## Project description template for research infrastructure of national importance

**The project description template consists of**

**A:** an overview of the chapters and sections to be used as structure in the project description

**B:** content guidance for each chapter and section

### Chapters and sections to be used in the project description

### National importance and relevance to the call

### Excellence

#### Contribution to research and innovation

#### Quality and uniqueness of the research infrastructure

### Impact

#### Potential impact

#### Measures for communication and utilisation

### Implementation

#### Project partners, management and organisation

#### Plans for establishment/upgrade and operation

#### Technical solutions

#### Cost- and funding plan

### Guidance

**Please note:**

Complete all chapters and sections in the template, following the order of content as given in part A, and delete the guidance boxes, except the tables. The template is designed to address all elements of the evaluation criteria. The applicant is nevertheless strongly advised to read the evaluation criteria carefully, both for the expert evaluation and the strategic administrative evaluation.

Project period, progress plan including main activities and milestones, budget, dissemination plan and more, are all part of the electronic grant application form and are not included in the project description. The project description is intended for a more detailed description of the objectives, the background for the project and how it will be carried out. A complete list of mandatory attachments is given in the call for proposals, and these provide more details about the project.

The proposed research infrastructure should be presented clearly using a language that is understandable also to individuals with a general scientific understanding of the field.

The project description is not to exceed 15 pages, including the list of references. The page format must be A4 with 2 cm margins, single spacing and Arial, Calibri, Times New Roman or similar 11-point font. It is permitted to use 9-point font for the list of references and figure captions. Links listed in the project description will not be included in the assessment.

**Reference to mandatory outline submitted 27 May 2020**

This proposal is based on the outline(s) no: (you will find the project number of each of the out-lines on our [webpage](https://www.forskningsradet.no/arrangementer/2023/informasjonsmote-om-infrastruktur-utlysinga/))

### National importance and relevance to the call

This chapter should describe national importance of the proposed research infrastructure and how the infrastructure is relevant for the call.

* Describe the relevance to existing national agendas and strategies and specify how the planned infrastructure relates to the government's long-term plan for research and higher education.
* Name sub-areas in the Norwegian Roadmap for Research Infrastructure for which the planned research infrastructure is relevant.

### Excellence

This chapter should provide a description of the planned research infrastructure to enable an assessment of its state of the art and novelty.

* 1. **Contribution to research and innovation**
* State the overall project objectives and aims, and contribution to excellence in science, knowledge needs and innovation. Describe the research challenges the new research infrastructure will be able to address.
* Describe how the research infrastructure will contribute and provide services that respond to the needs of relevant research communities and/or research areas.
	1. **Quality and uniqueness of the research infrastructure**
* Describe the landscape of infrastructures the proposed infrastructure will operate in (national and international) and justify the initiation of the project.
* Give a description of the research infrastructure (physical, technological etc.) and highlight any particularly novel, original or ambitious aspects of the project (“state-of-the-art”).
* Specify needs and requirements for e-infrastructure, such as resources for data storage, computing and networking, tools for data management, access, security, collaboration and other types of electronic services. Describe how you envision that these needs will be fulfilled.
* If the proposal includes development of new storage solutions and/or services for managing data and making data accessible (also referred to as “data infrastructure”), describe how these solutions are to be integrated with existing national/international e-infrastructures.
* If the proposal concerns an upgrade of an existing research infrastructure, describe the added value of the upgrade (accomplishments of the existing infrastructure should be described in a specific attachment to the proposal).
* If there are ethical issues to consider, describe how these will be dealt with.
* If relevant, describe how potentially undesirable effects from carrying out the project, on human and animal health, climate and the environment and society at large, can be avoided

For international research infrastructure cooperation:

* Describe the international research infrastructure and the Norwegian contribution.
	+ If the research infrastructure is a Norwegian node of a distributed international research infrastructure, describe the Norwegian node and how this contributes to the international project.
* When applying for an upgrade of an existing Norwegian node to a distributed research infrastructure, indicate consequences for the membership if the upgrade is declined.

**Excellence -** **please note:**

Make sure that the choice of technical solutions is well accounted for and described, and that it is clear how these are adequate for addressing the project objectives and aims.

The ethical guidelines of the Research Council may be used when preparing the grant application:

<https://www.forskningsradet.no/forskningspolitisk-radgivning/forskningsetiske-krav/> (Norwegian)

<https://www.forskningsradet.no/en/Adviser-research-policy/Ethical-standards-in-research/> (English)

### Impact

This chapter should describe the importance of anticipated or potential short- and longer-term impacts of the research infrastructure in terms of science, society and/or industry. The chapter should also specify the planned measures for utilisation, communication and dissemination of the research infrastructure for relevant user groups.

**3.1 Potential impact of the proposed research infrastructure**

* Building on the description in chapter 2, describe clearly why and how the research infrastructure will have impact on the following areas:
* Science i.e. excellence in research, recruitment to science, internationalisation of Norwegian science
* Society i.e. contribution to societal challenges and UN Sustainable Development Goals
* Innovation and industry i.e. value creation and national competitiveness
* For international projects, describe:
	+ the added value for Norwegian research communities of the project applied for
	+ the added value for the international consortium of the project applied for

**3.2 Measures for communication and utilisation**

Describe:

* how information about the research infrastructure related services will be disseminated.
* how access to the research infrastructure will be given for external user e.g. web contact, personnel for user contact- and coordination, principles of project selection, capacity issues, how price policy will be established.
* the management of generated knowledge e.g. how knowledge will be made available for research and innovation, how knowledge and results will be transferred to academic and industrial users, and to the public.
* how the stakeholders/users will be involved in the dissemination and utilisation of the research infrastructure.

If the research infrastructure:

* produces autogenerated data, describe how this output will be made available for research and innovation, and how the research infrastructure will transfer knowledge and results to academic and industrial users and the public.
* generates data only when in use, describe how the research infrastructure will provide guidance to the users on how to make the data FAIR[[1]](#footnote-2).

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**Impact - please note:**

The description of the potential impact should be specific for the planned research infrastructure. Describe impact in the context of the call proposals. General elaborations on the benefits of the research infrastructure in a wider context should be avoided.

The 17 UN sustainable development goals (SDGs) provide a global roadmap for a better future for all ([Link](https://www.un.org/sustainabledevelopment/)). If relevant for your project, describe how the outputs generated in this project can contribute to solving challenges and/or shed light on important issues related to one or more of the UN SDGs.

### Implementation

This chapter should provide a description of the partners, project team, work plan, task allocation, organisation and management.

#### 4.1 Project partners, management and organisation

**Partners**

Describe:

* the consortium as a whole and its capability to implement and host the national research infrastructure and why this consortium is the best suited to host the national research infrastructure. Justify the suggested localisation(s) and host institution(s).
* the project partners, the scientific and technological competence and expertise of each partner, and the partner’s role and responsibilities in the project.
* each partner’s responsibilities for operation and upgrade of the research infrastructure subsequent to the project period and how the research infrastructure fits into the host institutions’ long-term planning and research strategy.

**Management and organisation**

Describe:

* the expertise and experience of the project manager and work package leaders in the context of the proposed project, to complement the information in the CVs.
* the competence of the operational management in terms of operating advanced research infrastructure.
* the project organisation and management structure and procedures in the establishing phase of the national research infrastructure
* the plan for management and organization of the national research infrastructure in the operational phase, including after the funding from the Research Council is terminated.
* the governance model, including reporting lines, steering committee and any advisory committees.

For international projects (e.g. ESFRI), please describe:

* the international consortium
* its relation to the management of the international project
* if relevant, international project's management responsibilities

**4.2 Plans for establishment/upgrade and operation**

**Workplan and deliverables**

Describe the workplan, major deliverables and milestones by including;

* a brief outline of the overall structure of the work plan (a detailed description of work packages is to be given in the attachment "Work packages")
* timing of the different work packages and their components (Gantt chart or similar) and a presentation of how the components interrelate (Pert chart or similar)

**Utilisation**

* Estimate the total usage of the research infrastructure and describe relevant projects and users such as:
	+ consortium members
	+ external Norwegian and international research groups
	+ industrial users
	+ public sector projects
* Existing research infrastructures applying for an upgrade or further development should describe the present degree of utilisation
* Specify the management of intellectual property rights (also related to external users)

**Data management**

* Describe the data policy and plan for data management, storage and access. Include information about the use of electronic services and portals, databases, samples and publication archives etc., and how the research infrastructure will ensure sufficient expertise to provide data services of high quality.

**Risk and mitigation measures**

* Carry out a risk analysis. The analysis should identify major risks, including risks related to technical solutions, competence in establishing and operating the research infrastructure and funding of the establishing and operating phase.
* Describe measures to mitigate major risks.
* The template given in table 3 could be used for the risk analysis.

In table 1, likelihood is the estimated probability of unwanted incidents (without taking measures to prevent them from materialising) and consequence is the anticipated consequence for the project if the risks materialise. The scale for likelihood is "Low likelihood", "Likely" and "Highly likely" and for consequence the scale is "Minimal", "Moderate" and "Severe".

### Table 1: Risk analysis and mitigation measures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description of risk** | **Likelihood (Low / Likely / Highly likely)** | **Consequence (Minimal/ Moderate/ Severe)** | **Work package(s) involved** | **Proposed risk mitigation measures** |
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* 1. **Technical solutions**
* Based in the chapter 1, describe the technical solutions and include information if this is a new development or if its already available on the marked.
* Specify whether suitable buildings/locations are available to the new research infrastructure, and whether new, costly technical solutions needed in order to situate the research infrastructure in existing buildings, are part of the applied project. If the needed buildings/locations are not available, describe how these will be financed by other sources than the National Financing Initiative for Research Infrastructure by the Research Council of Norway.

**4.4 Cost- and funding plan**

The excel form that is available in the call for proposals must be used for the cost and funding plan. Based on the figures in the excel spreadsheet, please describe the following aspects:

**Cost center(s)/rental premises for the research infrastructure**

* Define the cost center(s) for the infrastructure. Clarify whether the cost center includes already existing equipment or is restricted to the infrastructure applied for in this proposal.

**Costs and funding sources for establishment of the research infrastructure**

* Describe the total costs for investments and the funding sources for the establishment or upgrade of the research infrastructure.
* Please specify the following:
	+ total costs for investments in equipment/instruments, installation, work-months for development of the research infrastructure etc.
	+ funding sources for the establishment/implementation of the research infrastructure;

**Cost and funding sources for operation of the research infrastructure**

* Specify the following for the running and operation of the infrastructure for a period of 10 years (including the project period):
	+ costs related to technical and other personnel, technical laboratory running costs, upgrades, equipment, services etc.
	+ funding sources for the running costs of the research infrastructure (to secure operation of the research infrastructure after the funding from the Research Council is terminated
	+ Annual income from projects
	+ If the budget includes membership costs for international projects such as ESFRI this must be specified.
* Research infrastructures that will make use of services from other existing national research infrastructures e.g. data storage, computing and tools for data management, must describe associated costs and how this will be financed.

**Down-scaled budget (mandatory for all that apply for more than NOK 30 million from the RCN)**

Describe:

* an alternative minimum budget that is sufficient to ensure that the research infrastructure will still have significant potential for utilisation even if the Research Council does not provide additional funding in later stages.
* how the down-scaled budget can be linked to the work packages presented in the workplan and deliverables section.
* briefly the possibilities to build up the research infrastructure stepwise and include information on how this can be done.
* briefly potential consequences of reduced funding from the Research Council

**Implementation - please note:**

Avoid repeating information already contained in the CVs. Focus on the concrete roles and tasks, and how the project team, including key collaborators, is suitable and adequate for the establishing/upgrading and operating the research infrastructure.

The work plan, work packages and tasks should present a realistic and feasible approach for achieving the objectives as presented in the first chapter. A work package on management should be included. The ambitions and workload should be realistic in terms of resources such as personnel, expertise, research infrastructure, etc. Please notice that details concerning work packages are to be included in the mandatory attachment.

The plan for access to the research infrastructure may be based on elements from the [European Charter for Access to Research Infrastructures](https://ec.europa.eu/research/infrastructures/pdf/2016_charterforaccessto-ris.pdf). Several of the elements of this document are relevant for national research infrastructures.

For information about data management plans, please see the information on the Research Council [website](https://www.forskningsradet.no/en/apply-for-funding/writing-grant-applications/general-application-requirements/).

**Partners** are institutions, businesses and enterprises that will participate in the project with professional and/or financial resources.

**Cost center(s)/rental premises** for the research infrastructure: distributed infrastructures may have more cost centers. If the infrastructure is located or owned by one institution, the cost center is generally the host institution.

1. The international FAIR Principles have been formulated as a set of guidelines for the reuse of research data. The acronym FAIR stands for findable, accessible, interoperable and reusable. Research data must be of quality that makes them accessible, findable and reusable. The concept interoperable entails that both data and metadata must be machine-readable and that a consistent terminology is used. [↑](#footnote-ref-2)