018	2024
SCI	CESSDA ERIC	Consortium of European Social Science Data Archives	2006	2016	2013	Shift from 2 nd batch