European Strategy Forum on Research Infrastructures

ESFRI

THE ASSESSMENT OF MATURITY OF NEW PROPOSAL: SCIENTIFIC CASE

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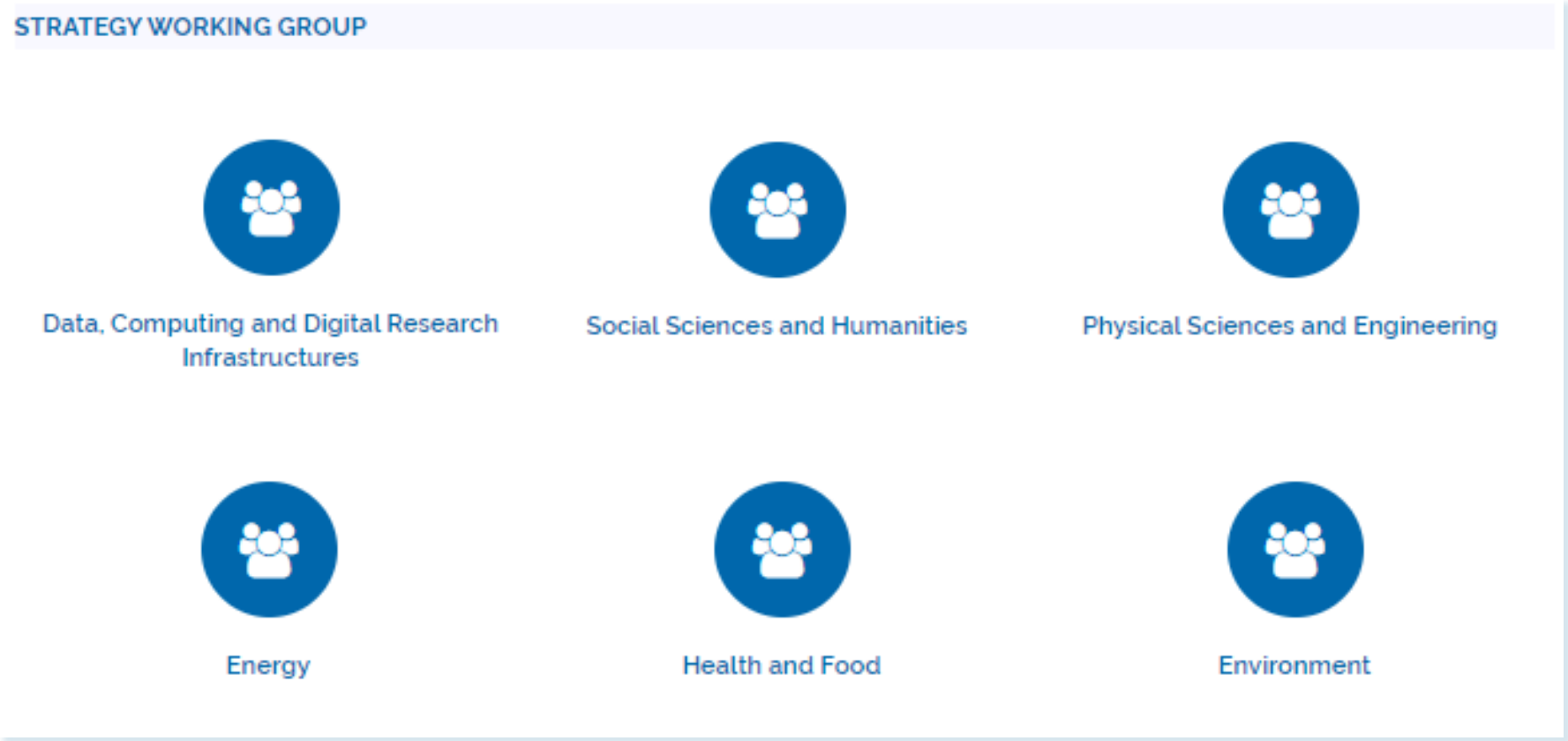
Strategy Report on Research Infrastructures

ROADMAP 2026

TECHNICAL SUPPORT BY THE STRATEGY WORKING GROUPS



THE ASSESSMENT OF MATURITY OF NEW PROPOSAL: SCIENTIFIC CASE

- The SWGs evaluate the SCIENTIFIC CASE along **six** dimensions:

- scientific excellence
- pan-European relevance
- socio-economic impact
- user strategy and access policy
- e-needs **& data**
- **environmental considerations (new)**

THE SMALL PRINT under the table of MINIMAL KEY REQUIREMENTS FOR SCIENTIFIC CASE:

*** Proposals that meet the minimal key requirements for the 'preparation' phase may be considered as Projects.**

**** Projects that meet the minimal key requirements for the `implementation' phase may be considered as Landmarks.**

- **Texts in blue only apply to single-site RI.**
- **Texts in green only apply to distributed RI.**
  [this presentation: see only dimension ‘User strategy and access policy’]

Minimal Key Requirements (MKR) dimension 'scientific excellence'

	PHASE				
	DESIGN	PREPARATION*	IMPLEMENTATION**	OPERATION	TERMINATION
SCIENTIFIC EXCELLENCE	– long term science programme defined – scientific community well-established (providing quantification) – scientific leadership described – cutting edge science and technology outlined	– Scientific vision and mission outlined including scientific new frontiers and/or multidisciplinarity – Cutting edge science and technology described, with science concept tested and found feasible – Scientific community well-established – Services for the scientific community described – Scientific leadership recruited – Availability of scientific human resources proven			

So, the MKR for this dimension are a more compact version of those for the previous Roadmap

	DESIGN	PREPARATION*	
		2021 Roadmap	2026 Roadmap
SCIENTIFIC EXCELLENCE	– long term science programme defined – **scientific community well-established** (providing quantification) – scientific leadership described – cutting edge science and technology outlined	– scientific vision and mission outlined – (multidisciplinary) scientific new frontier outlined – cutting edge science and technology described – science concept tested and found feasible	– Scientific vision and mission outlined including scientific new frontiers and/or multidisciplinarity – Cutting edge science and technology described, with science concept tested and found feasible
		– services for the scientific community described	– **Scientific community well-established** – Services for the scientific community described
		– technical maturity and feasibility tested and achieved	
		– scientific leadership recruited – availability of scientific human resources proven	– Scientific leadership recruited – Availability of scientific human resources proven

Minimal Key Requirements (MKR) dimension ‘pan-European relevance’

	PHASE	
	DESIGN	PREPARATION*
PAN-EUROPEAN RELEVANCE	– pan-European approach for scientific area outlined – targeted user community is pan-European – **complementary or synergistic potential with national/ international facilities**	– positioning in the European RI landscape **fully described** – case for European added value defined – research capacity and current/potential geographical distribution defined – links to relevant RI and other large pan-European **and international** programmes identified

Minimal Key Requirements (MKR) dimension ‘socio-economic impact’

	PHASE	
	DESIGN	PREPARATION*
SOCIO-ECONOMIC IMPACT	– relevance to societal challenges identified and potential economic impact predicted including innovation aspects at regional and European level	– case for impact made, supporting innovation, other types of benefits such as services for society, cultural aspects and attraction of business, industry and public services, **including digital transition** etc.

Minimal Key Requirements (MKR) dimension ‘user strategy and access policy’

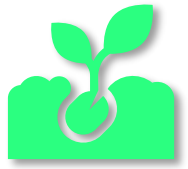
	PHASE	
	DESIGN	PREPARATION*
USER STRATEGY & ACCESS POLICY	– vision about user community – access model described – common approaches for national/thematic nodes	– identified user categories – **expected user community quantitatively investigated**, e.g. by surveys and description of it in terms of origin and size – Identified services based on a clear identification of user demands and needs – single entry point for users as well as common approaches in access policy for national/thematic nodes outlined

Minimal Key Requirements (MKR) dimension ‘e-needs & data’

	PHASE	
	DESIGN	PREPARATION*
E-NEEDS & DATA	– vision and description of e-infra-structure requirements, including access policy and security measures ready – interfacing with communication networks or distributed calculation or HPC/HTC – vision for Open Science approach – vision for engagement with the EOSC ecosystem	– conceptual design of e-infrastructure **& data infrastructure** ready – contributions of e-infrastructure & data management resources at all levels (institutional, regional, national, **European,** international) described – access policy, **security measures** and data management policy outlined – **demonstration of** compliance with FAIR principles – **compliance with Open Science approach** – **compliance with the EOSC ecosystem**

Minimal Key Requirements (MKR) dimension 'environmental considerations'

NEW



	PHASE	
	DESIGN	PREPARATION*
ENVIRONMENTAL CONSIDERATIONS	– environmental strategy outlined at headline level (reference: applicable elements used in the European Sustainability Reporting Standards (ESRS nomenclature)	– significant environmental issues identified and addressed in environmental strategy

Free to use ‘checklist’ of 43 items that may have relevance

(p 1 of 4 shown; will be on ESFRI website)

CHECKLIST FOR DIMENSION “ENVIRONMENTAL CONSIDERATIONS”

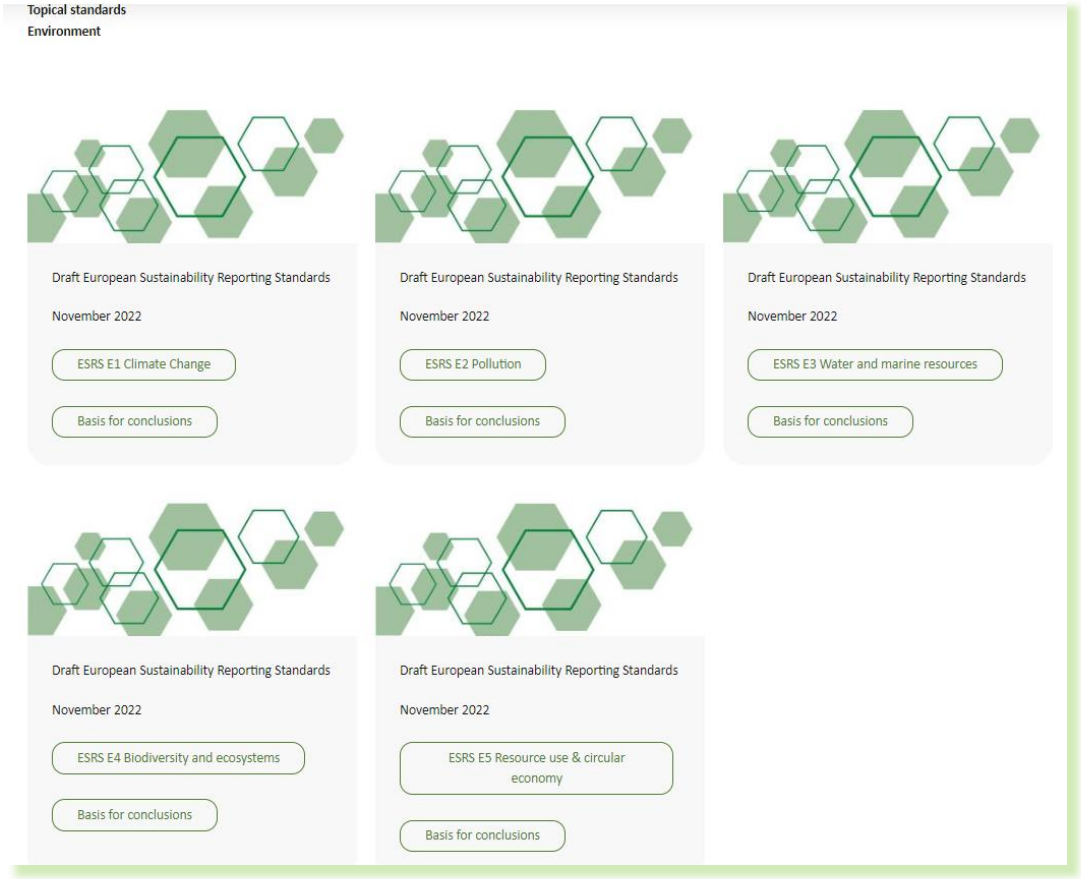
This checklist is intended to assist the formulation of answers on the dimension ‘environmental considerations’. It provides the substantive environmental ‘headline’ issues for which ESFRI project proposals are invited to **examine whether they are relevant (hence to be addressed in an environmental strategy) or not, as the case may be.**

The elements are listed in relation to their appearance in the series of environmental (draft) European Sustainability Reporting Standards and their so-called ‘disclosure requirements’, namely: ESRS E1 (Climate change), ESRS E2 (Pollution), ESRS E3 (Water and marine resources), ESRS E4 (Biodiversity and Ecosystems) and ESRS E5 (Resource use and circular economy). References below to these disclosure requirements (and paragraph numbers therein) allow to find more detailed explanations there.[1]

A. Elements to consider in relation to Climate
(ref. ESRS E1 disclosure requirements E1-1, E1-2, E1-3, E1-4, E1-5, E1-6, E1-7, E1-8, E1-9)

	CHECKLIST OF POTENTIAL ISSUES under E1-1 Transition plan for climate change mitigation[2]	Potentially relevant? (YES/NO)
1	(17) Resilience in relation to climate change	
	CHECKLIST OF POTENTIAL ISSUES under E1-2 Policies related to climate change mitigation and adaptation	**Potentially relevant? (YES/NO)**
2	(22) Material impacts, risks and opportunities related to climate change mitigation and adaptation	
3	(23) Whether and how policies address the energy efficiency and renewable energy deployment	
	CHECKLIST OF POTENTIAL ISSUES under E1-3 Actions and resources in relation to climate change policies	**Potentially relevant? (YES/NO)**
4	(24) Climate change mitigation and adaptation actions and the resources allocated for their implementation	
5	(27b) (Scope for) achieving / expecting reductions in GHG emissions	
	CHECKLIST OF POTENTIAL ISSUES under E1-4 Targets related to climate change mitigation and adaptation	**Potentially relevant? (YES/NO)**
6	(31) Setting GHG emissions reduction targets to manage material climate-related impacts, risks and opportunities, for example, renewable energy deployment, energy efficiency, climate change adaptation, and physical or transition risk mitigation	
7	(32f) The expected decarbonisation levers and their overall quantitative contributions to achieve the GHG emission reduction targets	
	CHECKLIST OF POTENTIAL ISSUES under E1-5 Energy consumption and mix	**Potentially relevant? (YES/NO)**
8	(35a) Total energy consumption from non-renewable sources	
9	(35b) Total energy consumption from renewable sources	
	CHECKLIST OF POTENTIAL ISSUES under E1-6 Gross Scopes 1, 2, 3 and Total GHG emissions	**Potentially relevant? (YES/NO)**
10	(42d) Total GHG emissions to provide an overall understanding of the project’s GHG emissions and whether they occur from its own operations or the value chain	

[1] The target audience of the ESRS standards are companies (economic operators) and their investors; for their use in this different (non-economic-) ESFRI roadmap context, it should be understood that there is no need to consider any issues in relation to ‘production’ or other measures of economic output, but purely with respect to any significance they may have in the Research Infrastructure life-cycle context.
[2] The context of climate change mitigation policy is most clearly that of the objective of achieving climate neutrality by 2050 and how this affects the use of fossil fuels. All sectors are ‘decarbonising’, and also need to consider any ‘lock-in’ of greenhouse gas emissions. From the disclosure requirement E1-1, this checklist only specifically retains the element of ‘resilience’.



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- In order to be considered as a Project, a proposal must meet the key requirements for the Preparation Phase and score a grading of at least ‘High’ for both the SCIENTIFIC CASE and the IMPLEMENTATION CASE.

- The status of each RI on the Roadmap is a strategic decision of the Plenary Forum that takes into account the outcomes of the evaluations.

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INSIDE THE SWGs:

- Identification & contact with external experts (outside of evaluation panel)
- Evaluation panel inside the SWG taking into account technical profile and CoI/Confidentiality
- Coordination with the different SWG for multidisciplinary RI and horizontal aspects
- Evaluation by Implementation Group, with very strong coordination and harmonization meetings in the different steps
- Final evaluation report (Scientific and Implementation) to ESFRI-EB

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- **These minimal key requirements serve as the basis for the scoring in the evaluations. Meeting minimal requirements is necessary, but not sufficient to be automatically listed in the Roadmap.**
- **The following scoring values are attributed to each dimension following the minimal key requirements described in the annexes II and III:**
  - Very high, i.e. the key requirements are outstandingly met.
  - High, i.e. the key requirements are comprehensively met.
  - Medium, i.e. the key requirements are partly met, but the proposal shows weaknesses with regard to specific requirements. Enhancing the RI's future success requires (significant) changes to (specific parts of) the proposal/plans.
  - Low, i.e. the key requirements are insufficiently met and the evidence for future success of the RI is not convincing.

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Thank you
for your attention

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