ESFRI European Strategy Forum
on Research Infrastructures

QUESTIONNAIRE FOR SUBMISSION OF PROPOSALS FOR ROADMAP 2018

This questionnaire consists of three parts:

PART A: GENERAL INFORMATION is used for the eligibility check by the EB and – if selected - for the public description of the Project in the Roadmap 2018.

PART B: SCIENTIFIC CASE and PART C: IMPLEMENTATION are used by the SWG to evaluate the scientific case of the proposal and by the IG to assess its implementation.

− Some questions require to tick a bullet, to fill a text section with a strictly limited number of characters or to upload supporting documents in PDF at maximum 1 MB each.

− If you believe a question does not apply to your proposal, you may enter 'not applicable', but you should explain why the question is not relevant in your case.

− Only the electronic version of this questionnaire may be used to submit proposals for the Roadmap 2018 until the **31st August 2017 at 18:00 CET**.

RESOURCES:

− ROADMAP 2016 at http://www.esfri.eu/roadmap-2016 for landscape analysis

− PUBLIC ROADMAP 2018 GUIDE
at http://www.esfri.eu/sites/default/files/u4/ESFRI_Roadmap_2018_Public_Guide_f_0.pdf for definitions, models, methods and procedures

− SUPPORT DOCUMENT from e-IRG at http://e-irg.eu/catalogue/eirg-1004 for Part B, Section 4: e-NEEDS

SUPPORT

− General questions: national ESFRI Delegations – contact details available at
http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri

− Helpdesk for the Online Submission Form: ESFRI Secretariat at esfri@ec.europa.eu

PART A: GENERAL INFORMATION

NAME

Provide the name of your RI:

- FULL NAME (maximum 200 characters with spacing)

- ACRONYM (maximum 20 characters with spacing)

TYPE

Identify the type of your RI: (dropdown)

- SINGLE-SITE

- DISTRIBUTED

CLASS

Indicate the class of your RI: (dropdown)

- MAJOR UPGRADE OF EXISTING RI

- NEW RESEARCH INFRASTRUCTURE

- GLOBAL RESEARCH INFRASTRUCTURE

TIMELINE

Indicate the timeline of the lifecycle of your RI:

- DESIGN: FROM <YYYY> TO <YYYY>

- PREPARATION: FROM <YYYY> TO <YYYY>

- IMPLEMENTATION (CONSTRUCTION):   FROM <YYYY> TO <YYYY>

- OPERATION: FROM <YYYY> TO <YYYY>

ESTIMATED COSTS

Summarise the real or estimated costs for your RI:

- CAPITAL VALUE: € <INSERT>

- DESIGN: € <INSERT>

- PREPARATION: € <INSERT>

- IMPLEMENTATION (CONSTRUCTION):   € <INSERT>

- AVERAGE ANNUAL OPERATION COSTS: € <INSERT>

HEADQUARTERS

If available, indicate hosting institution and location of the Headquarters:

- FULL NAME (maximum 200 characters with spacing)

WEBSITE

If available, provide the Internet address:

- URL: (maximum 200 characters with spacing)

IMAGE

Upload an image which represents your RI: (upload with limit 1 MB; length =12cm x height = 10cm; 300 dpi resolution)

BACKGROUND

Summarise the science background of your RI, the reference scientific community (-ies) and the current landscape: (maximum 1000 characters with spacing)

DESCRIPTION

Summarise the general characteristics and aim of your RI, including the impact on the quality and quantity of European research in the main field of action and the interdisciplinary aspects: (maximum 2000 characters with spacing)

IMPLEMENTATION

Summarise the actions that led to the presentation to ESFRI, your plans for preparation and implementation in terms of schedules and milestones, including Preparatory Phase or other pre-implementation actions, acquisition of legal status: (maximum 1000 characters with spacing)

POLITICAL SUPPORT

A) LEAD COUNTRY/ENTITY

Identify the Member State (MS), Associated Country (AC) or the EIROforum member, which leads the preparation of your RI:

- COUNTRY NAME FOR MS OR AC (limited dropdown list)

- EIROFORUM MEMBER (dropdown list)

Upload the Expression of political Support (EoS) of the lead country; in the case of a EIROforum member, please upload the Council resolution: (upload with limit 1 MB)

B) PROSPECTIVE MEMBER COUNTRIES/ENTITIES

Identify at least two MS and AC, which have submitted Expressions of political Support (EoS) signed by the national ministries responsible for RI or other entities such as EIROforum members of which the mandated authorities have expressed interest to join your RI. You may also identify any additional third country that has signed an EoS:

- COUNTRY NAMES (extensive dropdown list allowing for multiple entries)

- FULL NAMES Of OTHER ENTITIES (maximum 200 characters with spacing allowing for multiple entries)

Merge all corresponding EoS and Council resolutions and upload: (upload with limit 10 MB)

C) INCLUSION IN NATIONAL RESEARCH INFRASTRUCTURE ROADMAP (-S)

If applicable, identify the country (-ies) which has (have) included your RI - or a preliminary form - in its (their) national RI roadmap (-s).

- COUNTRY NAMES (extensive dropdown list allowing for multiple entries)

Please specify, per country, the amount of funds earmarked for or already allocated to your RI in the framework of this (their) national RI roadmap (-s): (maximum 500 characters with spacing).

FINANCIAL COMMITMENT

A) LEAD COUNTRY/ENTITY

Identify the authority[1] from the lead country that has signed Expression of Commitment (EoC) or provided a Council resolution to financially contribute to the preparation and implementation:

- NAME (maximum 200 characters with spacing)

- CONTACT PERSON (maximum 200 characters with spacing)

- EMAIL & TELEPHONE (email & telephone fields)

Upload the corresponding EoC or Council resolution: (upload with limit 1 MB)

B) PROSPECTIVE MEMBER COUNTRIES/ENTITIES

Identify the authorities from prospective member countries that have signed an Expression of Commitment (EoC) and other entities such as EIROforum members that have provided a Council resolution to financially contribute to the preparation and implementation:

- NAME (maximum 200 characters with spacing)

- CONTACT PERSON (maximum 200 characters with spacing)

- EMAIL & TELEPHONE (email & telephone fields)

Merge all corresponding EoC and Council resolutions and upload: (upload with limit 10 MB)

C) COVERAGE OF REAL AND ESTIMATED COSTS

Specify the amounts that havce already been financed or are fully agreed to be financed and speficy the share of costs covered by the commitment (-s) for the real or estimated costs:

- CAPITAL VALUE: € <INSERT>   <XXX>%

- DESIGN: € <INSERT>   <XXX>%

- PREPARATION: € <INSERT>   <XXX>%

- IMPLEMENTATION (CONSTRUCTION):   € <INSERT>   <XXX>%

- AVERAGE ANNUAL OPERATION COSTS: € <INSERT>   <XXX>%

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[1] Any legal entity from a MS, AC and third country that can take binding decisions to financially support the RI can submit an EoC. It may concern a regional or national government (agency), an umbrella organisation negotiating and redistributing funding on behalf of its members, a Research Funding Organisation (RFO) or a Research Performing Organisation (RPO).

COORDINATOR

Identify the Coordinator for the preparation of your RI:

- NAME INSTITUTION (maximum 200 characters with spacing)

- CONTACT LEADER (maximum 200 characters with spacing)

- EMAIL & TELEPHONE (email field) (telephone field)

PARTICIPANTS

Identify the core partners - being research institutions - that have signed the inter-institutional and multi-lateral agreement and thus are formally involved in the consortium:

- NAME INSTITUTION (maximum 200 characters with spacing)

- CONTACT PERSON (maximum 200 characters with spacing)

- EMAIL & TELEPHONE (email & telephone fields)

(allow for multiple entries)

List all MS, AC and third countries which host the research institutions and international organisations (partners) formally involved in the consortium, but are neither the lead country nor prospective member countries:

- COUNTRY NAMES (extensive dropdown list allowing for multiple entries)

Upload the corresponding inter-institutional and multi-lateral agreement, e.g. a Memorandum of Understanding (MoU): (upload with limit 1 MB)

SCIENTIFIC DOMAIN

Indicate which Strategy Working Group you believe to be the most suitable to evaluate the scientific case of your RI: (dropdown list: ENERGY; ENVIRONMENT; HEALTH & FOOD; PHYSICAL SCIENCES & ENGINEERING; SOCIAL & CULTURAL INNOVATION)

In case the scientific case of your RI should - in your view - be also evaluated by one or more additional SWG, indicate which: (tick boxes allowing for multiple entries: ENERGY; ENVIRONMENT; HEALTH & FOOD; PHYSICAL SCIENCES & ENGINEERING; SOCIAL & CULTURAL INNOVATION)

PART B: SCIENTIFIC CASE

SECTION 1: SCIENTIFIC EXCELLENCE

1.1 Identify the scientific field (-s) and - if applicable - the inter- or multidisciplinary scope of your RI: (maximum 500 characters with spacing)

1.2 Outline the scientific vision and mission , its short and long term impact on the main research field (-s) and its potential impact on other fields - if any - as well as on innovation: (maximum 5000 characters with spacing)

1.3 Describe if and how your RI corresponds to a long term science programme by a well-established science community and if and how your RI addresses a (inter- or multidisciplinary) scientific frontier opening novel possibilities in (several) research (fields): (maximum 2000 characters with spacing)

1.4 Identify the scientific leadership that was recruited to lead the preparation of your RI and elaborate how you will recruit and consolidate the scientific leadership and overall competences for the implementation and operation of the proposed RI: (maximum 500 characters with spacing)

1.5 Describe how the scientific concept of your RI was tested and found feasible and summarise the main findings concerning the scientific case from the design (and feasibilty) study report and the feedback from the relevant scientific community (-ies): (maximum 5000 characters with spacing)

1.6 Upload the design (and feasibility) study final report, if available: (upload with limit 1 MB)

SECTION 2: PAN-EUROPEAN RELEVANCE

2.1. Describe if and how your RI addresses a gap in the current RI landscape in Europe (and beyond) and thus responds to unaddressed needs of user communities, i.e. describe the `uniqueness` of the RI. If not, describe which value your RI adds to the existing European research capacity in one or more fields of research and innovation: (maximum 2000 characters with spacing)

2.2 Indicate current infrastructures or services that are operational and accessible for the relevant science communities, if any, and explain why they are not adequate: (maximum 3000 characters with spacing)

2.3 Explain why your RI is the most appropriate solution to address this need and what the added value is of performing the research activities within a RI instead of a research programme: (maximum 3000 characters with spacing)

2.4 Describe how your RI contributes to the enhancement and realisation of the European Research Area[2]: (maximum 3000 characters with spacing)

2.5 Describe how your RI will contribute to aligning national investments in your field (-s) at the European level: (maximum 3000 characters with spacing)

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[2] Please consider the Communication on A Reinforced European Research Area Partnership for Excellence and Growth COM (2012) 392.

2.6 Describe how your RI will effectively (re-) orient resources from the relevant science communities and stimulate `joint programming`, e.g. contributing complementary instrumentation, activating partnerships, training of young researchers in the relevant field (-s) of science: (maximum 2000 characters with spacing)

2.7 Describe the (potential) linkages between your RI and existing (European) platforms, networks and other (ESFRI) RI, e.g. European Technology Platforms (ETP), Joint Programming Initiatives (JPI), ERA-nets, Public-Private Partnerships (PPP) and projects under FP7 or Horizon 2020: (maximum 3000 characters with spacing)

2.8 Describe how your RI will leverage European competitiveness in research and innovation, e.g. uniqueness of technical offer, advancement of technical standards, innovation in research process, effective impact on the innovation of research products and setting reference standards in data management: (maximum 3000 characters with spacing)

2.9 By testing your RI against the ESFRI pan-European *ex ante* indicators, identify which indicators your RI meets and describe how: (maximum 3000 characters with spacing)

SECTION 3: SOCIO-ECONOMIC IMPACT

3.1. Describe the expected direct economic impact of your RI, e.g. the economic impact from direct spending in the site and region hosting the facility or the headquarters and the nodes of a distributed RI: (maximum 3000 characters with spacing)

3.2. Describe the expected mid and long term socio-economic benefits of your RI, e.g. in terms of replacing/re-orientating costly infrastructures that are already in place and support to public policy: (maximum 2000 characters with spacing)

3.3. Estimate the impact on the innovation activity in the production of goods and services that will result from your RI, e.g. in terms of well-trained people, knowledge transfer, access programmes and services provided: (maximum 2000 characters with spacing)

3.4. Describe the potential and role your RI can play in technological and social innovation: (maximum 2000 characters with spacing)

3.5. Describe how your RI will attract innovation-oriented resources from business, industries and public services, e.g. as users or suppliers: (maximum 2000 characters with spacing)

3.6. Describe how your RI will contribute to tackling (grand) societal challenges: (maximum 2000 characters with spacing)

3.7 If available, upload a socio-economic *ex ante* impact study: (upload with limit 1 MB)

SECTION 4: E- NEEDS

4.1. Outline the Data Management Plan (DMP) and data access policy of the RI. If applicable, describe how data would become accessible to the public: (maximum 3000 characters with spacing)

4.2. Describe and quantify what e-infastructure services - e.g. resources for storage, computing, networking, tools for data management, security, access, remote analysis, etc. - your RI will need: (maximum 2000 characters with spacing)

4.3.Describe how the e-infrastructure services needed by your RI will be implemented, specifying the potential need of external e-infrastructure resources and the relations to external e-infrastructures: (maximum 2000 characters with spacing)

4.4. Describe how the RI will contribute to the development of the European and global e-infrastructure landscape at all levels (institutional, regional, national, international) - including e.g. the e-infastructure commons and the European Open Science Cloud (EOSC): (maximum 2000 characters with spacing)

PART C: IMPLEMENTATION

SECTION 5: STAKEHOLDER COMMITMENT

5.1 If applicable, elaborate on your current and future inclusion in National/Regional Research and Innovation Strategies for Smart Specialisation (RIS3) and Operational Programme (-s) from the European Structural and Investment Funds (ESIF) and to what degree the inclusion in the ESFRI Roadmap is a condition for applying to the ESIF by the respective authorities: (maximum 2000 characters with spacing)

5.2 Complementing the identification of the lead country/entity, prospective member countries/entities, coordinator and participants from PART A, describe the envisaged final stakeholder community of your RI and elaborate on your strategies and plans on how your RI will obtain their commitment, including your plans to get listed in additional national RI roadmaps and regional Smart Specialisation Strategies: (maximum 2000 characters with spacing)

SECTION 6: USER STRATEGY & ACCESS POLICY

6.1 Upload a table describing quantitatively (in estimated absolute figures as well as %) the targeted user community in terms of 1) scientific field (-s), 2) origin (i.e. local/regional, lead country, prospective member countries, participants, other European countries, other non-European third countries) and 3) sort (i.e. academia, business & industries, public services, other): (upload with limit 1 MB)

6.2 Elaborate how your RI has verified the above-described expected user community, e.g. through a survey: (maximum 2000 characters with spacing)

6.3 Describe the user strategy agreed within your consortium and the possibilities to develop a reasonably sized user community considering costs and services based on your identification of demands and needs: (maximum 5000 characters with spacing)

6.4 Describe how you have involved the above-described (potential) user community in the development of your RI proposal, e.g. in the definition of the scientific case and of the technical design specifications, in analysing costs versus benefits, in planning and funding (parts of) the RI: (maximum 1000 characters with spacing)

6.5 Upload a table linking quantitatively (in estimated absolute figures as well as %) the above-identified user communities to access units, access modes and funding, i.e. provide a quantitative overview of your business case/delivery strategy: (upload with limit 1 MB)

6.6 Describe the envisaged (common) access policy[3] of your RI in terms of access units, the access mode (-s), the conditions for access, the processes and interactions involved in the access and the support measures facilitating the access: (maximum 5000 characters with spacing)

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[3] For more information and support, please consult the `European Charter for Access to Research Infrastructures` at
https://ec.europa.eu/research/infrastructures/pdf/2015_charterforaccessto-ris.pdf

SECTION 7: PREPARATORY WORK

7.1 Describe what type and level of assessment - including successful design and feasibility study (-ies) - your RI already has undergone: (maximum 1000 characters with spacing)

7.2 Elaborate on the prior work that led to this proposal, e.g. the RI is based on an international networking activity like Integrated Infrastructure Initiatives (I3) or other programmes with external international evaluation: (maximum 1000 characters with spacing)

7.3 Describe how the implementation of your RI was tested and found feasible and summarise the main findings concerning the implementation from the design (or feasabilty) study report (-s): (maximum 5000 characters with spacing)

7.4 Concerning the Technical Design Report (TDR), describe if all the relevant technologies are available or if and how much Research and Development (R&D) is needed in order to assess the full technical feasibility and draw a cost-book: (maximum 1000 characters with spacing)

7.5 Describe whether the industrial capacity for the implementation (construction) and operation is already in place (EU or international market) or whether it needs to be developed in relation to your RI, e.g. spin off companies, joint-ventures: (maximum 2000 characters with spacing)

7.6 Elaborate on the business case of your RI effectively linking the described scientific case, funding commitments, user strategy, access policy and Cost-Benefit Analysis (CBA) demonstrating the long term sustainability of the operations of your RI and explain whether and how this business case has already been reviewed: (maximum 5000 characters with spacing)

7.7 Describe your strategy for site selection and for siting. If your RI is single-site, explain how the site was or will be chosen. If your RI is distributed, explain how you have (will) select the headquarters and (national) nodes: (maximum 1000 characters with spacing)

7.8 Elaborate on the (prior) context of the site (-s) of your RI, e.g. a 'green-field', part of a broader plan of site development (including synergetic initiatives, installation in the premises of pre-existing facilities of similar or different scope) and the 'value' transferred to your new RI in terms of infrastructure, services and human resources: (maximum 1000 characters with spacing)

SECTION 8: PLANNING

8.1. Describe the detailed planning for your RI as approved within the consortium complementing the timeline provided in PART A by specifying all phases, Work Breakdown Structure (WBS), deliverables and milestones, including investments decisions and possible updates and decommissioning: (maximum 5000 characters with spacing)

8.2 If available, upload a visual illustration of your planning: (upload with limit 1 MB)

8.3 If you intend to apply for a Preparatory Phase under Horizon 2020, define what the main objectives and deliverables of such a project will be and what aspects of readiness-to-implement will be within its 2-3 years reach. If you do not intend to apply for a Preparatory Phase under Horizon 2020, explain why not: (maximum 1000 characters with spacing)

8.4 Explain how your RI will reach the firm decisions for implementation by the involved stakeholders and the financial commitment by a critical mass consortium within the permanence time on the ESFRI Roadmap, i.e. maximally ten years: (maximum 1000 characters with spacing)

SECTION 9: GOVERNANCE AND MANAGEMENT

9.1 Describe the project organisation for the preparation - and if able for the implementation - of your RI as approved within your consortium with clearly defined skills, responsibilities and reporting lines: (maximum 1000 characters with spacing)

9.2 Upload an organisation chart of the project organisation for the preparation: (upload with limit 1 MB)

9.3 Outline the (final) governance for operation with clearly defined responsibilities and reporting lines, including all bodies, senior managers, Supervisory and other Advisory Boards such as a Ethical Board - if appropriate: (maximum 2000 characters with spacing)

9.4 Elaborate on the chosen or preferred legal structure, how you intend to implement it with particular attention to the transition from the project organisation to the (final) governance: (maximum 1000 characters with spacing)

9.5 Describe the managerial skills and competences – other than scientific - needed for the preparation, implementation (construction), operation and termination of your RI and how you will recruit them: (maximum 1000 characters with spacing)

9.6 Identify all measurable and credible Key Performance Indicators (KPI) for both the scientific case as well as the implementation in all phases: (maximum 2000 characters with spacing)

9.7 Describe your plans for the independent scientific monitoring and evaluation of your RI when in operation: (maximum 1000 characters with spacing)

SECTION 10: HUMAN RESOURCES POLICY

10.1 Describe how your RI will help European scientific communities' mobility and internationalisation, i.e. link your access policy - particularly the excellence-driven access mode - to your (scientific) human resources policy: (maximum 2000 characters with spacing)

10.2 Describe the approved staffing plan for the preparation - and if able for the implementation (construction) - of your RI, i.e. the skills and competences needed and how they will be recruited: (maximum 2000 characters with spacing)

10.3 Outline the human resources policy for the operation of your RI, i.e. skills and competences needed, hiring, equal opportunities, secondments, education and training of staff and users: (maximum 2000 characters with spacing)

SECTION 11: FINANCES

11.1 Complementing the estimated costs as provided under PART A, describe the top-level breakdown of cost elements with overall order of magnitude estimates for all phases, including – in case of a distributed RI - for Central Hub, National Nodes and main upgrades. Please indicate the confidence levels of your estimates for each element. Please indicate if they are based on suppliers' quotations. (maximum 4000 characters with spacing)

11.2 Please upload your cost models and cost-book analysis, if available: (upload with limit 5 MB)

11.3 Describe the essence of your investment plan – in terms of current level of financial commitments, the (conditional) intentions to (co-) fund the implementation (construction) costs and access, site-premium and kind of formal investment commitments (in cash and/or in-kind), the plans to fund operating costs - and to what (sub-) set of stakeholders you have presented your investment plan: (maximum 2000 characters with spacing)

11.4 Indicate whether you intend to apply for loans of the European Investment Bank (EIB) - or equivalent national credit systems - and use the Access to risk finance under Horizon 2020: (maximum 3000 characters with spacing)

11.5 Indicate whether your RI is going to replace existing RI that will become obsolete, how you will ensure that funding and users from the obsolescent infrastructure (-s) are transfered to the new one and what political steps are needed to ensure this: (maximum 2000 characters with spacing)

SECTION 12: RISKS

12.1 Describe the scientific developments or competing projects elsewhere that could affect the research outputs expected from your RI: (maximum 1000 characters with spacing)

12.2 Identify the scientific, technological, political and financial risks that your RI could face in the different phases and describe your mitigation strategies to tackle them: (maximum 3000 characters with spacing)

12.3 Describe the risks that could delay, increase costs of or make the realisation of your RI impossible (maximum 1000 characters with spacing)

12.4 If available, upload a technical options analysis: (upload with limit 1 MB)