



Physical Sciences

Call for proposals

Free Competition

2012 1st round

The Hague, January 2012
Netherlands Organisation for Scientific Research

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1 Introduction

1.1 Background

The Board of the Division for Physical Sciences (GBE) invites researchers in the fields of astronomy, computer science and mathematics to submit research proposals under the Free Competition arrangements. Guidelines to assist you in producing your proposal are given in the appendix to this document.

NB The guidelines have been amended since the 2011 round. The most important changes are:

- Only one application may be submitted by each (principal) applicant (§3.1).
- New assessment criteria now apply (§4.2).

In 2012, the Free Competition will comprise two rounds, each with its own Call for Proposals and deadline. This document applies to the first round, for which the deadline is 15 February 2012 (see § 3.3).

Please read the entire Call carefully.

1.2 Available budget

The total available budget for the first round of the Free Competition 2012 is five million euros. This amount has been reserved for proposals deemed 'excellent'.

1.3 Validity of the call for proposals

This call for proposals is valid until the closing date 15-02-2012.

2 Aim

The Free Competition is intended for applications relating to innovative and risk-laden research with a high-quality research question and scientific or practical urgency.

Proposals must be **demonstrably** important to one or more of the disciplines astronomy, computer science or mathematics.

Within the Free Competition, the GBE wishes to encourage a number of specific aspects:

- Risk-laden research
- Research of practical relevance
- Multidisciplinary research
- Research by female applicants.

The board of the Division for Physical Sciences therefore invites researchers to submit proposals which address one or more of these aspects, to which extra attention will be devoted during the assessment phase.

The Free Competition is organized across the entire division. Proposals will be assessed by a committee which includes representatives of all disciplines. In keeping with the NWO Code of Conduct on Conflicts of Interest, the GBE will consult external (international) experts as necessary and appropriate.

3 Guidelines for applicants

3.1 Who can apply

Applications can be submitted by researchers from any Dutch university or research institute which is affiliated with NWO or KNAW. Each application is to be formally submitted by a single named researcher (the 'principal applicant') on behalf of a team comprising researchers from one or more institutes. The principal applicant is also the proposed project leader. You should submit a copy of your application to the director or dean of your institute. Applications are accepted on the understanding that your institute has been informed of your proposal, and that it accepts the conditions attaching to any grant awarded further to this competition.

Further requirements:

The principal applicant should:

- hold at least a master's degree or equivalent qualification
- have demonstrable research experience
- be able to remain effectively involved in the research project throughout the funding period.

Further conditions:

- The principal applicant may submit only one application in that capacity.
- The simultaneous submission of identical or very similar proposals is not permitted.
- Proposals submitted to more than one competition (e.g. the Free Competition and the Innovation Research Incentives Scheme) can be awarded funding only once.
- A researcher who still has a vacancy to fill within a project funded by the Free Competition may not submit a further application.
- Proposals which have been submitted on a previous occasion will be considered only if they were assessed as 'Category B'. A proposal may be submitted no more than three times. Proposals which have previously been rejected on the basis of their content will not be considered in the same form.

3.2 What can be applied for

Research proposals

You can apply for a grant to cover the staff costs of one research position (PhD student or postdoc) and up to €50K to cover additional resources and expenditure. The grant may be used for:

- a PhD student, or a two-year or three-year postdoc position, assuming fulltime employment. An individual bench fee (€5,000) will be awarded to each PhD student or postdoc as a contribution towards travelling expenses, the costs of printing a thesis or other approved expenditure.

- project-related equipment and software, provided the cost exceeds €5000. This equipment 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 €5000 is deemed to form part of the standard infrastructure of the research institute and is therefore ineligible for funding under the Free Competition.
- travel expenses incurred by the holders of the funded research positions, where not covered by the bench fee. The necessity of any travel undertaken in connection with the project, particularly that by the holders of the funded research positions, must be justified.
- other project-related expenditure such as the travel and accommodation costs of guest researchers, attendance at conferences, costs incurred in defending a doctoral thesis, etc. Again, all such expenditure must be justified.

Small investments

Funding to cover 'small investments' may also be requested. Attention should be devoted to the following points:

- Ideally, the application should be embedded within a full research proposal, as described in Section 6. However, this is not a firm requirement.
- There should be a clear link between the purpose of the investment and the research project (the science case). The relevance and necessity of the investment must be justified.
- The choice of equipment, as opposed to any available alternatives, should be explained.
- The suitability of the equipment (in terms of the science case) should be explained.

A small investment is defined as an amount between €50K and €110K, including VAT. No grant is payable in respect of the costs of equipment or software which would generally be considered part of the standard resources of the university or research institute. If the application is embedded within a full research proposal, the total grant payable remains limited to the cost of one research position plus no more than €110K in respect of the small investment, with a subsidy period of no more than four years.

3.3 When can applications be submitted

There are now two application rounds a year, each of which is subject to a set deadline. Applications will be accepted at any time following the publication of the Call for Proposals. The deadline for the current round is midday on Wednesday 15 February 2012. The number of applications received will be published shortly thereafter at www.nwo.nl/ew/vc.

3.4 Drawing up an application

All research proposals must be written entirely in English to allow foreign referees to be consulted. The proposal should be self-contained, i.e. understandable without reference to any other document. References to internal documents must be avoided, although references to literature in the public domain are permitted. Where a reference to a preprint is unavoidable, you

should include a digital copy for the benefit of the assessment committee. Further instructions can be found in the appendix to this document.

3.5 Specific conditions

Projects which are awarded a grant must commence within nine months of the award date. If the project has not been commenced during that period, the grant will be withdrawn.

3.6 Submitting an application

Applications and project proposals must be submitted using Iris, the NWO electronic grant application system. The procedure and Iris user manual can be found at <https://www.iris.nwo.nl>. An application is made in two parts. The first is the **factsheet** (an online web form) which states the key details of the applicant and a synopsis of the project. The second is the full project proposal. You must complete the factsheet and submit it online using the Iris system. The factsheet requires you to enter a project summary of no more than 250 words, which should correspond with the scientific summary (in English) in the full project proposal. The project proposal itself must be submitted as a PDF attachment to accompany the factsheet.

(NB When completing the online factsheet, only 'plain text' ASCII symbols can be used. It is not possible to include formulas or formatting such as italics, bold letters, etc. These can of course be used in the proposal document.)

Referees

You are requested to suggest up to three international referees. Please give their full names, **e-mail address** and **web address**. You should not propose anyone with whom you have recently collaborated or with whom you intend to collaborate in future, whether as co-authors or in any other form of joint undertaking. Only referees who are not directly involved in the research project and research team to which your application refers can be considered. Moreover, your suggested referees must be 'international', i.e. they must not currently hold an appointment in the Netherlands. The assessment committee will also be asked to suggest potential referees. The final selection will be made from the resultant 'pool' of experts.

It is also possible (but not mandatory) to give the names of up to three people who should NOT be approached to act as referee. In the interests of confidentiality, you should not include these names in the application itself but email them separately to ew.vrije.competitie@nwo.nl.

4 Assessment procedure

4.1 Procedure

Prioritization

In the first instance, all applications are assessed by a departmental assessment committee with the help of the referees' findings and any response from the applicant. The committee ranks applications within its own discipline according to their scientific quality. This assessment is based on four main criteria, as explained in Section 4.2.

The prioritized list produced by the departmental committee is then passed to the division-wide assessment committee which advises the Board of the Division for Physical Sciences (GBE) accordingly. This assessment committee is made up of equal numbers of representatives of all the departmental (single discipline) committees.

Decision making

The GBE takes the final decision on whether funding is to be provided. It does so based on the recommendations of the assessment committee.

In principle, the GBE will not reduce the amount of the grant requested, i.e. it will not offer a partial grant. If the explanation of the balance between the amount requested and the scope of the project ('cost effectiveness') is deemed inadequate, the project proposal will simply be given lower priority.

The GBE strives to make a decision within six months of the proposal's submission. However, it will exceed this self-imposed deadline if it considers doing so necessary to ensure that the proposal is assessed with all due diligence. You can monitor the progress of the assessment procedure using the Iris system.

4.2 Criteria

Formal admissibility of applications

An application will be accepted for consideration only when all the following conditions have been met:

If the application fails to meet any of the above requirements, the EW Office will contact the principal applicant with a view to resolving the problem. Applications with serious errors or omissions may be disqualified.

(The GBE reserves the right to apply a pre-selection procedure in accordance with Art. 2.6 of the NWO Granting of Subsidies Regulation.)

Assessment

Proposals which satisfy the above conditions are accepted for further consideration by the assessment committee, which will base its deliberations on the content of the application, the opinions of the referees, any response from the applicants, and the expertise of the committee members themselves. If a significant number of applications has been received, the assessment committee will not undertake a full discussion of those deemed to have little chance of success.

The assessment is based on criteria which fall under four main headings:

1. Objective and impact.
2. Scientific approach and methodology.
3. Innovation and challenge: is the proposal 'groundbreaking'?
4. The research team and resources.

The assessment committee will therefore consider the following points.

1. Objective and impact

- The degree to which the proposed project is appropriate to the research framework of this Call.
- The timeliness and impact of the proposed project, in scientific, social and/or economic terms.
- The potential applicability of the research outcomes. The assessment committee will attach particular weight to this aspect where appropriate.

2. Scientific approach and methodology

- The practicality of the work programme.
- Contingency: have potential problems in the approach been identified and alternative methods proposed?
- Originality of the scientific research question and proposed research method
- Clarity of the proposal.
- Quality of the research.
- Multidisciplinarity: does the research transcend the traditional boundaries of the individual disciplines of astronomy, computer science and mathematics? The assessment committee will attach particular weight to this aspect where appropriate.

3. Innovative, groundbreaking and challenging

- Are the project aims original and challenging, serving to push back the boundaries of existing scientific knowledge?
- The risk level of the research: does it explore uncharted territory whereby the chance of success is lower? Conversely, if successful, can the results be regarded as 'groundbreaking' (high risk, high return)? The assessment committee will attach particular weight to this aspect where appropriate.

4. Research team and resources

- The competence of the research team to conduct the proposed research and to supervise the researcher to be appointed using the subsidy funds. The assessment committee will attach extra weight to proposals submitted by a female principal applicant.
 - The relationship between the subsidy amount and the research objectives, with particular reference to cost-effectiveness: the balance between the objectives on the one hand and the cost of the research position and resources for which funding is requested on the other.
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5 Contact details and other information

5.1 Contact

5.1.1 Specific questions

Contact

For further information, please contact:

5.1.2 Technical questions about the electronic application system Iris

For technical questions about the use of Iris please contact the Iris helpdesk. Please read the Iris manual before consulting the helpdesk.

The Iris helpdesk is available from Monday to Friday from 11.00 to 17.00 hours on +31 900 696 4747. Unfortunately not all foreign phone companies allow you to phone to a 0900 number in the Netherlands. You can also send your question by e-mail to iris@nwo.nl.

5.2 Other information

Membership of the assessment committee

The assessment committee is not permanent. Its members are appointed for each application round.

6 Annexe(s):

Guidelines for preparing a research proposal

You must use the NWO electronic grant application system, Iris, which can be accessed at <https://www.iris.nwo.nl>. Sections 6, 7 and 8 of your project proposal (combined) must not exceed 3,500 words, including text in tables, captions and footnotes. The entire proposal must be written in English and must include the following:

1a Project Title

The title of the research project for which funding is requested. This should be brief but as specific as possible, and must correspond with the title given on the factsheet.

1b Project acronym

(Where applicable. This must also correspond with the information given on the factsheet)

1c Principal applicant

Give only the name of the principal applicant (who also acts as the contact person and is the intended project leader).

1d Renewed application

State whether this is an entirely new proposal or (an amended version of) a proposal which has been submitted on one or more previous occasions. Proposals which have been assessed and rejected in the past must have achieved at least a 'Category B' rating to qualify for re-assessment in the current round. Applications which achieved a 'Category C' rating may not be resubmitted in the same form. (The rating given to your proposal is shown in the rejection letter).

If you have submitted a previous application in respect of this research project, or a project which is substantially similar, and that application was declined by EW or another competent assessment body, you should indicate which part(s) of the proposal have since been amended. Please state the reference (dossier number) of the proposal (as shown on the relevant correspondence).

2a Scientific summary

A brief summary (maximum 250 words), in **English**, written for specialists in the relevant research field. This should correspond exactly with the summary given on the factsheet.

2b Abstract for a lay readership (in Dutch)

You are also requested to include a summary (maximum 500 words) in **Dutch**, written for the benefit of researchers in other disciplines and a lay readership. This summary should not be a direct translation of the English scientific summary. It should include:

If a grant is awarded, NWO may use this summary for publicity purposes.

2c Keywords

List up to six relevant keywords.

3 Classification

Please state the (sub)disciplines applicable to the research project. This classification will determine which departmental committee will undertake the initial assessment. Where several disciplines are stated, the proposal will be considered by all the respective departmental committees. The permitted classifications are:

You may also suggest an alternative discipline, such as 'biology' or 'life sciences', if you believe that your proposal falls under this heading.

4 Members of the research team

List those persons who will be directly involved in the research project, including the holder of the position for which funding is being requested. Where possible, state all surnames, initials, titles, specialisms and the university or institute with which the researchers are affiliated. This information should be presented in the form of a table. If the research is to be undertaken as a PhD project, give the name of the supervisor. The assessment committee will give extra weight to proposals submitted by female principal applicants.

Individual CVs should not be attached, but you may include links to personal websites or a brief description (no more than half an A4 page) of the team as a whole. Referees will be asked to assess the competence of the research team (see also Section 4.2, 'Criteria'.)

5 Research school

Please state the name of the research school or institute at which the applicant intends to undertake the research project.

6a Description of the proposed research

In this section, please state or describe:

6b 'Application perspective'

The GBE funds research of high quality and makes no distinction between projects with an intrinsic motivation ('fundamental') and those with an extrinsic motivation ('applied'). The GBE nevertheless encourages researchers to actively think about the practical applications of their research and results. It is for this reason that the Call asks for information about the 'application perspective'. Where appropriate, you should state how you expect the knowledge developed during the project to contribute to new approaches or applications in other disciplines, in technology, in industry, or to benefit society at large. In addition, you are requested to state how the knowledge is to be disseminated among potential users, and the role that you and your research will play in this process. Experience suggests that it is often useful to discuss the project proposal with the potential users in advance. An answer stating that there is (currently) no application perspective can also be perfectly valid and will not affect the assessment. Referees will be expressly asked to assess the content of this section. If you believe that it is not applicable to your proposal, please state this clearly rather than leaving the section blank.

6c Multidisciplinarity

State the degree to which your research project can be deemed multidisciplinary. Will you, for example, be using approaches or methods drawn from other disciplines? Will your project result in any innovation within other disciplines?

6d 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: Agrifood, Chemicals, the Creative Industry, Energy, High-tech Systems and Materials, Life Sciences, Logistics, Horticulture and Water. For further information, see www.top-sectoren.nl.

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

This section will not affect the assessment but gives the GBE a better understanding of the manner in which proposals are relevant to the top sectors and the national

economy.

7 Project planning

Phasing

Indicate the phasing of the entire project. What specific tasks can be identified and how are they to be scheduled over time?

Education and training

The purpose of funding a research position is not only to facilitate the proposed research, but also to contribute to the training and education of the holder of that position. In this section, you can describe any special aspects of the project which will serve this aim.

8 Expected use of equipment

What equipment is needed in order to conduct your research? Please distinguish between the equipment which is already available and that which must be purchased specifically for the research project. The possibilities and criteria are given in Section 3.2.

9a Literature (internal)

List the five most important publications produced by members of the research team and relevant to the research proposal.

9b Literature (external)

List the references and sources used in preparing the proposal.

10 Requested budget

Grant amounts

Summary of subsidy application

Copy the relevant parts of the table below and complete the required information. (See notes on the next page.)

(1) PhD student, postdoc or other personnel

- a) appointment of research personnel (State only the research position; NWO will enter the appropriate amount)
- b) additional travel budget = €.....
- c) project-related equipment/software = €.....
- d) other project-related activities = €.....

Total b, c, d = €.....

Notes:

a) State only the position for which funding is required: a PhD student or a postdoc researcher (for a period of 2 or 3 years). The relevant amount, including the individual bench fee, will be entered by NWO in accordance with the standard amounts given in the NWO-VSNU contractual agreements (which can be found here).

b), c) and d): Include a budget and justify the amount concerned. The total of the additional budget (items b, c and d) may not exceed €50K.

(2) Investments (incl. VAT)

The budget for investments in equipment or software is a minimum of €50K and no more than €110K.

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