



Towards More Sustainable and Social Local Energy Systems, Nederlandse Organisatie voor Wetenschappelijk Onderzoek

Cooperation China-The Netherlands (NSFC)

Call for Proposals

Merian Fund

2020

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1 Introduction

1.1 Background

There is a long history of scientific collaboration between China and The Netherlands. The Dutch Research Council (NWO), through the Merian Fund¹, and the National Natural Science Foundation of China (NSFC) aim to stimulate long-term research collaboration between their two countries by funding joint research, to strengthen the international position and global impact of their research. Funding is provided for interdisciplinary and transdisciplinary consortia of Chinese and Dutch research groups and stakeholder partners, for high quality research that has the potential for high societal and scientific impact. The Cooperation China-The Netherlands (NSFC) Programme is one of several instruments in the bilateral research cooperation between China and The Netherlands.

NWO and NSFC have agreed on a strategic knowledge and innovation agenda. A call for proposals on a jointly agreed theme based on this agenda is published annually. Funded research should be in alignment with research agendas such as the JPI Urban Europe/SET Plan Action and the Strategic Research and Innovation Agenda for EU-China Cooperation on Sustainable Urbanisation, as well as international initiatives such as the UN Sustainable Development Goals, and build bridges between different actors in the knowledge chain, fundamental and applied research, and scientific disciplines. The theme for this year's call is 'Towards More Sustainable and Social Local Energy Systems'.

1.2 Available budget

The total available budget for this call is M€ 1.4 at NWO, and RMB 8 million at NSFC.

¹ The Merian Fund is part of NWO, and aims to stimulate long-term collaboration with important (emerging) science nations and increase the visibility and profile of Dutch science abroad. The Merian Fund focuses on broad scientific themes of societal importance that require a mission-oriented approach. Programmes in the Merian Fund are aligned with the National Research Agenda (NWA) of The Netherlands. For more information see: <https://www.nwo.nl/en/researchprogrammes/merian-fund>



Projects can apply for a maximum of € 700,000 at NWO, and for a maximum of RMB 4 million at NSFC.

The NWO Grant Rules 2.017 are applicable to the part of the project's budget covered by the grant from NWO. The part of the budget covered by the grant from NSFC must follow the NSFC grant conditions. Please see section 3 for further details.

1.3 Validity of the call for proposals

This call for proposals is valid until the date on which the NWO-WOTRO Steering Committee and the Board of NSFC take the decision about the full proposals. For projects awarded funding within this call for proposals, the conditions stated remain valid throughout the entire duration of the project.

The deadline for the submission of proposals is stated in Section 3.3; the decision dates are given in the planning stated in Section 4.1.

2 Aim

Many societal challenges are complex and interrelated. To address them requires sustainable collaboration, and flexibility and creativity to achieve sustainable results for effective and impactful solutions. The collaborative research financed by NSFC and NWO in this call is intended to work towards scientific knowledge and sustainable, innovative solutions for high scientific and societal impact. At the same time, NSFC and NWO aim to stimulate strong, sustainable research collaboration between their two countries. They do this by inviting consortia in which researchers from knowledge institutions from both countries will work with societal partners from public, semi-public and private organisations, in order to increase the societal relevance and impact of their research.

The current call focuses on 'More Sustainable and Social Local Energy Systems', a topic of great interest and importance to both China and The Netherlands.

2.1 Thematic focus

Both The Netherlands and China are strongly committed to a sustainable energy transition, aiming to develop low carbon energy systems that are reliable, secure and affordable, and which are able to handle society's changing energy supplies and demands. A substantial part of the sustainable energy transition takes place at the local level (i.e., neighbourhood or block level). It demands transformations in local energy systems, and strongly depends on the preferences and actions of the local actors involved, such as households, local businesses, and local industries. Three key transformations in local energy systems could critically advance the sustainable energy transition:

1. **Reducing energy consumption in buildings.** It is critical that new and existing buildings are made more energy efficient and that actors within the energy system reduce their energy consumption. In this, it is important to reduce direct energy use in buildings, as well as to reduce the energy consumption associated with for instance the development, renovation and demolition of buildings.
2. **Increasing local energy generation from renewables.** Increasing local, renewables-based generation capacity improves the sustainability of energy systems. Moreover, investing in local energy generation can critically contribute to energy systems' efficiency (e.g., reducing transmission losses), security (e.g., more distributed energy generation), while often being financially attractive as well.
3. **Increasing energy flexibility.** Flexibility is needed to achieve a balanced and resilient energy system, and to optimally profit from renewable energy sources (as mentioned under 2.). Flexibility can be achieved through for instance demand-side management, sector coupling and storage. This often requires collaboration between sectors, buildings, producers and consumers, and between local, regional and national levels.

Together, these transformations could result in net zero local energy systems, which produce the same amount of energy – or even more – than they consume, and which have a positive impact on regional

and national energy systems (e.g., on their flexibility, reliability and security)². Critically, to optimally benefit from such energy systems, a truly integrative approach is needed in terms of the domains, sectors and actors engaged, and technical, physical and social aspects involved. Hence, inter- and transdisciplinary research is needed that, amongst others, accounts for the integrative nature of local

² JPI Urban Europe / SET Plan Action 3.2 (2020). White Paper on PED Reference Framework for Positive Energy Districts and Neighbourhoods, <https://jpi-urbaneurope.eu/ped/>



energy systems, and that actively studies the interactions between different actors and aspects of such energy systems. Within this larger integrative framework, this call specifically focuses on two related key themes that are central to the Dutch and Chinese research agendas, **green buildings** and **actor integration**. Projects should address both key themes.

1. **Green buildings.** To achieve sustainable local energy systems, it is key to make buildings “greener”. This can be achieved by, for instance, minimizing the energy buildings use throughout their life cycle, maximizing their generation and storage capacity, and thereby enabling them to positively contribute to local and regional low carbon and sustainability goals. This brings clear design, planning and technical challenges³. In addressing these challenges, it is critical to take an integrative and systems-level approach, where dependencies and interactions within the local energy systems, as well as with larger systems, need to be considered. The development of green buildings is also strongly associated with social challenges. Buildings for instance need to be functional, acceptable and attractive to its users and other actors, and to be developed while considering equality and economic aspects to be truly sustainable. Moreover, the development and implementation of green buildings may require policy and system changes, and improvements in standards and certification systems. Accordingly, proposals are invited that focus on addressing these challenges.
2. **Actor integration.** Many different actors from different levels of society can be involved and work together in local energy systems, including national and local governments, industry, private organisations and consumers / prosumers, requiring collaboration between public and private sectors. For instance, the integration of local and regional energy systems requires interactions between local citizens and businesses, governments and various energy companies and operators (for another example, see green buildings above). Accordingly, research is needed to understand how these actors can most optimally interact and work together, both from a social and technical perspective. What are the (perceived) roles and responsibilities of different actors, which actors want to participate in the decision making, and what factors may facilitate or obstruct effective interactions between different actors (e.g., strategic use of knowledge in policy making)? Key focus areas include public participation, decision making, and strategies and technologies that enable or facilitate interactions between actors (e.g., energy dashboards, energy sharing platforms, interactive spatial planning support tools). Moreover, a better understanding is needed on different actors’ motives and interests, and how these could be aligned and achieved within local energy systems.

2.2 Specific project requirements

2.2.1 Integrated research approach and co-creation

The challenges addressed in this call are interrelated and multi-scalar, and to reach impact require a holistic approach that spans the entire research and innovation chain. The consortia should crosscut scientific disciplinary boundaries (interdisciplinarity) and integrate scientific and practitioners’ knowledge in joint research (transdisciplinarity). Research should focus on the entire knowledge chain, from fundamental to applied and practical research. The proposed research itself should be characterised by integrated perspectives. It should evolve in a process of co-creation with different partners: researchers from both countries and societal partners should be actively involved throughout the entire project, in (advising on) defining and conducting the research as well as in communicating the progress and results, in order to jointly produce a mutually valued outcome. Added value may be achieved by integrating and synthesising various sources of knowledge to create new knowledge and by creating sustainability through the development of long-term knowledge relations.

Applications should be based on a thorough review of existing knowledge and should preferably be complementary to existing research initiatives and reinforce these where possible. Project teams are encouraged to use a combination of quantitative and qualitative and quasi-experimental research methods, including operational research, and should include research-into-use approaches.

Projects are also expected to collaborate with the other project awarded in this call, so as to enhance the impact of the call as a whole. As a part of this, projects will be expected to attend joint kick-off and mid-term workshops, as well as a final conference. Projects should budget for this accordingly, using the NWO budget module “Knowledge Utilisation”.

³ https://www.urbaneuchina.eu/wp-content/uploads/2019/12/20191309_Approved-Strategic-Research-Innovation-Agenda01-for-EU-China-Cooperation-on-Sustainable-Urbanisation.pdf

2.2.2 International collaboration

Applications should furthermore be characterised by equal partnership and sustainable collaboration between the Chinese and Dutch partners. This includes inter-institutional cooperation, a balanced contribution to the proposed research, and frequent exchange between the partners, including exchange visits by both senior and junior researchers. Projects must organise a maximum of four research visits (in total) of a minimum of three months for PhD students and/or post docs. Senior researchers should spend at least three weeks in total, over the duration of the project, on research visits. Projects should budget for this accordingly, using the NWO budget module “Internationalisation”.

2.2.3 Impact Plan

The research conducted in this call for proposals should have relevance and potential for impact beyond the academic world, such as in societal, technical, economical or cultural realms. This is why, in addition to having a societal or industry partner within the consortium, consortia should consider how relevant stakeholders can be involved in, or benefit from, the design and realisation of the proposed research project.

To further enhance the potential for impact of the proposed research, the application should state how approaches for achieving impact are integrated in the research design and conducted by the consortium in engagement with end users, such as practitioners, policymakers, and industry. To this end, applicants are asked to include an Impact Plan that sets out the potential for impact of the proposed research.

The Impact Plan consists of the following elements:

- *Productive interactions*: Exchanges between researchers and stakeholders in which knowledge is produced and valued that is both scientifically robust and socially relevant. Examples of productive interactions are: formulation of research questions and approaches jointly with potential end-users (co-design), joint execution of research projects and interactive dialogue on research results (co-creation). Interactions can be direct/personal, indirect or financial. The quantity as well as quality of the productive interactions forms an indicator for the potential for societal impact.
- A *Theory of Change* describes how the research process can contribute to societal/economic impact, taking into account the context, actors involved and describing the sequence of logically-linked consequential relations. Developing a Theory of Change in a joint effort with research partners as well as stakeholders allows for making explicit which (and whose) problem is being tackled, and how the desired change is perceived to happen through research efforts. Projections on expected change will be based on a myriad of assumptions; documenting these assumptions allows for reflection on whether and how expected pathways to impact remain adequate or need adjustment. A Theory of Change is not fixed, but rather reflected on continuously throughout the research process. For this reason, it is also used as part of the monitoring, evaluation and learning trajectory.
- The *Impact Pathway*, which is part of the Theory of Change, is the visualisation of the change process following from research execution as described in the Theory of Change. It makes explicit how the research activities will lead to results (output) and how exchange of knowledge and the uptake of research output will contribute to desired changes in behaviour, relationships, actions and activities of partners and stakeholders (outcome) that are considered essential to achieving the desired impact.
- A *Strategic Activity Planning* spells out how the proposed productive interactions contribute to achieving outcomes. Outputs do not automatically lead to outcomes, thus strategies are needed of the research consortium to plan and monitor how their efforts will enhance the potential for outcomes. This planning should include specific activities for:
 - *Stakeholder engagement*: Who are the relevant stakeholders to engage with according to context analysis, how are the productive interactions organised and when?;
 - *Communication strategy*: How are engagement dialogues organised and results exchanged and translated, and whose responsibility is it?;
 - *Monitoring, Evaluation and Learning*: How are results of activities monitored and evaluated, such that assumptions can be tested and activities adjusted accordingly and whose responsibility is it?;
 - *Capacity strengthening*: How are required capacities (of consortium partners and stakeholders) strengthened in order to achieve the outcomes, how is this organised and whose responsibility is it?
- A *Risk assessment* entails a description of potential risks for the successful execution of your project and options for handling or mitigating these risks.

Box 1: Defining Output, outcome and impact

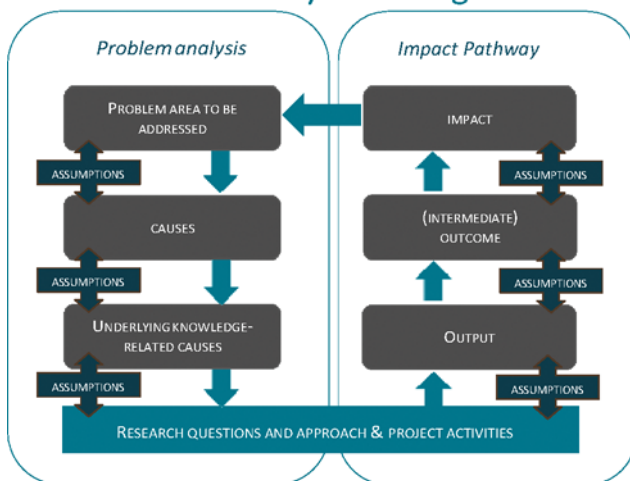
Research outputs relate to the direct and immediate results obtained by a research project or programme.

Research outcomes relate to the changes in behaviour, relationships, actions, or activities of stakeholders as a result of sharing and uptake of research.

Research impact is defined as changes in economic, environmental and social conditions a project or programme is aiming at.

Change is a complex process that depends on a variety of actors and factors of which research is only one. Where research outputs fall under the direct sphere of control of a research project or programme, outcomes belong to their sphere of influence, and impact to their sphere of interest.

Theory of Change



3 Guidelines for applicants

3.1 Who can apply

Eligible consortia are composed of researchers based in the Netherlands and in China, with active involvement in the project of a senior Principal Investigator (PI) on both the Dutch and the Chinese side, as well as a Dutch and a Chinese co-applicant. The consortium must also include a partner from a public, semi-public or private practitioner organisation (for-profit or not-for-profit).

Specifically, the Dutch and Chinese sides of the consortium must fulfil the following requirements:
Dutch side of the consortium:

- One Principal Investigator who fulfils the requirements of 3.1.1;
- At least one co-applicant who fulfils the requirements of 3.1.2 and is from a different organisation (i.e. a different university, KNAW institute, etc., or from a university of applied sciences or from an organisation not listed in 3.1.1. that meets the criteria stated in 3.1.2.) than the Principal Investigator;
- A partner from a public, semi-public or private practitioner organisation (for-profit or not-for-profit).

Chinese side of the consortium:

- One Principal Investigator who fulfils the requirements of 3.1.1;
- A minimum two and maximum three teams from universities / institutes, or a partner from a public, semi-public or private practitioner organisation, who replaces one of the teams. The university or institute of the Principal Investigator counts as one of the teams.

Together, the consortium members will 1) formulate relevant research questions and approaches; 2) formulate and submit the proposal through the Principal Investigators; 3) conduct the project activities;

4) coordinate knowledge sharing and support the application, dissemination and communication of the project results to a broader group of possible knowledge users that are not a member of the consortium; and 5) take responsibility for the adequate and timely reporting conditions.

A researcher may only be involved in one proposal.



This call aims at knowledge chain-wide collaboration, to enhance demand articulation, ownership, and the effective uptake of results. For this reason, all consortium partners, as well as relevant stakeholders, are expected to be engaged in all phases of the project execution, from its inception to sharing the (emerging) results. Evidence of such active engagement will be an important element in the assessment of project proposals and may be demonstrated through references to involvement in project preparation, active involvement as a project partner and links between the proposed research project and ongoing projects of NGOs, private enterprises, and/or policy implementation.

A Consortium Agreement to regulate consortium governance, task division, resource management and ownership of results between the collaborating consortium organisations is obligatory (see section 3.5 for details).

3.1.1 Principal Investigators

A proposal should have two Principal Investigators: one based in The Netherlands or at a university established in the Kingdom of The Netherlands, and one based in China. The two Principal Investigators will serve as the recipients of the grants from their respective funding agencies, NWO and NSFC. They will serve as the points of contact for their respective funding agencies and will submit the proposal to both organisations. The Principal Investigators' organisations will take responsibility for the project secretariat, the day-to-day management and all financial affairs of the research project, including the final financial accountability towards their respective funding agencies.

The Dutch Principal Investigator will furthermore serve as point of contact for the NWO call secretariat for the duration of the assessment procedure, and is responsible for ensuring that feedback on the eligibility of the application, reviewer reports, information regarding the rebuttal, and any further information such as the NWO grant award decision communicated regarding the assessment of the proposal is shared with the other consortium members. The Dutch Principal Investigator is also responsible for submission of the application in ISAAC, and for submitting any additional documentation such as the rebuttal on behalf of the consortium. The Chinese Principal Investigator will serve as contact point for NSFC for the duration of the assessment procedure, and is responsible for sharing any further information received from NSFC, such as the NSFC grant award decision, with the consortium.

Dutch Principal Investigator

For scientists based in the Kingdom of The Netherlands, the NWO eligibility criteria apply. Full, associate and assistant professors and other researchers with a comparable appointment can submit an application if:

- they are employed (i.e. hold a salaried position) at one of the following organisations:
 - Universities established in the Kingdom of the Netherlands;
 - University medical centres;
 - NWO and KNAW institutes;
 - TO2 institute⁴;
 - the Netherlands Cancer Institute;
 - the Max Planck Institute for Psycholinguistics in Nijmegen;
 - the DUBBLE Beamline at the ESRF in Grenoble;
 - NCB Naturalis;
 - Advanced Research Centre for NanoLithography (ARCNL);
 - Princess Máxima Center.
- and also have a PhD or equivalent qualification, and have an appointment period for at least the duration of the application procedure and the entire duration of the research for which the grant is being applied for. Personnel with a zero-hour appointment is excluded from applying. An exemption can be made for researchers on a 'tenure track' contract at one of the institutions above.

Chinese Principal Investigator

For Chinese scientists, NSFC requires the Principal Investigator to:

- have a senior academic rank (title)

AND

- be the Principal Investigator of an on-going or completed NSFC grant with a duration of three

⁴ The members of the TO2 Federation are Deltares, ECN, Marin, NLR, TNO and WUR/DLO. See also <http://www.to2-federatie.nl> (website in Dutch).



years or longer. For more information, please refer to the NSFC call text on the website of NSFC (<http://bic.nsf.gov.cn/Show.aspx?Cl=22>).

3.1.2 Co-applicants

A co-applicant is a participant in the consortium and receives funding through the Principal Investigator.

Dutch co-applicants

At least one co-applicant must be from a different eligible organisation (e.g. a different university) than the Dutch Principal Investigator. NWO furthermore requires co-applicants to be one of the following:

- a researcher from one of the institutions listed in 3.1.1, who has an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for;
AND
has at least a PhD or an equivalent qualification.
Researchers with a 0 hour contract at one of the institutions above cannot be a co-applicant. An exemption can be made for researchers on a 'tenure track' contract at one of the institutions above.
- (in case of a university of applied sciences) an experienced researcher (a professor, assistant professor, or a researcher with a similar appointment) with an appointment at an university of applied sciences as referred to in Article 1.8 of the Higher Education and Scientific Research Act (WHW).
- (in case of an organisation that is not a university of applied sciences nor listed in paragraph 3.1.1.) A researcher who has an employment contract for at least the duration of the application procedure and the duration of the research grant applied for, and has a PhD or equivalent, whose organisation meets the following cumulative criteria:
 - i. is based in The Netherlands;
 - ii. is a public institute and carries out its research independently;
 - iii. receives at least 50% public funding;
 - iv. is not-for-profit other than for the purpose of carrying out further research;
 - v. its researchers enjoy freedom of publication in international scientific journals.

Please note: these conditions will be assessed by NWO **prior to** submission of the application. To this end, the co-applicant's organisation must submit the following documents by email to nsfc-nwo@nwo.nl no later than **22 April 2021**:

- a recent extract from the Chamber of Commerce register;
- the deed of incorporation, articles of association or other formal document indicating the public task and the non-profit status;
- the latest available annual accounts accompanied by an auditor's statement.

Chinese co-applicants

The Chinese side of the consortium should consist of a minimum two and maximum three teams from universities/institutes, or a partner from a public, semi-public or private practitioner organisation, who replaces one of the teams. The university or institute of the Principal Investigator counts as one of the teams; the rest should be registered as co-applicants in the application form.

3.1.3 Public and/or private practitioner collaboration partners

Consortia should contain a public and/or private practitioner collaboration partner. Public and/or private practitioner collaboration partners are partners from the public and/or semi-public sectors and/or industry. They are closely involved with the research and impact strategy. Please note that personnel of these organisations are excluded from payment of salaries and research costs from the NWO grant, unless they are hired through the NWO module 2 – work by third parties (see "3.2 What can be applied for"). A public and/or private collaboration partner on the Chinese side of the consortium will be considered one of the two or three teams and can receive funding from the NSFC grant.

All organisations participating in a consortium must be registered as a legal persona.

3.2 What can be applied for

The Principal Investigators and consortia can apply for funds for a project with a maximum duration four years. Per project, a maximum of € 700,000 can be requested from NWO, and a maximum of RMB 4 million can be requested from NSFC.

This call invites full proposals to be submitted. All consortium members have to be involved in the



formulation of the research questions, in the development of the proposal and in the execution of the research project. Each researcher may only be involved in one application.

Reimbursable costs

Different costs can be reimbursed from the NSFC and NWO grants. The application form allows you to specify which organisation you would like to cover a certain cost. You should complete two budgets, one specifying the costs to be covered by the NWO grant and one specifying the costs to be covered by the NSFC grant.

Reimbursable costs NWO budget:

For a research proposal in this round, a maximum of € 700,000 can be applied for on the Dutch side. The budget modules (including the maximum amounts) that are available within this call for proposals are stated in the table below. You should only request that which is essential for realising the research.

Budget module	Maximum amount
PhD	According to VSNU or NFU rates ¹
Professional Doctorate in engineering (PDEng)	Positions in combination with PhDs and/or postdoc(s), according to VSNU or NFU rates ¹
Postdoc	According to VSNU or NFU rates ¹
Non-scientific staff at (NSS) universities	€ 100.000, according to VSNU or NFU rates ¹ in combination with PhDs and/or postdoc(s)
Other scientific staff (OSS) at universities	€ 100.000, in combination with PhDs and/or postdoc(s)
Research leave	5 months, 1 fte, according to VSNU or NFU rates ¹
Personnel universities of applied sciences and other institutions (such as applied research organisations (TO2) and SMEs)	Rates based on <i>Handleiding Overheidstarieven 2017</i> (HOT)
Material costs	€ 15,000 per year per scientific position
Investments (up to € 150.000)	maximum of € 150,000
Knowledge utilisation	25,000 per module; up to 20% of grant
Internationalisation	25,000 per module; up to 20% of grant
Project management	Up to 5% of the budget requested from NWO

¹ For personnel outside the Netherlands, the local rates are reimbursed up to a maximum of the VSNU rates.

An explanation of the budget modules can be found in the annex to this call.

Involvement of civilians, so-called 'citizen science', might have an added value to the quality of science. They could offer data and insights that would not be available for science in other set-ups. NWO wants to finance citizen science as well and offers the possibility from 2020 onwards to apply for reimbursement of citizen involvement in research projects via the budget module 'material, project-related goods or services, work by third parties'. This module offers researchers a possibility; this is by no means an obligation. Researchers can decide whether the involvement of citizens is desirable and how the budget is used for this (e.g., reimbursement of expenses for civilians, offering skill training or technical aids for participating citizens).

Reimbursable costs NSFC budget:

The following costs will be reimbursed by NSFC. For more information, please refer to the NSFC call text (be the Principal Investigator of an on-going or completed NSFC grant with a duration of three years or longer. For more information, please refer to the NSFC call text on the website of NSFC (<http://bic.nsfc.gov.cn/Show.aspx?CI=22>):

- Equipment;
- Materials and Consumables;
- Test / Calculation / Analysis;
- Travel / Workshop / International cooperation;
- Etc.

3.3 When can applications be submitted

The deadline for the submission of proposals is:

- **11 May 2021, 14:00:00 hours CEST (for submission of the application to NWO)**
- **12 May 2021, 16:00:00 hours CST (for submission of the application to NSFC).**



Proposals must be submitted on time to both NWO (via ISAAC) and NSFC (via <https://isisn.nsfc.gov.cn/>).

When you submit your application to ISAAC you will also need to enter additional details online, such as the names and institutions or organisations of both Principal Investigators and of your co-applicants and collaboration partners. You should therefore start submitting your application at least five working days before the deadline of this call for proposals.

Applications submitted after the deadline to either NWO or NSFC will not be taken into consideration, and will be declared inadmissible.

3.4 Preparing an application

Proposal

Sino-Dutch research teams must prepare a joint research proposal, which will be submitted to NWO by the Dutch Principal Investigator and to NSFC by the Chinese Principal Investigator. The Chinese Principal Investigator is also required to submit a Chinese application and a collaborative agreement. Please refer to the Chinese call for proposals on the NSFC website for more information.

- Download the application form and Excel budget format from the electronic application system ISAAC (www.isaac.nwo.nl) or from NWO's website (on the grant page for this programme);
- Complete the application form in English and Excel budget format, using the guidelines in the application form;
- Save the application form as a pdf file and upload it in ISAAC and ISISN system (<http://isisn.nsfc.gov.cn/>);
- Save the Excel budget format as Excel and upload it as separate document in ISAAC and ISISN system (<http://isisn.nsfc.gov.cn/>).

Proposals should include:

- The application form for full applications, including the completed annexes;
- A completed budget, using the Excel budget format;
- A letter of commitment from the organisations of the Principal Investigators, co-applicants, and collaboration partner(s), in which the institution or organisation confirms that they agree to the conditions required for the execution of the project. The letter must be signed by the Dean of the faculty or director of the organisation and be printed on the letterhead of the institution or organisation. See the format in Annex 6.1;
- A draft consortium agreement;
- CVs of both Principal Investigators and all co-applicants and collaboration partners (each max 1 A4 page);
- In case of co-financing: a letter of guarantee from the co-financing institution confirming the numeric amount that will be provided as co-financing. In case the institution of a consortium member provides co-financing, this confirmation can be included in the letter of commitment. Letters of guarantee or commitment letters which include co-financing are unconditional and do not contain opt-out clauses.

It is not permitted to include other documents than those requested above and in the annexes to the application form. Applicants will be asked to remove any additional documents.

Please note: the Chinese Principal Investigator may need to submit additional information to NSFC. Please refer to the Chinese call for proposals on the NSFC website for more information.

Eligibility concerns compliance with the conditions set in this call. Formal criteria include all criteria mentioned in Chapter 3 of this call for proposals, including:

- Timely received application via NWO's electronic application system ISAAC and NSFC ISISN system (<http://isisn.nsfc.gov.cn/>);
- Application has been submitted by the Dutch Principal Investigator and the Chinese Principal Investigator to their respective agencies;
- All consortium members meet national eligibility criteria (section 3.1 of the call for Proposals);
- Specific conditions (as outlined in Section 3 of the call for proposals, the annexes, and the notes in the application form) have been applied;
- Completed and signed application form, signed by both Principal Investigators, and by all co-applicants and collaboration partners;
- Composition of consortium complies with the requirements;
- Format, length of text, language is as required;
- Budget conditions are met;
- Completed annexes are added.



Please note that the Chinese Principal Investigator may need to submit additional documents to NSFC in order to comply with national eligibility requirements. The Chinese Principal Investigator must also submit the application on time to NSFC, using the application code G0411 (see 3.6, Submitting an application). Please refer to the Chinese call for proposals on the NSFC website for more information: <http://bic.nsf.gov.cn/Show.aspx?CI=22>

If correction of an application, or the submission of necessary additional information to NWO, is possible, the Dutch Principal Investigator will receive one opportunity to correct their application and/or submit the necessary additional information within five working days. If the Dutch Principal Investigator is unable or unwilling to comply with this request within the allowed timeframe, the application will not be admitted to the assessment procedure.

Please note: applications submitted to NSFC cannot be corrected, and, if they do not meet NSFC's eligibility criteria, will be declared inadmissible. If an application is declared inadmissible by NSFC, it will also be declared inadmissible by NWO and will not be admitted to the assessment procedure.

Applicants will receive written confirmation of receipt within three weeks after the deadline of this call, stating whether or not the application has been accepted into the assessment procedure. If an application is declared not eligible by either NSFC or NWO, it will not be admitted to the assessment procedure.

3.5 Conditions on granting

The NWO Grant Rules 2017 and the Agreement on the Payment of Costs for Scientific Research apply to all grants provided by NWO. The NSFC grant conditions apply to all grants provided by NSFC.

Conditions start and runtime of project

Start

On the Dutch side, the project should start within six months of the award letter, by May 2022. At least one researcher must be appointed to the project at the time of its start. If the project has not started within six months, the NWO-WOTRO Steering Committee, on behalf of NWO, can decide to revoke the granting decision.

Start documents

The Dutch Principal Investigator and the Chinese Principal Investigator are responsible for ensuring the necessary documents for the start of the project are submitted to their respective funding agencies, so that the project in its entirety can start on time.

NWO

The project can start if the following documents have been approved by NWO:

- A project notification form with information of project staff;
- A data management plan;
- A consortium agreement, signed by all consortium organisations⁵;
- (If applicable) approval of relevant ethics committees;
- (If applicable) receipt by NWO of the first tranche of in-cash co-financing.

NSFC

NSFC will inform the Chinese Principal Investigator of the necessary steps. The Chinese Principal Investigator must submit all necessary documentation to NSFC in time for the project to start by January 2022.

Publications

When publishing the results of the subsidised research, the support by NWO and NSFC should be mentioned.

⁵ A format can be found on the Financing page for this call on the NWO website.



Reporting to NWO and NSFC

Annual and Mid-term report

Annually, the project must submit a report to inform NWO and NSFC on the overall project progress, experiences and output. The Dutch Principal Investigator will receive instructions and a format for this report in advance.

The projects will also be evaluated at about the mid-term of the projects' running time by self-assessment. This includes a workshop of the project team organised by the consortium and a discussion of the results with stakeholders from outside the project team. Consortia should include this workshop in their budget. The mid-term report will be based on the conclusions of the workshop, including a reflection on and, if required, revision of the impact strategy, the underlying assumptions and the indicators. The International Advisory Committee (IAC, see 4.1) created by NSFC and NWO will evaluate the progress of the projects based on mid-term reports submitted by the consortia.

Interviews or field visits may be organised to evaluate the progress and impact of the projects. The IAC will give recommendations to the projects based on their evaluations.

The mid-term report of all the projects of a call need to be submitted before the joint mid-term workshop and will be used as input for organising the mid-term workshop.

Final accountability to NWO

A substantive final report should be submitted within three months after the end of the project's runtime, detailing the research done and the achieved results, as well as a reflection on the project's impact strategy and its indicators. As part of this, projects will be asked to again complete a self-assessment, and hold a final workshop and a discussion with stakeholders from outside the project team. The final substantive report will again be evaluated by the International Advisory Committee, created by NSFC and NWO. The final workshop should again be taken into account in the consortium's budget.

Simultaneously, the Dutch Principal Investigator and the controller / financial manager of the Principal Investigator's institution should submit a signed financial end report, organised according to the budget lines of the approved NWO budget. The report should detail, among others, the effective duration (period) and size (FTE) of the personnel appointed to the project using the module Personnel of the NWO grant, and, if applicable, how eventual replacements were arranged. The realised in-cash and in-kind co-financing should also be accounted for.

If the Dutch Principal Investigator is based at an institution that is not subject to the education accountants protocol of the Ministry of Education, Culture and Science, an external audit report must also be submitted. NWO reserves the right to conduct an external financial audit.

NWO reserves the right to externally evaluate projects financed under this call. The project ends with the issuing of the grant settlement decision. This decision is taken after approval of the final document(s) by NWO.

For financial accountability to NSFC, see the Chinese version of the call for proposals: <http://bic.nsfc.gov.cn/Show.aspx?CI=22>.

Programmatic coherence

The projects awarded under this call should contribute to positive energy districts. To this end, Principal Investigators, researchers and other consortium members are expected to contribute to knowledge exchange and knowledge utilisation at a programme level, and to participate in and contribute to the meetings organised for that purpose. This includes a joint kick-off and mid-term workshop with all projects of the call, as well as a final conference. This is in addition to the activities organised by the individual projects for this purpose. Consortia should budget for their participation in these meetings in their application (€ 15,000).

Please note that, for monitoring and evaluation purposes, projects are also expected to organise a project-specific kick-off, midterm (self-assessment) and final workshop, with stakeholders from outside the consortium. These project-specific workshops must also be included in the budget.

Co-financing

- Co-financing by private and/or public parties is not a requirement for this call, but if available, can



take the form of in-kind or in-cash co-financing, with a maximum of 50% of the total project budget;

- It is possible for contributions to be partially in-kind and partially in-cash. The amounts of co-financing specified in the budget should correspond to the amount of co-financing specified in the letter of guarantee or, in case of co-financing by an organisation that is part of the consortium, in the letter of commitment. Letters of guarantee are unconditional and do not contain opt-out clauses;
- The private and/or public parties that are part of the consortium should be involved in the research for the duration of the project;
- Co-financing provided by a Chinese institution or organisation should preferably be included in the NSFC budget, and should be accounted for to NSFC. Co-financing provided by other institutions or organisations should preferably be included in the NWO budget, and accounted for to NWO;
- After a research proposal has been awarded funding, NWO will invoice the private or public party that has pledged an in-cash contribution if that in-cash contribution to the NWO budget is equal to or exceeds € 5,000. After the contribution has been received, the money will be awarded to the project. It is the responsibility of the Dutch Principal Investigator to invoice cash co-funding organisations who are contributing less than € 5,000.

Consortium agreement

For research partnerships to be effective, they have to be fair. A consortium agreement should be signed by all consortium partners prior to the start of the awarded project, detailing agreements regarding rights (such as copyright, publications, intellectual property, etc. of products or other developments in the project), knowledge utilisation, as well as affairs such as payments, progress and final reports, and confidentiality. The agreement furthermore details agreements on governance of the consortium (to the extent that it gives sufficient guarantee for effective collaboration), finances, and if applicable, basic knowledge to be contributed, liability, disputes, and information sharing within the consortium. The agreement has to be drafted in a spirit of equity.

The initiative for the concluding of these agreements lies with the Principal Investigators. The agreement will be tested for consistency with the NWO Grant Rules 2017. For intellectual property (IP) rights, the provisions as specified in Chapter 4 of the NWO Grant Rules 2.017 are applicable, according to which the IP rights to the results belong to the research institution, whose employee generated the results in question (ownership follows inventorship). For the IP rights of the results of possible co-financing institutions, the percentages shown are applicable, unless an appropriate reflection justifies deviation from this.

Open Access

As signatories to the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003), NWO and NSFC are committed to making the results of scientific research funded by NWO and NSFC freely available in open access on the internet. In doing so, NWO and NSFC are implementing the ambitions to make all publicly funded research openly available. All scientific publications of research funded on the basis of this call for proposals should therefore be available in open access immediately (at the time of publication). NWO and NSFC accept various routes:

- publication in an full open access journal,
- deposit a version of the article in a repository or
- publication in a hybrid journal covered by one of the agreements between the VSNU and publishers. See www.openaccess.nl.

Any costs for publication in full open access journals can be incurred in the project budget. NWO and NSFC do not reimburse costs for publications in hybrid journals⁶. These conditions apply to all forms of scholarly publications arising from grants awarded on the basis of this call for proposals. Also academic monographs, edited volumes, proceedings and book chapters. For more information on the NWO's open access policy, see: www.nwo.nl/openscience.

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 freely accessible. As much as possible, NWO and NSFC expect that research data resulting from projects funded in this programme

⁶ A hybrid journal is a scientific journal that is based on subscription income but which offers researchers the possibility to make individual articles Open Access by paying an extra article processing charge. In one issue of a journal you may therefore find both articles that can only be read with a subscription and articles that are freely accessible.

will be made publicly available for reuse by other researchers. “As open as possible, as closed as necessary” is the guiding principle in this respect. As a minimum, NWO and NSFC require that the data underpinning research papers should be made available at the time of the article’s publication. The costs for doing so are eligible for funding and can be included in the project budget. In the data management section, and in the data management template if the project is awarded funding, researchers explain how they plan to manage the data expected to be generated by the project.

1. **Data management section**

The data management section is part of the research proposal. Researchers are asked to prospectively consider how they will manage the data the project will generate and plan for which data will be preserved and be made publicly available. Measures will often need to be taken during the production and analysis of the data to make their later storage and dissemination possible. If not all data from the project can be made publicly available, the reasons for not doing so must be explained in the data management section. Due consideration is given to aspects such as privacy, public security, ethical limitations, property rights and commercial interests.

2. **Data management plan**

After a proposal has been awarded funding, the researcher should elaborate the data management section into a data management plan. In this plan, the researcher describes 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. The data management plan must be completed in consultation with a data steward or equivalent research data management support staff at the home institution of the project leader. The plan should be submitted to NWO via ISAAC as part of the starting documents. NWO will approve 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.

Further information on the NWO data management protocol can be found at www.nwo.nl/datamanagement-en.

Nagoya Protocol

The Nagoya Protocol became effective on 12 October 2014 and 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). NWO and NSFC assume that researchers will take all necessary actions with respect to the Nagoya Protocol.

Ethical aspects

An applicant is responsible for determining whether the execution of the proposed research requires an ethical statement or license. The applicant must ensure that this statement or license is acquired in a timely manner from the relevant ethics review committee. If awarded, the grant will be awarded under the condition that the necessary ethical statement and/or license is obtained before the project’s starting date. A research project cannot start before NWO has received a copy of the ethical statement or license.

3.6 Submitting an application

Applications should be submitted to both NWO and NSFC, by the Dutch and Chinese Principal Investigators respectively. Applications not submitted to both organisations will not be admitted to the assessment procedure.

Applications submitted after the deadline, or that have not been submitted to both application systems before the deadline, will be declared inadmissible and will not be included in the assessment procedure.

Submission to NWO:

The Principal Investigator based in The Netherlands or at a university established in the Kingdom of The Netherlands must submit his/her application via his/her own ISAAC account. Applications not submitted via ISAAC will not be admitted to the assessment procedure.

If the Principal Investigator does not have an ISAAC account yet, then this should be created at least five working days before the application is submitted to ensure that any registration problems can be resolved on time. If the Principal Investigator already has an ISAAC account, then he/she does not need to create a new account to submit an application.



Please note that you will be asked to submit additional information when submitting your application in ISAAC, such as the organisations of your consortium members. For this reason, we strongly advise that you start submitting your application at least five working days before the deadline. If the organisation of your co-applicant(s) or collaboration partners is not yet registered in ISAAC, you will need to contact the department 'Relatiebeheer' (relatiebeheer@nwo.nl) of NWO in order to add them.

For technical questions please contact the ISAAC helpdesk, see Section 5.1.2.

Submission to NSFC:

The Chinese Principal Investigator is required to submit via <https://isisn.nsfc.gov.cn/egrantweb/>. Please pay special attention to the eligibility requirements specified in the Chinese call for proposals, such as selecting the application code G0411.

4 Assessment procedure

4.1 Procedure

The first step in the assessment procedure is to test whether an application is admissible. Only those proposals that satisfy the criteria stated in Chapter 3 are admissible and will be taken into consideration.

The NWO Code for Dealing with Personal Interests applies to all persons and NWO staff involved in the assessment and/or decision-making process. See also: www.nwo.nl/en/code

Eligibility

After the deadline, the administrative eligibility of the applications is assessed by NWO and NSFC, based on the conditions specified in Chapter 3. All applicants and their institutions must fulfil national eligibility rules for research proposals as set by the relevant organisation (see section 3.1, Who can apply).

If correction of the application submitted to NWO is possible and necessary, the Dutch Principal Investigator will be given the opportunity to adjust his or her application. If the application is not corrected within five working days, NWO will not include the application in the assessment process and declare it inadmissible. Corrected applications will, after approval of eligibility by NWO, and provided they have been found to be eligible by NSFC, be included in the assessment procedure.

Please note that applications submitted to NSFC cannot be corrected, and if found not to comply with NSFC's eligibility conditions will not be admissible. Applications found to be inadmissible by NSFC will also be declared inadmissible by NWO.

The remainder of the assessment procedure will subsequently be conducted through the online system of NWO.

Substantive assessment

All eligible applications will be sent to independent, (inter)national reviewers, who will assess the application based on the criteria specified in 4.2. Each application will be assessed by a minimum of five reviewers. The reports by the external reviewers will be made available to the Dutch Principal Investigator via ISAAC, who should share them with the Chinese Principal Investigator. The consortium will have five working days to write a response to the reviewers' reports. The response should be submitted by the Dutch Principal Investigator on behalf of the consortium, via his or her ISAAC account.

Assessment and grant advice

NWO and NSFC will jointly compose an International Advisory Committee (IAC), with international experts. All applications are assessed in competition by the IAC, according to the criteria specified in paragraph 4.2. The IAC will make a final assessment of the application, based on the application, the reviewer reports, and the response, according to the criteria in section 4.2. The IAC will subsequently rank all applications. The IAC will subsequently present a substantiated advice to the NWO-WOTRO Steering Committee and the Board of NSFC regarding which applications are to be awarded.



Decision

The NWO-WOTRO Steering Committee, on behalf of NWO, and the Board of NSFC will check the assessment procedure has been carried out in accordance with the call for proposals, and will provisionally decide on the projects to be awarded, based on the advice of the IAC. The decision becomes definitive when the NWO-WOTRO Steering Committee and the Board of NSFC have come to the same provisional decision.

Qualification

Based on the IAC's final score, NWO will award a qualification to all proposals, and will make this known to the Dutch Principal Investigator with the decision about whether or not the application has been awarded funding. NSFC will communicate the decision to the Chinese Principal Investigator.

Only applications that receive the qualification "excellent" or "very good" will be eligible for funding. For more information about the qualifications please see: <https://www.nwo.nl/en/apply-funding-how-does-it-work>.

Data management

The data management section in the application is not evaluated and therefore not included in the decision about whether to award funding. However, both the reviewers and the IAC can issue advice with respect to the data management section. After a proposal has been awarded funding, the researcher should elaborate the data management section into a data management plan. Applicants can use the advice from the reviewers and the IAC when writing the data management plan.

A project awarded funding can only start after NWO and NSFC have approved all starting documents, as stated in section 3.5. It is the responsibility of the Principal Investigators to ensure that these documents are submitted on time to the respective funding agencies so that the project can start within the allowed time frame.

March 2021	Webinar
Proposals	
11 May 2021 14:00:00 CEST	Submission deadline full proposals NWO
12 May 2021 16:00 CST	Submission deadline full proposals NSFC
Mid-May – end of August 2021	Reviewers are consulted
End of August – beginning of September 2021	Consortia have five working days to submit a rebuttal, via the ISAAC account of the Dutch Principal Investigator
End of October 2021	IAC meeting
November 2021	Decision NWO-WOTRO Steering Committee and Board of NSFC
Mid-November 2021	NWO and NSFC inform Principal Investigators about the decision
January – May 2022	Start projects

While NWO and NSFC strive to meet the above time frame, NWO and NSFC reserve the right to deviate from the indicated dates.

4.2 Criteria

Applications will be assessed according to the following criteria:

- I. Quality of the research proposal
- II. Potential for societal impact
- III. Quality of the consortium

The criteria carry equal weight and each count for one-third of the final assessment. The assessment criteria are further operationalised below:

- I. *Quality of the research proposal*
 - Scientific importance and innovativeness of the research questions and approach;
 - Degree to which the proposal substantiates convincingly how the research relates to the thematic focus of the call for proposals;
 - Complementarity to other research programmes or (inter)national research agendas;
 - Rigorousness of the research design: adequacy, feasibility and coherence of the research approach and methodology in view of the problem addressed;
 - Interdisciplinarity and transdisciplinarity; the proposal incorporates the scientific disciplines necessary for addressing the problem, as well as knowledge from outside the scientific community;
 - Adequacy of the budget.
- II. *Potential for societal impact*
 - Relevance for society and potential for societal breakthroughs;



- Suitable involvement of wider public / specific target groups, convincingly responding to their demand;
 - Quality of the impact plan:
 - i. a clear problem statement, analysis and vision on the desired societal impact;
 - ii. a logical impact pathway presenting plausible pathways to societal impact;
 - iii. appropriate and feasible strategic activity planning;
 - iv. relevant stakeholder involvement in the development and execution of the impact plan.
- III. *Quality of the consortium*
- Suitability of the consortium partners' expertise in relation to the research project;
 - Potential for long term knowledge relations;
 - Quality of the Sino-Dutch collaboration, including fair and equitable partnership.

5 Contact details

5.1 Contact

5.1.1 Specific questions

For specific questions about Cooperation China-The Netherlands (NSFC) and this call for proposals 'Towards More Sustainable and Social Local Energy Systems' please contact:

NWO:

Mr Berry Bonenkamp

+31 (0)70 349 44 16

or

Ms Maaike Spiekerman

+31 (0)70 349 40 94

nsfc-nwo@nwo.nl

NSFC:

Mr XU Jin

+86 10 62325351

xujin@nsfc.gov.cn

5.1.2 Technical questions about the electronic application system ISAAC

For technical questions about the use of ISAAC please contact the ISAAC helpdesk. Please read the manual first before consulting the helpdesk. The ISAAC helpdesk can be contacted from Monday to Friday between 10:00 and 17:00 hours CE(S)T on +31 (0)20 346 71 79. You can also submit your question by e-mail to isaac.helpdesk@nwo.nl. You will then receive an answer within two working days.

6 Annex

Please note: These annexes are for NWO. It may be that NSFC requires additional documents. Please see the Chinese call for proposals.

Annex 1: Format Letter of Commitment Annex 2: NWO Modules

6.1 Format Letter of Commitment

[Template letter of commitment for consortium organisation]

[The letter should be printed on the stationery of the consortium organisation concerned]

[address main applicant]

Concerns: Letter of Commitment

[Location], [date]

Dear [name principal investigator],

Through this letter, I confirm that **name consortium organisation** is available and committed to participate [in the proposed project, entitled '[*proposal titel*]', which was submitted to the '[*Title of call*']'.



outline the availability and commitment of the consortium organisation, including the availability and commitment of the individual consortium members, and confirm that the PI and/or co-applicant(s) have a contract for the duration of the assessment process and the research]]

Yours sincerely,

[signed by the head of the organisation/department]

Location: [.]

Date: [.] [

..... [signature]

NAME + POSITION]

6.2 Explanation of NWO budget modules

Funding for the salary costs of personnel who make a substantial contribution to the research can be applied for. Funding of these salary costs depends on the type of appointment and the organisation where the personnel are or will be appointed.

- For university appointments, the salary costs are funded in accordance with the VSNU salary tables applicable at the moment the grant is awarded
(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).
- For personnel from universities of applied sciences and other institutions, the salary costs are funded on the basis of the collective labour agreement salary scale of the employee concerned, based on the *Handleiding Overheidstarieven 2017*.
- 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.
(<https://www.rijksdienstcn.com/werken-bij-rijksdienst-caribisch-nederland/arbeidsvoorwaarden>)

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

The available budget modules are explained below.

PhD (including MD-PhD)

A PhD 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 as long as this is properly justified, the standard time can be deviated from. However, the duration of appointment must always be at least 48 months.

Professional Doctorate in Engineering (PDEng)

Funding for the appointment of a PDEng can only be applied for if funding for a PhD or postdoc is also applied for.

The appointment for a PDEng position is a maximum of 1.0 fte for 24 months. The PDEng trainee is employed by the institution applying for funding and can realise activities within the research at an industrial partner for a specified time. If the research proposal is awarded funding, then an agreement must be concluded with the industrial partner(s) concerned. The underlying “Technological Designer Programme” should be described in the funding proposal.

Postdoc

The size of the appointment of a postdoc 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 a postdoc.

Non-scientific staff (NSS) at universities

Funding for the appointment of non-scientific personnel necessary for the realisation of the research project can only be applied for if funding for a PhD 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 non-scientific staff 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 non-scientific personnel.

Other scientific personnel (OSS) at universities

Budget for other scientific personnel 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 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 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.

Research leave for applicants

With this budget module, funding can be requested for the research leave costs of the main and/or co-applicant(s). The employer of the applicant concerned can use this to cover the costs of relinquishing him or her from educational, supervisory, administrative or management tasks (not research tasks). The time that is released through the research leave grant can only be used by the applicant(s) for activities in the context of the project. The proposal must describe which activities in the context of the project the applicant(s) will carry out in the time relinquished.

The maximum amount of research leave that can be applied for is the equivalent of five full-time months per project. NWO funds the research leave in accordance with the salary tables for a senior scientific employee (scale 11) at the time the grant is awarded (www.nwo.nl/en/salary-tables).

Personnel universities of applied sciences and other institutions

For the funding of salary costs of personnel employed at a university of applied sciences or other type of institution (such as TO2 or SMEs), the following maximum rates (hours/day) are used in accordance with the *Handleiding Overheidstarieven 2017* (HOT). For the Taskforce for Applied Research (NPRO SIA), the HOT table *kostendekkend* is used, and for the Netherlands Initiative for Education Research (NRO) and other institutions, it is the HOT table *kostenplus*.

Explanation of budget module Material

For each fte scientific position (PhD, 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 accordingly⁷.

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 (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), 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 post-doc and/or non-scientific personnel for a smaller appointment size than those offered in the personnel budget modules

⁷ Per 0.2 fte scientific employee at a university of applied sciences (junior, medior and senior level, with a minimum appointment of 0.2 fte for a period of 12 months), a maximum of € 15,000 material budget can be applied for each year of the appointment.



Travel and accommodation costs for the personal 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 within the research project
- costs for Open Access publishing (solely in full gold Open Access journals, registered in the “Directory of Open Access Journals” <https://doaj.org/>)
- data management costs
- 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, desks, etc.);
- maintenance and insurance costs.

If the maximum amount of € 15,000 per year per full-time scientific position is not sufficient for realising the research, then it may be deviated from if a clear justification is provided in the proposal.

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

NB: *This module can be applied for a maximum of 6 times. A maximum of € 140,000 (20% of the NWO grant) can therefore be requested under this call as funding for knowledge utilisation activities. Please take into account requirements stated elsewhere in the call, such as regarding the Impact Plan and the programme and project kick-off, midterm, and final workshops. The following conditions apply per module:*

The aim of this budget module is to facilitate the use of the knowledge that emerges from the research⁸. The budget applied for may not exceed € 25,000. Because knowledge utilisation takes many different forms in different scientific fields, it is up to the applicant to specify the costs required, 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

NB: *This module can be applied for a maximum of 6 times. A maximum of € 140,000 (20% of the NWO grant) can therefore be requested under this call as funding for internationalisation activities. please take into account the requirements for internationalisation stated elsewhere in this call for proposals, such as in 2.2.2 International Collaboration The following conditions apply per module:*

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 a clear justification is provided in the proposal.

Funding can be requested for:

- 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;

⁸ In this budget module, the definition for “knowledge transfer” used by the European Commission in the Framework for State Aid for research and development and innovation applies (PbEU, 2014, C198).



- 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. On this NWO web page you will find an overview of research councils that have signed a bilateral MfC agreement with NWO.

The budget applied for within this module cannot be more than 50% of the total budget applied for. A co-applicant from the participating foreign knowledge institution should satisfy 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 should 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 VSNU rates. The table can be found on this web page of NWO.

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, the final financial statement must be accompanied by an auditor's report.

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

Explanation of the budget module Project management

The module project management provides a possibility to request a budget for project management that is at most 5% of the total budget requested from NWO. This budget can only be used for activities that solely support the project for which the grant is requested. The applicant must satisfactorily justify this budget.

Amongst other things, project management is understood to mean the optimal shaping of the organisation structure of the consortium, support of the consortium and the main applicant, monitoring coherency, progress and unity of the project, and alignment between the sub-projects within the project. This task may also be realised by external parties insofar as the expertise is not available at the knowledge institution of the main and/or co-applicant(s). During the tendering procedure for the selection of a third party, knowledge institutions should take into account the procurement rules of the government and, where necessary, follow a European tendering procedure. The activities of the main applicant and co-applicants in the context of the project (management) may not be funded from this budget module.

The budget to be requested for project management can consist of material costs, realisation costs and personnel costs. For personnel costs a maximum rate of 119 euros per hour may be used (for the rates, please see Annex 6.1). The hourly rate of personnel to be appointed is based on the cost-covering rate (kostendekkend) and is calculated in accordance with the standard productive number of hours used by the organisation. The cost-covering rate includes:

- (average) gross salary for the post of the employee who will contribute to the project (based on the collective labour agreement scale of the employee concerned);



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- holiday allowance and 13th month (if applicable in the relevant collective labour agreement) in proportion to the use in fte;
 - social security contributions;
 - pension costs;
 - overheads.

Third parties may realise tasks in the context of project management, but the part of the (commercial) hourly rates that exceeds the hourly rates stated above is not fundable and can therefore not be included in the budget.