

Strategy Report on Research Infrastructures

ROADMAP 2021

Proposal Submission Questionnaire

25th September 2019



QUESTIONNAIRE FOR SUBMISSION OF PROPOSALS FOR ROADMAP 2021

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 2021.
- PART B: SCIENTIFIC CASE is used by the Strategy Working Group (SWGs) to evaluate the SCIENTIFIC CASE of the proposal.
- PART C: IMPLEMENTATION CASE is used by the Implementation Group (IG) to assess the IMPLEMENTATION CASE of the proposal.

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.

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_through the ESFRI MoS+ may be used to submit *New Proposals* for the Roadmap 2021.

Deadline for Submission of Proposal Questionnaire is 5th May 2020 at 18:00 CET.

RESOURCE

- ROADMAP 2018 at http://roadmap2018.esfri.eu
- ROADMAP 2021 Guide at https://www.esfri.eu/esfri-roadmap-2021

SUPPORT

- General questions: national ESFRI Delegations contact details available at https://www.esfri.eu/people?qt-people=1#qt-people
- Helpdesk for the Submission process: send your inquires to roadmap@str-esfri.eu

ROADMAP 2021





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European Strategy Forum on Research Infrastructures

Proposal Submission Questionnaire

PART A: GENERAL INFORMATION

Fields marked with * are mandatory

SECTION 1: GENERAL DATA*

|NAME

Provide the name of the RI

- FULL NAME (maximum 200 characters with spacing)
- ACRONYM (maximum 20 characters with spacing)

|TYPE

Identify the type of your RI

- SINGLE-SITED
- DISTRIBUTED

RI TYPE < DROPDOWN LIST FOR RI TYPE: SINGLE-SITED, DISTRIBUTED>

|CLASS

Indicate the class of your RI

- NEW RESEARCH INFRASTRUCTURE
- MAJOR UPGRADE OF EXISTING RI
- GLOBAL RESEARCH INFRASTRUCTURE

RI CLASS < DROPDOWN LIST FOR RI CLASS: NEW RESEARCH INFRASTRUCTURE, MAJOR UPGRADE OF EXISTING RI, GLOBAL RESEARCH INFRASTRUCTURE>

|TIMELINE

Indicate the timeline of the lifecycle of your RI

PHASE	FROM YEAR	TO YEAR	COMMENT
DESIGN*			
PREPARATION*			
IMPLEMENTATION (CONSTRUCTION)*			
OPERATION*			





TERMINATION*		
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|ESTIMATED COSTS

Summarise the real or estimated costs for your RI

COST	EURO (€)	EURO (€)	COMMENT
TOTAL INVESTMENT*			
DESIGN*			
PREPARATION*			
IMPLEMENTATION*			
TERMINATION*			
AVERAGE ANNUAL OPERATION*			

|HEADQUARTERS

Indicate hosting institution of the Headquarters

- INSTITUTION NAME (maximum 200 characters with spacing)
- INSTITUTION ADDRESS

|WEBSITE

If available, provide the Internet address

- URL: (maximum 200 characters with spacing)

|LOGO

Upload the logo of your RI

- UPLOAD (upload with limit 1 MB)

|IMAGE

Upload an image which represents your RI

- UPLOAD (upload with limit 1 MB)

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| 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

- TEXT (maximum 1000 characters with spacing)

| BACKGROUND

Summarise the science background of your RI, the reference scientific community (-ies) and the current landscape

- TEXT (maximum 2000 characters with spacing)

|STEPS TO 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 preimplementation actions, acquisition of legal status

- TEXT (maximum 1000 characters with spacing)

|SCIENTIFIC DOMAIN

Indicate which Strategy Working Group you believe to be the most suitable to evaluate the scientific case of your RI

- DIGIT
- FNF
- ENV
- H&F
- PSE
- SCI

SWG NAME < DROPDOWN LIST FOR SWG ENTRY: DIGIT, ENERGY, ENVIRONMENT, HEALTH & FOOD, PHYSICAL SCIENCES & ENGINEERING, SOCIAL & CULTURAL INNOVATION>

|OTHER RELEVANT DOMAIN

In case you believe that the scientific case of your RI should also be evaluated by one or more additional SWG, indicate which

SWG NAME < DROPDOWN LIST FOR SWG ENTRY: DIGIT, ENERGY, ENVIRONMENT, HEALTH & FOOD, PHYSICAL SCIENCES & ENGINEERING, SOCIAL & CULTURAL INNOVATION>



SECTION 2: POLITICAL SUPPORT*

|LEGAL STATUS

Indicate the legal status your RI

- none
- in preparation (specify status: i.e. Step 1, 2 etc.)
- established (ERIC, AISBL, GmbH, others)

Upload the relevant updated legal entity statutes/agreement of your RI

- UPLOAD (upload with limit 1 MB)

| POLITICAL SUPPORT - LEAD COUNTRY/ENTITY

Identify the Member State (MS), Associated Country (AC) or the EIROforum Member, which leads the Preparation Phase of your RI

- LEAD COUNTRY/ENTITY NAME < DROPDOWN LIST FOR MS/AC OR EIROFORUM>

Identify the National Ministry responsible for the RI from the LEAD MS/AC, or other entity – such as EIROforum Member – that has signed Expression of Support (EoS)¹ or provided a Council resolution.

- NATIONAL MINISTRY RESPONSIBLE FOR RI / COUNCIL OF THE ENTITY (e.g. EIROforum MEMBER)

Upload the Expression of political Support (EoS) of the Member State (MS) and Associated Country (AC); in the case of a EIROforum member, please upload the Council resolution.

- UPLOAD EoS (upload with limit 1 MB)

LEAD COUNTRY/ENTITY	NATIONAL MINISTRY RESPONSIBLE FOR RI / COUNCIL OF THE ENTITY (e.g. EIROforum MEMBER)	EoS/Council Resolution
DROPDOWN LIST FOR MS/AC OR EIROFORUM MEMBER	NAME	UPLOAD*
(allow for multiple entries)		

| POLITICAL SUPPORT - PROSPECTIVE MEMBER COUNTRY/ENTITY

Identify at least two MS and AC – and any additional THIRD COUNTRY – which have submitted Expressions of political Support (EoS) signed by the National Ministries responsible for RI, or other

¹ The ESFRI Delegation will validate such EoS.





entity – such as EIROforum Member – whose mandated authorities have expressed interest to join the RI through a Council resolution.

- PROSPECTIVE MEMBER COUNTRY/ENTITY NAME < DROPDOWN LIST FOR MS/AC, THIRD COUNTRIES, EIROFORUM OR OTHER ENTITY>

Identify the National Ministry responsible for the RI from the PROSPECTIVE MEMBER MS/AC or other entity – such as EIROforum Member – that has signed Expression of Support (EoS)² or provided a Council resolution.

- NATIONAL MINISTRY RESPONSIBLE FOR RI / COUNCIL OF THE ENTITY (e.g. EIROforum MEMBER)

Upload the Expression of political Support (EoS) of the Member State (MS) and Associated Country (AC); in the case of any other entity – such as EIROforum Member – please upload the Council resolution

- UPLOAD EoS/Council Resolution (upload with limit 1 MB)

PROSPECTIVE MEMBER COUNTRY/ENTITY	NATIONAL MINISTRY RESPONSIBLE FOR RI / COUNCIL OF THE ENTITY (e.g. EIROforum MEMBER)	EoS/Council Resolution
DROPDOWN LIST FOR MS/AC, THIRD COUNTRIES, OR EIROFORUM OR OTHER ENTITY	NAME	UPLOAD*
(allow for multiple entries)		

| POLITICAL SUPPORT – INCLUSION IN NATIONAL ROADMAPS

If applicable, identify the MS and AC which has (have) included your RI – or a preliminary form – in its (their) national RI roadmap (-s) or similar political document.

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) or similar strategic document (in this case, please also provide reference of the relevant political document): (maximum 1000 characters with spacing).

- COUNTRY NAME < DROPDOWN LIST FOR MS OR AC> < COMMENT>

NATIONAL ROADMAP COUNTRY	FUNDS EARMARKED OR ALLOCATED	RELEVANT POLITICAL DOCUMENT
DROPDOWN LIST FOR MS/AC	EURO (€)	TEXT
(allow for multiple entries)		

² The ESFRI Delegation will validate such EoS.

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SECTION 3: FINANCIAL COMMITMENT*

| FINANCIAL COMMITMENT - LEAD COUNTRY/ENTITY

Identify the MS/AC or the EIROforum Member, which is the LEAD COUNTRY/ENTITY

- LEAD COUNTRY/ENTITY NAME < DROPDOWN LIST FOR MS/AC OR EIROFORUM OR OTHER ENTITY>

Identify the authorities³ from the LEAD COUNTRY/ENTITY that has signed Expression of Commitment (EoC) or provided a Council resolution to financially contribute to the Preparation and Implementation Phases of you RI.

- NAME (maximum 200 characters with spacing)
- ADDRESS
- CONTACT PERSON (maximum 200 characters with spacing)
- EMAIL (email field)
- TELEPHONE (telephone field)

Upload the corresponding EoC or Council resolution

- UPLOAD EoC (upload with limit 1 MB)

LEAD COUNTRY/ENTITY	AUTHORITY NAME	ADDRESS	CONTACT PERSON	E-MAIL	PHONE	EoC
DROPDOWN LIST FOR MS/AC OR EIROFORUM						UPLOAD*
(allow for multiple entries)						

| FINANCIAL COMMITMENT - PROSPECTIVE MEMBER COUNTRIES/ENTITIES

Identify the MS/AC, any additional THIRD COUNTRY, or other entities – such as EIROforum Member – which are PROSPECTIVE MEMBER COUNTRY/ENTITY

- PROSPECTIVE MEMBER COUNTRY/ENTITY NAME < DROPDOWN LIST FOR MS/AC, THIRD COUNTRY, EIROFORUM OR OTHER ENTITY>

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³ 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).

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Identify the authorities⁴ from each PROSPECTIVE MEMBER COUNTRY/ENTITY that have signed Expression of Commitment (EoC) or provided a Council resolution to financially contribute to the Preparation and Implementation Phases of you RI.

- NAME (maximum 200 characters with spacing)
- ADDRESS
- CONTACT PERSON (maximum 200 characters with spacing)
- EMAIL (email field)
- TELEPHONE (telephone field)

Upload the corresponding EoC or Council resolution

- UPLOAD EoC (upload with limit 1 MB)

PROSPECTIVE MEMBER COUNTRY/ENTITY	AUTHORITY NAME	ADDRESS	CONTACT PERSON	E-MAIL	PHONE	EoC
DROPDOWN LIST FOR MS/AC, THIRD COUNTRY, EIROFORUM OR OTHER ENTITY		_				UPLOAD*
(allow for multiple entries)						

| FINANCIAL COMMITMENT - COVERAGE OF REAL AND ESTIMATED COSTS

Specify the amounts that have 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:

соѕт	EURO (€)	PERCENTAGE (%)	COMMENT
TOTAL INVESTMENT*			
DESIGN*			
PREPARATION*			

⁴ 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).





IMPLEMENTATION*		
TERMINATION*		
AVERAGE ANNUAL OPERATION COSTS*		

SECTION 4: RESEARCH INFRASTRUCTURE CONSORTIUM*

|COORDINATOR

Identify the Coordinator for the preparation of your RI

COUNTRY/ENTITY	INSTITUTION NAME	INSTITUTION ADDRESS	CONTACT PERSON	E-MAIL	TELEPHONE
DROPDOWN LIST FOR MS/AC OR EIROFORUM					
(allow for multiple entries)					

|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

COUNTRY/ENTITY	INSTITUTION NAME	INSTITUTION ADDRESS	CONTACT PERSON	E-MAIL	TELEPHONE
DROPDOWN LIST FOR MS/AC, THIRD COUNTRY, EIROFORUM OR OTHER ENTITY					
(allow for multiple entries)					

Upload the corresponding inter-institutional and multi-lateral agreement, e.g. a Memorandum of Understanding (MoU)

- UPLOAD MoU* (upload with limit 10 MB)







PART B: SCIENTIFIC CASE

Fields marked with * are mandatory

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. Outline the cutting edge science and the used technology: (maximum 2000 characters with spacing)
- 1.5. 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)
- 1.6. 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)
- 1.7. Upload the design (and feasibility) study final report, if available: (upload with limit 1 MB; in case the document is longer than 30 pages, please also provide an executive summary of maximum 4 pages)

SECTION 2: PAN-EUROPEAN RELEVANCE*

- 2.1. Position in the RI landscape and 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)

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- 2.4. Describe how your RI contributes to the enhancement and realisation of the European Research Area⁵: (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)
- 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. <u>European Technology Platforms (ETP)</u>, <u>Joint Programming Initiatives (JPI)</u>, <u>ERA-nets</u>, <u>Public-Private Partnerships (PPP)</u> and projects under <u>FP7</u> or <u>Horizon 2020</u>: (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 <u>ESFRI pan-European ex ante</u> 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)

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⁵ Please consider the Communication on <u>A Reinforced European Research Area Partnership for Excellence and Growth</u> COM (2012) 392.





3.7. If available, upload a socio-economic *ex ante* impact study: (upload with limit 1 MB; in case the document is longer than 30 pages, please also provide an executive summary of maximum 4 pages)

SECTION 4: USER STRATEGY & ACCESS POLICY*

- 4.1. 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, maximum 30 pages)
- 4.2. Elaborate how your RI has verified the above-described expected user community and user needs, e.g. through a survey: (maximum 2000 characters with spacing)
- 4.3. 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)
- 4.4. 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)
- 4.5. Provide a quantitative description of the services (including access modes and funding) which will be provided by your RI based on the user_demands and needs: (upload with limit 1 MB; maximum 30 pages)
- 4.6. Describe the envisaged (common) access policy 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)

SECTION 5: e-NEEDS*

- 5.1. 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)
- 5.2. 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)
- 5.3. 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)
- 5.4. Describe the compliance with the FAIR principles and 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 <u>e-infrastructure commons</u> and the <u>European Open Science Cloud</u> (EOSC): (maximum 2000 characters with spacing).





5.5. In case of a specific (non-horizontal) e-infrastructure, describe the interface with existing communication networks and technical design of your RI





PART C: IMPLEMENTATION CASE

Fields marked with * are mandatory

SECTION 6: STAKEHOLDER COMMITMENT*

6.1. 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 or similar strategical documents, National/Regional Research and Innovation Strategies for Smart Specialisation (RIS3) and Operational Programme (-s) from the European Structural and Investment Funds (ESIF): (maximum 3000 characters with spacing)

SECTION 7 & 8: PREPARATORY WORK & PLANNING*

|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 <u>Integrated Infrastructure Initiatives (I3)</u> 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. define the main objectives and tasks of your preparation phase and the aspects of readiness-to-implement within its 2-3 years reach.: (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 & 10: GOVERNANCE, MANAGEMENT & HUMAN RESOURCES POLICY*

|SECTION 9: GOVERNANCE & MANAGEMENT

- 9.1. Describe the project organisation for the preparation and 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 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 including 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 case 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)

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|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 (including gender balance and diversity), 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 use other sources of fundings like for example 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)

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 risks (scientific, technological, political, financial, etc.) that your RI could face in the different phases and describe your mitigation strategies to tackle them: (maximum 3000 characters with spacing)
- 12.3. From the risks identified in 12.2., describe more specifically the main 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, maximum 30 pages)