



# Expertise Networks programme

**PIPP – Partnerships for Space Instruments & Applications Preparatory Programme**

## Call for proposals

Science

2022



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# 1 Introduction

In this Call for proposals, which falls under the 'Partnerships for Space Instruments & Applications Preparatory Programme' (PIPP), you can read about the aim of the PIPP programme and how the application procedure has been set up for this funding round. The PIPP is also known as the *Kennisnetwerkenregeling* (Expertise Networks Programme), as it shall be called in this call. This Call for proposals falls under the responsibility of the Dutch Research Council (NWO). The Netherlands Space Office (NSO) is responsible for the realisation of the programme. All organisational and administrative aspects will be dealt with by NSO.

In this Call for proposals you will find information about the aim of this programme (Chapter 2), the conditions for the grant application (Chapter 3) and how your proposal will be assessed (Chapter 4). This is the information you need to submit a grant application. Chapter 5 states the obligations for grant recipients in the event you are awarded funding, Chapter 6 contains the contact details and Chapter 7 the annexes.

## 1.1 Background

The PIPP is aimed at promoting the international position of the Netherlands in the area of developing and using space instruments and does this by supporting expertise networks. The programme is part of the Dutch space policy.

## 1.2 Available budget

The Dutch Ministry of Education, Culture and Science (OCW) funds the *Kennisnetwerkenregeling*. The subsidy ceiling for this Call for proposals is € 1,300,000. A maximum of two proposals will be awarded funding (a maximum of one per theme) within this Call for proposals.

## 1.3 Submission deadline(s)

The deadline for the voluntary registration of initiatives is 7 February 2023, at 14:00:00 CET.

The deadline for submitting full proposals is 9 May, 2023, at 14:00:00 hours CEST.

Proposals submitted after the deadline will not be taken into consideration.

## 2 Aim

This chapter describes the aim of the programme and the societal impact.

### 2.1 Aim of the programme

Over the past few decades, the Netherlands has built up a strong international position in the area of space instruments\*, especially for astronomical and atmospheric research. The consolidation of strengths and increased collaboration are necessary to maintain and expand this position and extend it to other areas. The aim of the *Kennisnetwerkenregeling* is to strengthen collaboration between knowledge parties and other parties in the Netherlands for the technological themes that are or could be relevant for the development ('upstream') and use ('downstream') of space instruments. Through this collaboration, Dutch technological expertise in the area of space instruments can be better utilised. That will contribute to retaining and further expanding the international position of the Netherlands in this area.

The *Kennisnetwerkenregeling* falls under the Dutch space policy from which the following priorities emerge for this programme:

- xlvi) collaboration,
- xlvi) demand-driven research, and
- xlvii) the focus on development and/or use of space instruments.

In the context of the *Kennisnetwerkenregeling*, expertise networks will be funded in which the above-mentioned collaboration can be given further shape. The aim and priorities of the *Kennisnetwerkenregeling* (Section 2.1.1) and the choice of themes for this funding round of the *Kennisnetwerkenregeling* (Section 2.1.2) are explained in more detail below.

\*Instruments are understood to be (hardware) systems with which observations are collected by transmitting and/or receiving radiation (in specific parts of the electromagnetic spectrum) or the detection of other types of signals. An instrument typically consists of a sensor/detector and the associated front-end components (such as optics and antennae) and back-end components for registration and data processing. The space instrument (as a composite or distributed system) is launched into space and operates on a satellite or space vehicle. The *Kennisnetwerkenregeling* covers space instruments with which data are collected for the purpose of solving scientific, societal and/or market issues in the areas of astronomy/astrophysics, Earth observation and/or planetary research. The *development* of space instruments concerns concept development, design, technology and prototypes of space instruments. For this call, the *use* of space instruments is understood as the processing of the observations and extracting information from the observations that is used in applications in science, society and the market.

### 2.1.1 Expertise networks

#### Collaboration in expertise networks

The collaboration that the *Kennisnetwerkenregeling* intends to encourage, specifically concerns the synergy between scientific and fundamental technological strengths and knowledge in the area of the development and use of space instruments and scientific, societal and/or market problems. An explicit aim of the *Kennisnetwerkenregeling* is to strengthen and facilitate such collaboration. For this, the *Kennisnetwerkenregeling* funds so-called expertise networks in which the parties organise their collaboration. Expertise networks mainly focus on the development and use of *future* space instruments (long-term) with specific attention for possibilities to deploy entirely new, breakthrough technologies from inside and outside of the space sector. With this, the direction of instrument development is not only determined by the technological possibilities, but also partly by the demand for data from these instruments for scientific, societal and market applications. In this manner, expertise networks are able to initiate fundamental technology development, and the results of the expertise networks at the same time serve science, society and the economy as well.

#### Demand-driven development

The use (for science as well as society and the market) of space, and so also space instruments, is a priority of the Dutch space policy. Just like in the case of the long-standing tradition of scientific astronomical space research, the need in the field of Earth observation and planetary research for data from space instruments is becoming an increasingly clearer and essential driver for the development of – technologies for – space instruments (demand-driven development). An expertise network will itself organise these demand-driven developments within its chosen theme.

#### Composition and tasks of expertise networks

An expertise network is an organised group around a coherent and clearly defined knowledge theme (in the area of science, technology, applications and/or use) that focuses on the development and/or use of space instruments. In all cases, Dutch knowledge parties, that have demonstrable expertise and undertake activities that are relevant for the development and/or use of space instruments for the specific theme, participate in the expertise network. Other parties can participate in an expertise network as well, such as companies, civil society organisations, government bodies or users. For each theme, a network brings together the relevant knowledge present in the Netherlands. The expertise network is not allowed to exclude any parties that have relevant knowledge and wish to participate. The tasks of an expertise network are:

- drawing up a research agenda for its chosen theme;
- organising the collaboration and alignment between the network participants, and between the expertise network and parties outside of this (knowledge, government and market parties);
- aligning the own institute's activities related to space instruments with the expertise network activities that complement these;
- making an inventory of promising technologies and/or applications for future space instruments;
- realising concrete research activities (PhDs, postdocs, feasibility studies, etc.) relating to its chosen theme;
- organising the user requirements, the valorisation of knowledge in society and the market, and the synergy with knowledge and market parties outside of the space sector.

### 2.1.2 Choice of theme

In this funding round, the *Kennisnetwerkenregeling* is open for one expertise network for each one of the following themes in the area of developing:

1. breakthrough technologies for space instruments and/or innovative concepts, methods, models and (fundamental) knowledge for the purpose of using – data originating from – such space instruments in the area of **planetary research**;
2. innovative (breakthrough) concepts, methods, models and (fundamental) knowledge for the purpose of using – data originating from – space instruments applications in the area of **water (quantity and/or quality) in urban, rural and marine environments**.

### Explanation of these themes

In previous calls under this *Kennisnetwerkenregeling*, expertise networks were set up for the following themes: 1) breakthrough technologies for space instruments in the (optical) spectral domain of Far-IR to X-ray; 2) breakthrough technologies of space instruments in the microwave domain; 3) breakthrough technologies for distributed satellite systems; 4) the use of – data originating from – space instruments, specifically in the microwave domain, for modelling/monitoring of vegetation for applications in the area of agriculture and food security; 5) the use of – data originating from – space instruments for applications in the area of air quality in the urban, rural and marine environments.

The two new themes in the current call complement the above themes and are motivated as follows:

1. Planetary research is one of the priorities of Dutch space research policy. Although the planetary research community in the Netherlands is younger and relatively smaller than those in the areas of Earth observation or astronomy, it is developing rapidly, and this research community has already generated highly promising results. In the coming years, various new planetary missions are on the agenda that the Netherlands is participating in, or could participate in, on the basis of existing technological and scientific capacities. Examples are JUICE, Envision, and Mars Sample Return. Strengthening the collaboration in this area provides opportunities for Dutch space research and sector.

2. Water is a theme in which the Netherlands has a strong (international) position from a scientific, societal and economic viewpoint. Various studies and investigations have revealed the relevance of using space instruments for this theme: there is an increasing demand for – applications with – satellite data and for new future space instruments. In the areas of water quantity and water quality, there are major (fundamental, conceptual and methodological) challenges for the use of satellite data.

Within the stated themes, the expertise networks will mainly focus on the development and/or use of future space instruments. With respect to the development phase, the activities of the expertise networks are ranged at the lower Technology Readiness Levels (TRLs), for which TRL<4 serves as a guideline. The used TRL definitions can be found in Section 7.2. The themes have deliberately been defined broadly. Within its chosen theme, the network will select the specific subjects for (sub-) projects that are put forward in the proposal (taking into account the priorities as explained in Section 2.1.1).

### 2.1.3 Expertise network activities

The activities in an expertise network can have both a research and organisational character. Generally speaking, activities funded from the *Kennisnetwerkenregeling* complement and/or support the research and development activities for concrete instruments, missions and applications that are, or could be, funded with the standard institute funding or from other programmes. Below a description is given of activities that can be funded from the *Kennisnetwerkenregeling*.

1. Research activities: The *Kennisnetwerkenregeling* offers a possibility to fund (sub-) studies related to the development and/or use of future space instruments. Due to budgetary limitations, this scheme is not suitable for funding the support of the actual development of approved instruments and missions. Concrete examples of studies that can be funded from the *Kennisnetwerkenregeling* are:
  - PhD or postdoc studies in the area of scientific and/or societal/operational user requirements;
  - development and definition of instrument and mission concepts;
  - trade-off studies of technologies;
  - feasibility studies;
  - early technology/low TRL hardware projects;
  - breadboard projects;
  - simulation studies;
  - end-to-end modelling.

The research concerned is jointly managed by the expertise network.

2. Network-supporting activities: The *Kennisnetwerkenregeling* is also explicitly intended to facilitate the collaboration between the expertise network partners and between the expertise network and external parties for the purpose of strengthening the Dutch position in the development and use of space instruments. Therefore, besides the aforementioned research activities, network-supporting activities that benefit this objective can also be funded from the *Kennisnetwerkenregeling*. Examples of such activities are:
- organising – national or international – workshops concerning the network’s chosen theme;
  - participating in processes for the preparation of proposals;
  - realising inventories of technologies and/or user applications;
  - market research;
  - organising the alignment of parties outside of the own network (both nationally and internationally), such as space agencies, industry, government bodies, et cetera.

## 2.2 Societal impact

New knowledge and insights from scientific research can make an important contribution to solutions for current and future societal issues. Examples are the energy transition, health and care, or climate change. Knowledge utilisation increases the chances of research having a societal impact and is therefore an important aspect of the NWO strategy for 2019-2022.

### 2.2.1 Knowledge utilisation

NWO defines knowledge utilisation as an iterative process aimed at achieving societal impact. Through interaction and alignment between researchers and possible users of knowledge, the chances of knowledge utilisation and, accordingly, societal impact increase. Via its knowledge utilisation policy, NWO facilitates the possible contribution of research to societal issues by encouraging productive interactions with societal stakeholders during the development and realisation of the research. NWO does this in a manner appropriate to the aim of the funding instrument.

### 2.2.2 Customisation in approach knowledge utilisation

Depending on the aim of the funding instrument, NWO will select the approach that has the greatest chance of achieving societal impact. The primary aim of the funding instrument determines the method NWO deploys to facilitate knowledge utilisation in various phases of the project (proposal, realisation, project completion) and the effort required from the applicant(s) and partner(s).

In this programme, the Impact Outlook approach is used. With this approach, NWO encourages applicants to pay more attention to discovering and exploring opportunities for societal impact. NWO offers an e-learning module to help those interested on their way using the Impact Outlook approach. Please visit the NWO website [impact.nwo.nl/en](https://impact.nwo.nl/en) for more information.

For more information about the NWO knowledge utilisation policy, see the website: [www.nwo.nl/en/knowledge-utilisation](https://www.nwo.nl/en/knowledge-utilisation).

## 3 Conditions for applicants

This chapter contains the conditions that are applicable to your grant application. Firstly it describes who can apply for funding (section 3.1) and what you can request funding for (section 3.2).

Subsequently, you will find the conditions for preparing and submitting the application (sections 3.3 and 3.4) and the specific funding conditions (section 3.5).

### 3.1 Who can apply

Full, associate and assistant professors and other researchers with a comparable position\*\* may submit an application if they have a tenured position (and therefore a paid position for an indefinite period) or a tenure track agreement at one of the following organisations:

- universities located in the Kingdom of the Netherlands;
- university medical centres;
- institutes affiliated to the Royal Netherlands Academy of Arts and Sciences (KNAW) or NWO;
- Netherlands Cancer Institute;
- the Max Planck Institute for Psycholinguistics in Nijmegen;
- Naturalis Biodiversity Center;
- Advanced Research Centre for NanoLithography (ARCNL);
- Princess Máxima Center;
- the Royal Netherlands Meteorological Institute (KNMI);
- IHE Delft Institute for Water Education;
- Joint Institute for Very Long Baseline Interferometry European Research Infrastructure Consortium (JIVE).

\*\*A comparable position refers to a researcher that has a demonstrable and comparable number of years of experience in carrying out scientific research and supervising other researchers as a full, associate or assistant professor.

Persons with a zero-hour employment agreement or with a contract for a limited period of time (other than a tenure track appointment) may not submit a proposal.

It could be the case that the applicant's tenure track agreement ends before the intended completion date of the project for which funding is applied for, or that before that date, the applicant's tenured contract ends due to the applicant reaching retirement age. In that case, the applicant needs to include a statement from their employer in which the organisation concerned guarantees that the project and all project members for whom funding has been requested will receive adequate supervision for the full duration of the project.

Applicants with a part-time contract should guarantee adequate supervision of the project and all project members for whom funding is requested.

Additional conditions:

- One of the participants from the expertise network acts as the main applicant. The main applicant is also the intended project leader for realising the research.
- Researchers from organisations other than those mentioned above or from companies can be part of the expertise network, but may not act as the main applicant. Only researchers from the organisations stated above can act as co-applicants.
- With regard to its chosen theme, the expertise network should demonstrate that it brings together the knowledge and expertise present in the Netherlands, and that all relevant parties that want to participate in the expertise network are indeed enabled to do so. Further, the expertise network should be able to demonstrate that they have the required knowledge and expertise and the associated infrastructure to be able to carry out the intended activities. See criteria 3 and 4 of the policy assessment (Section 4.3.1).



### 3.1.1 Main and co-applicants

The main applicant submits the proposal to NSO. During the assessment process, NSO will communicate with the main applicant.

After a proposal has been awarded funding, the main applicant will become the project leader and point of contact for NSO. The knowledge institution of the main applicant is the main beneficiary and will become the official secretary.

Co-applicants have an active role in realising the project. The (sub)project leaders and beneficiary/beneficiaries are jointly responsible for realising the entire project.

## 3.2 What can be applied for

For this Call for proposals, a maximum of € 650,000 can be requested per proposal. The maximum duration of the proposed project is 5 years. The budget modules (including the maximum amount) available for this Call for proposals are listed in the table below. Apply only for funding that is vital to realise the project. A more detailed explanation of the budget modules can be found in the annexe to this Call for proposals (7.1). Each cost item should be briefly and separately explained in the full proposal.

At least € 5,000 and at most € 50,000 of the amount requested should be used for network-supporting activities.

To facilitate collaboration in the expertise network, for each proposal, at least three personnel positions should be applied for from the budget modules PhD student and/or Postdoc, which should be appointed at three different institutions that participate in the expertise network. Personnel can only be appointed at the institutions that have been listed in Section 3.1.

Budget module	Maximum amount
PhD student	according to UNL rates <sup>1</sup>
Postdoc	according to UNL rates <sup>1</sup>
Non-scientific staff (NSS) at universities	€100,000, according to UNL rates <sup>1</sup> in combination with PhD student(s) and or postdoc(s) <sup>1</sup>
Other Scientific personnel (OSS) at universities	€100,000, in combination with PhD student and/or postdoc
Personnel universities of applied sciences, educational institutions and other organisations	in accordance with the applicable rate at the time of awarding the grant as taken from Table 2.2, column 'Hourly rate productive hours, excl. Dutch VAT' from the <i>Handleiding Overheidstarieven</i> [HOT- Manual Dutch Government rates] ( <a href="https://www.nwo.nl/en/salary-tables">https://www.nwo.nl/en/salary-tables</a> ).
Material costs	€15,000 per year per FTE scientific position
Investments (up to €150,000)	Maximum €150,000
Knowledge utilisation	€25,000
Internationalisation	€25,000
Money follows Cooperation	less than 50% of the total budget applied for

<sup>1</sup> For personnel outside the Netherlands, the local rates are reimbursed. These rates are capped at a maximum equal to the UNL rates corrected by the NWO Country correction coefficients (CCC) table, see <https://www.nwo.nl/en/money-follows-cooperation>.

Given the nature of the *Kennisnetwerkenregeling*, which aims to strengthen the collaboration between Dutch knowledge parties with (non-scientific) parties/companies, an exception can be made for the cost category *work by third parties* (e.g. procured knowledge) in the budget module Material costs. A maximum of 30% of the total budget applied for can be used for this cost category, if this has been properly motivated in the proposal. The (non-scientific) parties/companies receive this amount via the applicant, subject to the conditions stated in the de-minimis aid regulation (Regulation (EU) no. 1407/2013 of the European Commission of 18 December 2013). If a (non-scientific) party/company ascertains that the NWO funding exceeds the de-minimis limit, then the party/company shall not be entitled to claim the amount (see Section 3.5.5 for the additional conditions concerning de-minimis support).

## 3.3 Preparing an application

### 3.3.1 Voluntary registration of activities

Prior to the submission of the full proposal, main applicants can register the initiative to set up an expertise network with NSO for publication on the NSO website and to obtain advice from NSO. The announcement of initiatives serves to ensure the establishment of networks that bring together the relevant knowledge and expertise present in the Netherlands and to make certain that no relevant parties are excluded (in accordance with Section 2.1.1). It also serves to give potential partners a chance to register and possibly join the expertise network. An initiative consists of the main applicant, the contact details, the theme and an as complete as possible description of the expertise network (parties involved and their role). For the announcement of the initiatives, use should be made of the form for initiatives that will be made available via the NSO website <https://www.spaceoffice.nl/nl/ondersteuning/kennisnetwerken/>. The completed form should be submitted to NSO by email ([knw@spaceoffice.nl](mailto:knw@spaceoffice.nl)).

Applicants are encouraged to register their initiative. Bringing together the relevant knowledge and expertise in the Netherlands is one of the assessment criteria of the policy assessment (see Section 4.3).

### 3.3.2 Preparing a full proposal

The steps involved in writing your application are:

- download the application form from the website of NSO, <https://www.spaceoffice.nl/nl/ondersteuning/kennisnetwerken/>;
- complete the application form;
- save the application form as a PDF file and submit it with any compulsory annexes to [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl).

Compulsory annexe:

- budget.

Optional annexe(s) (compulsary if applicable):

- statement demand-driven development (see Section 4.3.1, criterion 5);
- letter of guarantee for the supervision.

You must write your application in English.

Applications submitted after the deadline will not be taken into consideration.

The applicant must inform the organisation where she/he works about the submission of the application, and the organisation must accept the granting conditions of this Call for proposals.

The main applicant should provide a copy of the application to the persons responsible from all participating parties in the expertise network.

### 3.3.3 Advice about substantive suitability

For this call, your proposal must fit within the thematic description of the programme. Therefore, please consider in good time whether your application meets the substantive criteria. If you have any doubts about this, then please contact one of the programme's contact persons well before the deadline. They can advise you about the substantive connection of your proposal with this call. Please note that the final choice is yours. For contact details please see Section 6.1.1.

## 3.4 Conditions for submission

### 3.4.1 Formal conditions for submission

For the voluntary registration of initiatives, the following conditions apply:

- the initiative form should be completed according to the instructions;
- initiatives submitted after the deadline will not be published on the NSO website, and will not receive any advice from NSO.

NSO will assess your application against the conditions listed below. Your application will only be admitted to the assessment procedure if it meets these conditions. After submitting your application, you are requested to be available to implement any possible administrative corrections so that you can (still) meet the conditions for submission.

These conditions are:

- the main applicant and co-applicant(s) meet the conditions stated in Section 3.1;
- the application form is, after a possible request to make additions or changes, complete and filled out according to the instructions;
- the application is received at or before the deadline set;
- the application is written in English;
- the application budget is drawn up in accordance with the conditions for this Call for proposals, and in particular there needs to be an application for at least 3 PhD and/or postdoc positions that will be fulfilled at three different institutions as listed in Section 3.1;
- the application satisfies the DORA guidelines as described in Section 4.1;
- the proposed project has a duration of at most 5 years;
- all of the required annexes are, after a possible request to make additions or changes, complete and filled out according to the instructions.

## 3.5 Conditions on granting

The [NWO Grant Rules 2017](#) and the Agreement on the Payment of Costs for Scientific Research are applicable to all applications.

### 3.5.1 Data management

The results of scientific research must be replicable, verifiable and falsifiable. In the digital age, this means that, in addition to publications, research data must also be publicly accessible insofar as this is possible. NWO expects that research data resulting from NWO-funded projects will be made publicly available, as much as possible, for reuse by other researchers. "As open as possible, as closed as necessary" is the applicable principle in this respect. Researchers are at least expected to make the data and/or non-numerical results that underlie the conclusions of work published within the project publicly available at the same time as the work's publication. Any costs incurred for this can be included in the project budget. Researchers should explain how data emerging from the project will be dealt with based on the data management section in the proposal and the data management plan that is drawn up after funding is awarded.

#### Data management section

The data management section is part of the proposal. Researchers are asked before the start of the research to consider how the data collected will be ordered and categorised so that this can be made publicly available. Measures will often already need to be taken, during the creation of data and analysis of the data, to make its later storage and dissemination possible. If it is not possible to make all data from the project publicly available, for example due to reasons of privacy, ethics or valorisation, then the applicant is obliged to list the reasons for this in the data management section.

The data management section in the proposal is not evaluated and will therefore not be weighed in the decision whether to award funding. However, both the referees and the committee can issue advice with respect to the data management section.

### 3.5.2 Scientific integrity

In accordance with the NWO Grant Rules 2017, the project that NWO funds must be carried out in accordance with the nationally and internationally accepted standards for scientific conduct as stated in the Netherlands Code of Conduct for Research Integrity (2018). By submitting the proposal, the applicant commits to this code. In the case of a (possible) violation of these standards during a project funded by NWO, the applicant should immediately inform NWO of this and should submit all relevant documents to NWO. More information about the code of conduct and the policy regarding research integrity can be found on the website: [www.nwo.nl/en/scientific-integrity](http://www.nwo.nl/en/scientific-integrity).

### 3.5.3 Ethical statement or licence

The applicant is responsible for determining whether an ethical statement or licence is needed for the realisation of the proposed project. The applicant should ensure that this is obtained from the relevant institution or ethics committee on time. If the project is awarded funding, then the grant is issued under the condition that the necessary ethical statement or licence is obtained before the latest start date for the project. The project cannot start until NWO has received a copy of the ethical statement or licence.

### 3.5.4 Nagoya Protocol

The Nagoya Protocol ensures an honest and reasonable distribution of benefits emerging from the use of genetic resources (Access and Benefit Sharing; ABS). Researchers who make use of genetic sources from the Netherlands or abroad for their research should familiarise themselves with the Nagoya Protocol ([www.absfocalpoint.nl](http://www.absfocalpoint.nl)). NWO assumes that researchers will take all necessary actions with respect to the Nagoya Protocol.

### 3.5.5 De-minimis aid

Via the applicant, (non-scientific) parties/companies can receive a payment covered by the budget module Material costs for work done by third parties, in accordance with the conditions set out in the de-minimis aid regulation (Regulation (EU) no. 1407/2013 of the European Commission of 18 December 2013). Based on the de-minimis aid regulation, a (non-scientific) party/company may receive a maximum of 200,000 euros in government aid over a period of three fiscal years. After awarding, the (non-scientific) party/company must state, by completing a De-minimis aid statement, that receipt of the funding from the NWO does not bring the (non-scientific) party/company in question above the de-minimis aid limit. After the grant has been awarded, the applicant is responsible for ensuring that the (non-scientific) party/company supplies the De-minimis aid statement.

## 4 Assessment procedure

This chapter describes first of all the assessment in accordance with the DORA principles (Section 4.1) and the course of the assessment procedure (Section 4.2). It then states the criteria that the assessment committee will use to assess your application (Section 4.3).

The NWO Code for Dealing with Personal Interests applies to all persons and NWO employees involved in the assessment and/or decision-taking process ([www.nwo.nl/en/code-dealing-personal-interests](http://www.nwo.nl/en/code-dealing-personal-interests)).

NWO strives to achieve an inclusive culture in which there is no place for conscious or unconscious barriers due to cultural, ethnic or religious background, gender, sexual orientation, health or age ([www.nwo.nl/en/diversity-and-inclusion](http://www.nwo.nl/en/diversity-and-inclusion)). NWO encourages referees and members of an assessment committee or jury to be actively aware of implicit associations and to try to minimise these. NWO will provide them with information about concrete ways of improving the assessment of an application.

### 4.1 The San Francisco Declaration (DORA)

NWO is a signatory to the San Francisco Declaration on Research Assessment (DORA). DORA is a worldwide initiative that aims to improve the way research and researchers are assessed. DORA contains recommendations for research funders, research institutions, scientific journals and other parties.

DORA aims to reduce the uncritical use of bibliometric indicators and obviate unconscious bias in the assessment of research and researchers. DORA's overarching philosophy is that research should be evaluated on its own merits rather than on the basis of surrogate measures, such as the journal in which the research is published.

When assessing the scientific track record of applicants, NWO makes use of a broad definition of scientific output.

NWO requests committee members and referees not to rely on indicators such as the Journal Impact Factor or the h-index when assessing applications. Applicants are not allowed to mention these in their applications. You are, however, allowed to list other scientific products besides publications, such as datasets, patents, software and code, et cetera.

For more information on how NWO is implementing the principles of DORA, see [www.nwo.nl/en/dora](http://www.nwo.nl/en/dora).

### 4.2 Procedure

The application procedure consists of the following steps:

- Voluntary registration of the initiative
- Advice from NSO about a registered initiative
- Submission of the proposal
- Consideration of the proposal
- Policy assessment by NSO
- Peer review by referees
- Rebuttal
- Final assessment
- Decision-making

### 4.2.1 Voluntary registration of the initiative

A standard form for the registration of initiatives is available from the NSO website (<https://www.spaceoffice.nl/en/support/expertise-networks/>). With the registration of an initiative, you indicate that you want to submit a proposal for this Call for proposals. Registered initiatives will be published on the NSO website. The registration of an initiative is voluntary, but the publication of it on the NSO website and the advice from NSO (see Section 4.2.2) can help ensure that all relevant parties in the Netherlands will be able to join the expertise network.

You must register your initiative with NSO before the deadline (see Section 1.3) via the email address [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl). It is possible to withdraw the registration of an initiative. This can be done by sending an email to the same email address.

### 4.2.2 Advice from NSO about a registered initiative

The registered initiatives will be assessed by NSO using policy criteria 3 and 4 (see Section 4.3) to ensure that expertise networks contain the relevant expertise present in the Netherlands and do not exclude any relevant parties. Based on these criteria, registered initiatives will receive advice about elaborating a full proposal.

### 4.2.3 Submission of the proposal

For the submission of a full proposal, a standard form is available on the NSO website (<https://www.spaceoffice.nl/en/support/expertise-networks/>). In your proposal, you must adhere to the questions included in this form and to the approach stated in the explanatory notes. You must also adhere to the conditions for the maximum number of words and pages.

Your fully completed application form must have been received by NSO before the deadline (see Section 1.3) via the email address [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl). It is not possible to submit an application after this deadline. After submission, the main applicant will be sent a confirmation of receipt.

### 4.2.4 Consideration of the proposal

NSO will inform you whether or not your full proposal will be taken into consideration as soon as possible after the submission of your proposal. NSO will determine this on the basis of several administrative-technical criteria (see the formal conditions for submission, Section 3.4). Your proposal will only be considered by NSO if it satisfies these conditions. Please bear in mind that NSO can approach you within two weeks after the submission deadline to make any possible administrative corrections so that you can (as yet) satisfy the conditions for submission. You will be given one opportunity to do this, and you must make the changes within 5 working days.

### 4.2.5 Policy assessment by NSO

NSO will assess the submitted full proposals for their policy relevance on the basis of all policy criteria specified in Section 4.3.1. If the proposal does not satisfy the criteria of the policy assessment, then it will not be considered further.

### 4.2.6 Peer review by referees

The full proposals that satisfy the criteria of the policy assessment will be assessed by independent scientific experts (referees) for their scientific quality. Each proposal will be assessed by at least two referees for the theme concerned. The referees will advise NSO about the scientific quality of the proposal. The assessors will base their assessment on the assessment criteria specified in 4.3.2.

It is possible to submit the names of (not more than 3) non-referees. Applicants can submit the names of these non-referees to NSO via [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl). You should not list the names of these non-referees in your full proposal. NSO will not approach these non-referees to serve as an external referee for the assessment of the proposal.

### 4.2.7 Rebuttal

The main applicant will receive the policy assessment and the anonymised referees' reports. After that, the main applicant will be given the opportunity to formulate a rebuttal in consultation with the submitting expertise network. You will be given 10 working days to submit your rebuttal to NSO via [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl). NSO will discuss the rebuttal with the external referees.

Should you decide to withdraw the proposal, then you should notify NSO of this as soon as possible by email. If NSO receives your rebuttal after the deadline, then it will not be included in the rest of the procedure.

#### 4.2.8 Final assessment

Based on the policy assessment, scientific assessments, the rebuttals received and the assessment of the rebuttals by the referees, NSO will provide a final assessment. Overall, the proposal must receive at least the qualification 'very good' to be eligible for funding. For more information about the qualifications, see <https://www.nwo.nl/en/apply-funding-how-does-it-work>.

#### 4.2.9 Decision-taking

Finally, the NWO Science Domain Board will assess the procedure followed and the advice from NSO. It will subsequently determine the final qualifications and make a decision about which proposals will be awarded funding.

#### 4.2.10 Timetable

Below, you will find the timetable for this Call for proposals. During the current procedure, NWO might find it necessary to make further changes to the timetable for this Call for proposals. You will, of course, be informed about this in time.

<b>Initiatives</b>	
7 February 2023, at 14:00:00 CET	Deadline announcement initiatives
<b>February/March 2023</b>	Advice about announced initiatives
<b>Proposals</b>	
9 May 2023, at 14:00:00 CEST	Deadline proposals
May 2023	Assessment of conditions for submitting and policy assessment by NSO
May/June 2023	Consultation referees
June/July 2023	Rebuttal by expertise network; NSO discusses rebuttal with referees
September 2023	Final assessment NSO to NWO Science Domain Board
September/October 2023	Decision NWO Science Domain Board

### 4.3 Criteria

#### 4.3.1 Policy assessment

For the policy assessment, the following criteria apply:

1. The proposal concerns the development of technology for, and/or the use of, future space instruments that align with the themes of this call;
2. The proposal connects with the key points and priorities of the Dutch scientific and economic space policy;
3. Through strengthened collaboration and synergy, the proposal contributes to maintaining and strengthening the Dutch position;

4. The proposed expertise network brings together the existing, relevant knowledge and expertise about its chosen knowledge theme from the participating knowledge parties;
5. The proposed expertise network covers the organisation of the demand formulated by science, the government and/or the market;
6. The proposed expertise network covers the collaboration with other parties outside of the network, both within and outside of the space sector.

All criteria carry equal weights in the assessment.

## Explanation of the policy criteria

### Criterion 1. Development of technology for and/or use of future space instruments

The expertise network brings together knowledge and expertise in the area of developing and using space-based instruments (therefore not ground-based instruments). Among the participating parties, substantial knowledge and expertise must be present in this area so that the proposed expertise network activities can be regarded as supplementary to this.

### Criterion 2. Connection with the Dutch space policy

The expertise network connects with the following priorities of the Dutch space policy:

- I. In the coming years, the policy will focus on the use of space by science, government/society and the market.
- II. In decisions about the deployment and development of technological capabilities, the use of space (by a process of establishing needs and demands) will be the most important driver ('user pull'), besides (and in balance with) the optimal use of the existing technological possibilities ('technology push').
- III. In the development and use of space instruments, efforts will be made to realise synergy between the knowledge sector and industry, between the space and non-space sectors, between upstream and downstream (chain approach) and between national and international developments.
- IV. Substantive priorities of the Dutch space policy lie in the area of astrophysics/astronomy, Earth observation and planetary research.
- V. The Netherlands has an outstanding position in the area of (scientific) knowledge concerning the development and use of space instruments. In the coming years, the valorisation of this knowledge for the purpose of science, government and the market will be a priority.
- VI. During the development and use of future space instruments, the Dutch parties should be able to gain optimal benefit from breakthrough technologies and disruptive innovations from within and outside of the space sector.

These priorities also form the basis for the priorities of the *Kennisnetwerkenregeling* as described in Section 2.1.

### Criterion 3. Collaboration and strengthening the Dutch position

The expertise network should convincingly (signed agreements) demonstrate that collaboration will take place in which the participants provide input in a synergetic way. Parties strengthen each other so that the Dutch position in the area of developing and using space instruments is maintained and, if possible, they jointly ensure that the Netherlands gains a stronger position.

### Criterion 4. Dutch knowledge parties

In all cases, the expertise network should include Dutch knowledge parties. The expertise network brings together the relevant knowledge and expertise regarding its chosen theme, and parties who possess relevant knowledge and want to participate may not be excluded by the expertise network.



#### Criterion 5. Organisation of the demand-driven development

The expertise network convincingly demonstrates that the proposed activities for the purpose of developing and/or using space instruments are partly driven by the demand articulated by science, the government and/or the market. Demand-driven developments should be given as tangibly as possible. Statements from identified parties that have expressed a demand, in particular about their questions and needs, should be submitted together with the proposal. With respect to the (very) long-term developments, the demand might be less tangible, but the use of breakthrough technologies or disruptive innovations should be made plausible.

#### Criterion 6. Collaboration outside of the network

The expertise network states how it will collaborate with parties outside the expertise network. That could be other knowledge parties, government bodies or companies. A description of the partnerships with parties outside of the space sector needs to be included as well.

Criteria 5 and 6 are related to the NWO objective concerning knowledge utilisation (see also <https://www.nwo.nl/en/knowledge-utilisation>).

### 4.3.2 Scientific assessment criteria

For the scientific assessment, the following criteria apply:

1. Originality/innovative character
2. Scientific quality of the proposal
3. Scientific quality of the expertise network

These criteria carry equal weighting in the overall assessment.

#### Explanation of the assessment criteria

##### Criterion 1. Originality/Innovative character

What is the potential innovative aspect with respect to the broader field of the research theme? By definition, all research results need to extend the boundaries of the 'known'. However, this point concerns differentiating research with a more innovative contribution in terms of the discipline(s) in which it will take place from more routine research that is based on traditional methods. To establish this, the research question, proposed research methods and potential research results may be weighed.

##### Criterion 2. Scientific quality of the proposal

In general, it can be said that scientific quality is associated with:

- I. Objectives
 

It is important that the research question makes it sufficiently clear what the research will focus on and whether there is a substantial aim that captures the imagination. From the proposal, it must be clear that the objectives formulated are recognisably scientifically relevant and have the potential to realise scientific impact.
- II. Scientific approaches and research method
 

This point refers to an examination of whether the methods and techniques chosen are clearly described and whether the work plan is of a sufficiently high level, as judged in accordance with the research question and objective. The extent to which the proposed research compares, in terms of quality, to the international research carried out in this area will also be examined.
- III. Effect: potential increase/deepening of knowledge
 

Which perspectives will be opened up within and outside of the discipline concerned, as a result of finding answers to the research questions? What relevance does the proposal have for the development of the concerned field?

### Criterion 3. Scientific quality of the expertise network

Quality and competencies of the expertise network. In general, it can be said that the scientific quality of the expertise network depends on:

#### I. Research output

This concerns the value and impact of different forms of research output provided by the participants and the expertise network. Output can, for example, consist of (peer-reviewed) papers, other publications (such as (project) reports, articles, reports), datasets, software and hardware products, results of analyses, et cetera. The value and impact of these will be, as much as possible, qualitatively assessed with due consideration for the DORA guidelines (see Section 4.1).

#### II. Research position

As far as possible, this concerns a qualitative assessment of both the position and status that the participants are accorded in the expertise network and in their own field of work, as well as the collective position and status of the participants with regard to the research theme of the expertise network. This assessment weighs both national and international positions. The subject of examination will, among other things, be what the value and impact of relations and contacts in (inter)national partnerships are and the extent to which the expertise network is authoritative and occupies a leading position.

## 5 Obligations for grant recipients

This chapter details the various obligations that - in addition to the conditions stated in Section 3.5 - apply after funds have been awarded.

### 5.1.1 Data management

After a proposal has been awarded funding, the researcher should elaborate the data management section into a data management plan. For this, applicants can make use of the advice from the referees and committee. The applicant describes in the plan whether use will be made of existing data, whether new data will be collected or generated, and how the data will be made FAIR: Findable, Accessible, Interoperable, Reusable. Before submission, the data management plan should be checked by a data steward or similar officer of the organisation where the project will be realised. The plan should be submitted to NSO via [knw@spaceoffice.nl](mailto:knw@spaceoffice.nl), no later than 4 months after the proposal has been awarded funding. NSO will check the plan as quickly as possible. Approval of the data management plan by NWO is a condition for disbursement of the funding. The plan can be adjusted during the research.

More information about the data management protocol of NWO can be found at: [www.nwo.nl/en/research-data-management](http://www.nwo.nl/en/research-data-management).

### 5.1.2 Intellectual property

With respect to intellectual property (IP), the NWO IP policy applies. This can be found in Chapter 4 of the NWO Grant Rules 2017.

Applicants must carry out a project funded by NWO during the time that they work for the knowledge institution. If an applicant or a researcher funded by NWO is appointed by more than one employer, then the other employer should relinquish any possible IP rights that emerge from the project of the applicant.

### 5.1.3 Socially responsible licensing

The knowledge that emerges from the project could be suitable for use in society. When agreements about licensing and/or the transfer of research results developed under this Call for proposals are made, due consideration should be given to the ten principles for socially responsible licensing, as stated in the NFU factsheet "Socially Responsible Licensing Toolkit for knowledge institutions" ([www.nfu.nl/sites/default/files/2020-09/200902-NFU%20Factsheet%20Toolkit%20SRL.pdf](http://www.nfu.nl/sites/default/files/2020-09/200902-NFU%20Factsheet%20Toolkit%20SRL.pdf)).

### 5.1.4 Open Access

As a signatory to the Berlin Declaration (2003) and a member of cOAlition S (2018), NWO is committed to making the results of the research it funds openly accessible via the internet (Open Access). By doing this, NWO gives substance to the ambitions of the Dutch government to make all publicly funded research available in Open Access form. Scientific publications arising from projects awarded on the basis of this Call for proposals must therefore be made available in Open Access form in accordance with the Open Access Policy.

#### Scientific articles

Scientific articles must be made available in Open Access form immediately at the time of publication (without embargo) via one of the following routes:

- publication in a fully Open Access journal or platform registered in the DOAJ;
- publication in a subscription journal and the immediate deposition of at least the author accepted manuscript of the article in an Open Access repository registered in Open DOAR;
- publication in a journal for which a transformative Open Access agreement exists between UNL and a publisher. For further information, see [www.openaccess.nl/en](http://www.openaccess.nl/en).

#### Books

Different requirements apply to scholarly books, book chapters and edited collections. See the Open Access Policy Framework at [www.nwo.nl/en/open-science](http://www.nwo.nl/en/open-science).

### CC BY licence

To ensure the widest possible dissemination of publications, at least a Creative Commons (CC BY) licence must be applied. Alternatively – in case of substantial interest – the author may request to publish under a CC BY-ND licence. For books, book chapters and collected volumes, all CC BY licence options are allowed.

### Costs

Costs for publication in fully Open Access journals can be budgeted in the application using the budget module for “material costs”. Costs for publications in hybrid journals are not eligible for reimbursement by NWO. For Open Access books, a separate NWO Open Access Books Fund is available.

For more detailed information about NWO’s Open Access policy, see [www.nwo.nl/en/open-science](http://www.nwo.nl/en/open-science).

## 6 Contact and other information

### 6.1 Contact

#### 6.1.1 Specific questions

For specific questions about this Call for proposals, please contact:

J. Diekema (Netherlands Space Office), tel.: +31 (0)6 2706 2992, email: [j.diekema@spaceoffice.nl](mailto:j.diekema@spaceoffice.nl)

Dr R. Koop (Netherlands Space Office), tel.: +31 (0)88 042 4528, email: [r.koop@spaceoffice.nl](mailto:r.koop@spaceoffice.nl)

For questions about the budget modules, please contact:

Dr M. van den Berg (NWO), tel.: +31 (0)70 349 4046, email: [m.vandenberg@nwo.nl](mailto:m.vandenberg@nwo.nl)

### 6.2 Other information

Information about the *Kennisnetwerkenregeling* (PIPP) can be found on the NSO website at <https://www.spaceoffice.nl/en/support/expertise-networks/>.

## 7 Annexes:

### 7.1 Explanation of budget modules

It is possible to apply for the funding of the salary costs of personnel who make a substantial contribution to the research. Funding of these salary costs depends on the type of appointment and the organisation where the personnel are/ will be appointed.

- For university appointments, the salary costs are funded in accordance with the UNL salary tables applicable at the moment the grant is awarded ([www.nwo.nl/en/salary-tables](http://www.nwo.nl/en/salary-tables)).
- For university medical centres, the salary costs are funded in accordance with the NFU salary tables applicable at the moment the grant is awarded ([www.nwo.nl/en/salary-tables](http://www.nwo.nl/en/salary-tables)).
- For personnel from universities of applied sciences, educational institutions and other organisations, salary costs will be funded based on the collective labour agreement pay scale of the employee concerned in accordance with the applicable rate at the time of awarding the grant as taken from Table 2.2, column ‘Hourly rate productive hours, excl. Dutch VAT’ from the *Handleiding Overheidstarieven* [HOT- Manual Dutch Government Rates] (<https://www.nwo.nl/en/salary-tables>).
- For the Caribbean Netherlands, the Dutch government employs civil servants on Bonaire, Sint Eustatius and Saba under different conditions than in the European part of the Netherlands [www.rijksdienstcn.com/werken-bij-rijksdienst-caribisch-nederland/arbeidsvoorwaarden](http://www.rijksdienstcn.com/werken-bij-rijksdienst-caribisch-nederland/arbeidsvoorwaarden).

NWO will apply a mandatory one-off indexing of the salary costs with respect to:

- UNL rates: for proposals submitted before 1 July and that are awarded funding after 1 July;
- NFU rates: for proposals submitted before 1 August that are awarded funding after 1 August;
- HOT rates: for proposals submitted before 1 January that are awarded funding after 1 January.

The mandatory one-off indexing has no influence on the level of the grant ceiling or on the maximum amount of the grant awarded per proposal. The level of the grant ceiling and the maximum amount of the grant awarded will remain unchanged during the assessment procedure. The mandatory one-off indexing will be applied after the decision-taking about awarding or rejecting proposals has been completed.

If co-funding is required or permitted then the one-off mandatory indexing will have no consequences for the co-funding requirement or the IP rights that can emerge from the co-funding.

The rates for all budget modules are incorporated in the budget template that accompanies the application form. For the budget modules “PhD student”, “PDEng” and “Postdoc”, a one-off individual bench fee of €5,000 is added on top of the salary costs to encourage the scientific career of the project employee funded by NWO. Remunerations for PhD scholarship students (‘bursalen’) at a Dutch university are not eligible for funding from NWO.

The available budget modules are explained below.

#### PhD student (including MD-PhD student)

A PhD student is appointed for 1.0 FTE for a duration of 48 months. The equivalent of 48 full-time months, for example an appointment of 60 months for 0.8 FTE, is also possible. If a different duration of appointment is considered necessary for the realisation of the proposed research, then the standard time can be deviated from as long as this is properly justified. However, the duration of appointment must always be at least 48 months.

#### Postdoc

The size and duration of the postdoc appointment is at least 6 full months and at most 48 full-time months. The size and duration of the appointment is at the applicant’s discretion, but the appointment is always for at least 0.5 FTE or for a duration of at least 12 months. The product of FTE x duration of appointment should always be a minimum of 6 full-time months.

The material budget is available to cover the costs of a more limited appointment of a postdoc.

## Non-scientific staff (NSS) at universities

Funding for the appointment of NSS required to realise the research project can only be applied for if funding for a PhD student or postdoc is also applied for. A maximum of €100,000 can be requested for NSS. This includes personnel such as student assistants, programmers, technical assistants or analysts. Depending on the level of the position, the appropriate salary table for NSS at MBO, HBO or university level applies.

The size of the appointment is at least 6 full-time months and at most 48 full-time months. The size and duration of the appointment is at the applicant's discretion, but the appointment is always for at least 0.5 FTE or for a duration of at least 12 months. The product of FTE x duration of appointment should always be a minimum of 6 full-time months.

The material budget is available to cover the costs of a more limited appointment of NSS.

## Other Scientific personnel (OSS) at universities

Budget for OSS such as AIOS (doctor training to be a specialist), ANIOS (doctor not training to be a specialist), scientific programmers or employees with a master's degree can only be applied for if funding for a PhD student or postdoc is also applied for. For this category, a maximum of €100,000 can be applied for.

The size of the appointment is at least 6 full-time months and at most 48 full-time months. The size and duration of the appointment is at the applicant's discretion, but the appointment is always for at least 0.5 FTE or for a duration of at least 12 months. The product of FTE x duration of appointment should always be a minimum of 6 full-time months.

## Personnel universities of applied sciences, educational institutions and other organisations

With the exception of personnel that fall under UNL or NFU rates, costs for the funding of personnel employed at a university of applied sciences, educational institution or at other organisations will be remunerated in accordance with Table 2.2, column 'Hourly rate productive hours, excl. Dutch VAT' from the *Handleiding Overheidstarieven* [HOT- Manual Dutch Government Rates] ([www.nwo.nl/en/salary-tables](http://www.nwo.nl/en/salary-tables)).

For the calculation you should use the number of productive hours stated in the valid volume of the *Handleiding Overheidstarieven*.

## Explanation of budget module Material

For each FTE scientific position (PhD student, postdoc, PDEng) applied for, a maximum of €15,000 material budget can be applied for per year of the appointment. Material budget for smaller appointments can be applied for on a proportionate basis and will be made available by NWO accordingly. Per 0.2 FTE scientific employee applied for at a university of applied sciences, educational institution or other organisation (with a minimum appointment of 0.2 FTE for 12 months) a maximum of €15,000 in material budget can be applied for per year.

The applicant is responsible for distributing the total amount of material budget across the NWO-funded personnel positions. The material budget that can be applied for is specified according to the three categories below:

### *Project-related goods/services*

- consumables (e.g. glassware, chemicals, cryogenic fluids, etc.)
- measurement and calculation time (e.g. access to supercomputer, etc.)
- costs for acquiring or using data collections (e.g. from Statistics Netherlands [CBS]), for which the total amount may not be more than €25,000 per proposal
- access to large national and international facilities (e.g. cleanroom, synchrotron, etc.)
- work by third parties (e.g. laboratory analyses, data collection, citizen science, etc.)
- personnel costs for the appointment of a postdoc and/or non-scientific personnel for a smaller appointment size than those offered in the personnel budget modules

*Travel and accommodation costs for the personnel positions applied for*

- travel and accommodation costs
- conference attendance (maximum of two per year per scientific position applied for)
- fieldwork
- work visit

*Implementation costs*

- national symposium/conference/workshop organised by the project researchers
- costs for Open Access publishing (solely in full gold Open Access journals, registered in the “Directory of Open Access Journals” <https://doaj.org/>)
- costs data management
- costs involved in applying for licences (e.g. for animal experiments)
- audit costs (only for institutions that are not subject to the education accountants protocol of the Ministry of Education, Culture and Science), maximum €5,000 per proposal; for projects with a duration of three years or less, a maximum of €2,500 per proposal applies

Costs that cannot be applied for are:

- basic facilities within the institution (e.g. laptops, office furniture, etc.)
- maintenance and insurance costs

If the maximum amount is not sufficient for realising the research, then this amount may be deviated from, if a clear justification is provided in the proposal.

## Citizen science

Involving citizens (citizen science) can contribute to the quality of the research. With the help of citizens, data and insights can be acquired that would not otherwise be available for research. NWO also funds citizen science. Applicants can use the budget module “material, project-related goods/services, work by third parties” to request a remuneration for the involvement of citizens in projects. The budget module offers a possibility and is not a requirement. Applicants are free to decide whether it is worthwhile involving citizens in the project and what exactly they use this budget for (for example, reimbursement of expenses of citizens, skills training for citizens or technical devices for the participating citizen).

## Explanation of budget module Investments (up to €150,000)

In this budget module, funding can be requested up to a maximum of €150,000 for investments in equipment, datasets and/or software (e.g. lasers, specialised computers or computer programs).

## Explanation of budget module Knowledge utilisation

The aim of this budget module is to facilitate the use of the knowledge that emerges from the research.<sup>2</sup> The budget applied for may not exceed €25,000.

As knowledge utilisation takes many different forms in different scientific fields, the applicant needs to specify the required costs, e.g. costs of producing a teaching package, conducting a feasibility study into potential applications, or filing a patent application.

The budget applied for should be adequately specified in the proposal.

## Explanation of budget module Internationalisation

The budget for internationalisation is intended to encourage international collaboration. The budget applied for may not exceed €25,000. The amount requested must be specified. If the maximum amount is not sufficient for realising the research, then it may be deviated from if an adequate justification is provided in the proposal.

Funding can be requested for:

<sup>2</sup> In this budget module, the definition for “knowledge transfer” as used by the European Commission in the Framework for State aid for research and development and innovation (PbEU, 2014, C198) applies.



- travel and accommodation costs in so far as these concern direct research costs emerging from the international collaboration and additional costs for internationalisation that cannot be covered in another manner, for example from the bench fee;
- travel and accommodation costs for foreign guest researchers;
- costs for organising international workshops/symposia/scientific meetings.

### Explanation of the budget module Money follows Cooperation (MfC)

The module Money follows Cooperation provides the possibility of realising a part of the project at a publicly funded knowledge institution outside of the Netherlands.

The applicant must convincingly argue how the researcher from the foreign knowledge institution will contribute specific expertise to the research project that is not available in the Netherlands at the level necessary for the project.

This condition does not apply if NWO has concluded a bilateral agreement concerning Money follows Cooperation with the national research council of the country where the foreign knowledge institution is located. At [www.nwo.nl/en/money-follows-cooperation](http://www.nwo.nl/en/money-follows-cooperation) you will find an overview of research councils that signed a bilateral MfC agreement with NWO.

The budget applied for within this module must be less than 50% of the total budget applied for.

The co-applicant from the participating foreign knowledge institution must meet the conditions set for co-applicants in Section 3.1 of this Call for proposals, with the exception of the condition that the co-applicant must be employed in the Kingdom of the Netherlands.

The rates for the personnel costs of researchers at the foreign knowledge institution are calculated on the basis of the correction coefficients table of the Marie Skłodowska-Curie grants (EU, Horizon 2020), based on the Dutch UNL rates. The table can be found at [www.nwo.nl/en/money-follows-cooperation](http://www.nwo.nl/en/money-follows-cooperation).

The main applicant receives the grant and is responsible for transferring the amount to the foreign knowledge institution and for providing accountability for the MfC part of the grant. The MfC part will be part of the overall financial accountability of the project.

The exchange rate risk lies with the applicants. Therefore, gains or losses due to the exchange rate are not eligible for funding.

The applicant is responsible for:

- the financial accountability for all costs in both euros and the local currency, for which the exchange rate used must be visible;
- a reasonable determination of the size of the exchange rate. If requested by NWO, the applicant must always be able to provide a description of this reasonable determination.

If more than €125,000 is requested within this module, then the final financial statement must be accompanied by an audit report.

NWO will not award any funding to co-applicants in countries that fall under national or international sanction legislation and rules. The EU Sanctions Map ([www.sanctionsmap.eu](http://www.sanctionsmap.eu)) is guiding in this respect.

## 7.2 TRL definitions used

Activities of the expertise networks should take place at the lower TRLs, for which TRL 1 to 3 serve as a guideline. The table below provides an overview of the definitions for the TRLs used in this funding round. The terminology is aimed at the development of hardware systems, but can be analogously applied to other (e.g. software) systems, see also [https://www.esa.int/Enabling\\_Support/Space\\_Engineering\\_Technology/Shaping\\_the\\_Future/Technology\\_Readiness\\_Levels\\_TRL](https://www.esa.int/Enabling_Support/Space_Engineering_Technology/Shaping_the_Future/Technology_Readiness_Levels_TRL):

<b>Technology Readiness Level</b>	<b>Description</b>
1	Basic principle
2	Application formulated
3	Proof-of-concept
4	Functional verification
5	Breadboards (reduced scale) verification in a relevant environment
6	Models (full scale) demonstration in a relevant environment
7	Model demonstration for an operational environment
8	Flight qualified
9	Flight proven

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Dutch Research Council

Visiting address:

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[www.nwo.nl/en](http://www.nwo.nl/en)

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