

Joint eScience and Data Science across Top Sectors; Disruptive technologies

Guidelines for Application Pre-Proposal 2017

GENERAL

Please refer to the Call for Proposals “Joint eScience and Data Science across Top sectors;” for the Terms and Conditions of this granting scheme. The call text can be downloaded from www.esciencecenter.nl.

The correct Application Form should be used. This form can be downloaded from www.esciencecenter.nl. Proposals must be submitted using the electronic application system ISAAC: www.isaac.nwo.nl (see below for details).

The proposal should be written in English. The layout of the proposal should facilitate easy reading. A minimum font size of 10 pts is advised.

REGISTRATION FORM (BASIC DATA)

1. Details of the applicant(s)

Please provide details for all applicants; complete all boxes as requested in the form. You can include as many co-applicants as needed. The principal investigator (PI) is the contact person for correspondence.

2a. Title of the proposal

Please provide a short but specific title for the research for which funding is being requested. The title entered here must be the same as in the fact sheet in the ISAAC submission system.

2b. Keywords

Provide up to 6 keywords most representative of the proposed research.

2c. Project duration

Indicate the expected duration of the project in months. A maximum duration of up to 4 years is allowed.

2d. Abstract

Provide a summary of the proposal in English, using no more than 200 words.

2e. Main field of research (compulsory)

Please fill out one or more research fields that correspond to the subject of your research proposal. You can only refer to the descriptions and codes from the NWO research field list. Please find the list via:

www.nwo.nl/researchfields

2f Relevance to the ‘Top Sectors’

The Dutch government has designated nine ‘top sectors’: areas of economic activity to which extra attention is to be devoted. They are: Agro & Food, Chemistry, Creative Industry, Energy, High-tech Systems and Materials, Life Sciences, Logistics, Horticulture and Water. For further information, see www.topsectoren.nl.

State (where applicable) if and how your project proposal is relevant to one or more of the designated top sectors or to the ICT roadmap, which transcends top sector boundaries. You should also include details of any proposed collaboration with the private sector.

This section will not affect the assessment but gives the Board of NWO Physical Sciences, which is a partner in this call, a better understanding of the manner in which proposals are relevant to the top sectors and the national economy.

Joint eScience and Data Science across Top Sectors; Disruptive technologies

Guidelines for Application Pre-Proposal 2017

3. Total funding requested

State the amount of funding requested from NLeSC (incl. personnel employed by NLeSC). Additional contributions (e.g. for local personnel, equipment, etcetera) should not be included in this amount.

4. Composition of the Research Team

List all the team members who will have a substantial and verifiable contribution to the proposed work. Also include the projected eScience Research Engineers. Please use the table in the application form.

5. Key publications

Please list 5 key papers published by members of the research team in the last 5 years. The papers must be relevant to the current proposal.

RESEARCH PROPOSAL (MAX. 1500 WORDS FOR SECTIONS 6 AND 7)

6. Description of the proposed research (+/- 1200 words)

For this pre-proposal no more than 1500 words may be used, including text below figures, excluding literature references. The proposal should include:

- a. **Science: Background, research questions, approach, and innovation**, incl.:
 - the addressed data science problem, and the approach to tackle the problem;
 - the specific top sector oriented use case(s) selected as targeted proof(s)-of-concept (top sectors that can be addressed: Life science and health, smart industry and energy transition; see white paper of COMMIT2DATA);
 - the relation of the proposed solution, outcomes, and deliverables with existing state-of-the-art technological developments.
- b. **eScience: Technologies, methods, and expected impact on the research**, incl.:
 - the key technological challenges dealt with in the project, e.g. as defined by the Netherlands eScience Center: Optimized Data Handling, Big Data Analytics, Efficient Computing;
 - the eScience tools and methodologies to be developed, applied (re-used), integrated, or extended;
 - how the developed eScience technologies help to solve the targeted topsector use-case(s).
- c. **Re-use, sustainability, dissemination and, collaborations**, incl.:
 - how the proposed technological solutions will find use beyond the target use cases, if possible across disciplines, also after finalization of the project;
 - how maintenance and sustainability of project results will be secured and managed;
 - how the project will serve as a stepping stone to building further collaborations, in science, industry, or both;
 - the efforts made to promote the results of the project (publications, demonstrations, workshops, training, etcetera).
- d. **Data management**
 - If data is collected or generated during the research that has potential for re-use, please specify how this data is going to be stored and shared during and after the project.
 - Specify what facilities and expertise are expected to be needed for the data storage, and whether these are available to you.

Joint eScience and Data Science across Top Sectors; Disruptive technologies

Guidelines for Application Pre-Proposal 2017

e. Software maintainability

- If the software developed during the project is applicable for re-use, please explain how the software will be licenced and made available to third parties, and what effort will be needed make the software re-usable.
- Indicate the size of the community able to re-use the software developed within the project
- Indicate what expertise is needed in order to make the software re-usable, and what contributions you would to have from the eScience Center in making the software re-usable.

f. Use national e-infrastructure

Indicate the project's (national) e-Infrastructure needs, in terms of compute hours, data storage capacity, lightpath connectivity, or otherwise NLeSC will apply a 'use-or-explain' policy, meaning that:

- projects *without* e-Infrastructure needs are asked to give a brief explanation;
- projects with clear e-Infrastructure needs are expected to select the hardware resources and services as part of the Dutch National e-Infrastructure as first option, and to indicate the expected extent of use (see Appendix B of call for proposals);
- projects with clear e-Infrastructure needs that aim to use international (e.g. PRACE, XSEDE, etcetera) or commercial (e.g. web, cloud, etcetera) hardware and services instead are required to give a brief explanation (see Appendix B of call for proposals).

The use of the Dutch National e-Infrastructure is not a requirement, nor is it a formal review criterion. However, in all cases in which the Dutch National e-Infrastructure is not used, a justification should be provided.

7. Workplan and Timetable (+/- 300 words)

Provide a detailed workplan (e.g. in work packages) and a (provisional) time table. In particular, specify clearly the role of the eScience Research Engineer(s), and the expected involvement in terms of duration (specify preferred start-date and end-date) and percentage of participation (full-time or part-time).

8. References

List of references cited in the pre-proposal, with full bibliographic details.

ADMINISTRATIVE DETAILS

9. Requested funding within the total budget

Applicants are allowed to apply for 1 temporary research position (2 or 3 year postdoc position or a 4 year PhD position), and 2,5 FTE of in-kind support of the eScience Center, in the form of an eScience Research Engineer. Additionally, applicants can apply for a maxim of € 35 k for additional costs directly related to the proposed research.

Please specify personnel costs, equipment, and travel using the layout as given in the application form. Requested equipment and software must be intended for use in the project described in the proposal. Both the relationship with the project and the necessity of the equipment must be justified. Equipment or software with a purchase price of less than € 5,000 is deemed to form part of the standard infrastructure of the research institute and is therefore not eligible for funding. Travel expenses of NLeSC personnel

Joint eScience and Data Science across Top Sectors; Disruptive technologies

Guidelines for Application Pre-Proposal 2017

need not be specified. The necessity of any travel undertaken in connection with the project must be justified.

Benchfee

Also following the NWO-VSNU-agreement for the period 1 July 2016 – 1 July 2017, the bench fees for PhD students and postdocs in € for 1,0 FTE are € 5.000 for each appointed temporary staff member.

10. Statements by the applicant

NLeSC requires applicants to endorse the [Code Openness Animal Experiments](#) and the [Biosecurity Code of Conduct](#) (available at www.knaw.nl) and act according to these. Applicants are asked to also endorse and follow the [NLeSC Strategy towards Publishing, Licensing, and IP](#) (at: www.esciencecenter.nl). For alternative IP agreements, NLeSC must be contacted before proposal submission.

PROPOSAL SUBMISSION

The pre-proposal should be submitted as a PDF file via the electronic application system ISAAC before **18 May 2017, 14:00 hours**. More information on the use of ISAAC is available at www.nwo.nl. The proposal must be submitted from the ISAAC account of the principal investigator.

For technical questions about the use of ISAAC, please contact the ISAAC helpdesk. Applicants are requested to read the ISAAC manual before consulting the helpdesk.

The ISAAC helpdesk is available from Monday to Friday from 11.00 to 17.00 hours on +31 900 696 4747. Unfortunately, not all foreign telephone companies allow you to call a 0900 number in The Netherlands. You can also send your question by email to isaac.helpdesk@nwo.nl. You will receive a reply within two working days.

A list of possible referees/non-referees should be added in ISAAC during the application process. Please give your arguments if you would like to exclude specific researchers from the evaluation of your application. You can exclude a maximum of 3 referees.

In accordance with the NWO-VSNU agreement, applicants should inform the local institute about the proposal. A copy of the proposal should be sent to the scientific director or dean of your department or institute. By submitting a proposal you state that you have informed your local institute and that you and your local institute accept the terms and conditions for this granting scheme.

MORE INFORMATION

For more information, please check www.esciencecenter.nl or contact:

Dr. F. Stephan, Program Officer NWO (substance, procedure)

Tel.: +31 (0)70 344 0522

Email: e-science@nwo.nl

J.I. van Wijk MSc, eScience Program manager (call contents, escience, technology)

Tel.: +31 (0)63 036 9802

Email: dtec-call@esciencecenter.nl
