Accelerator 2019

Call for proposals

Social Sciences And Humanities
Chapter 1: Introduction / Accelerator 2019

1 Introduction

1.1 Background

The Top Consortium for Knowledge and Innovation Logistics (TKI Dinalog) aims to systematically promote and implement private-public cooperation in the field of research in the Top Sector Logistics. This concerns innovation through fundamental and applied research and the valorisation and dissemination of knowledge, experience and results. Dinalog, NWO and TNO have joined forces in the Top Consortium for Knowledge and Innovation (TKI) in order to boost innovation in the Top Sector Logistics.

The Top Sector Logistics consists of representatives from the “golden triangle” of government, industry and knowledge institutions. Together, they determine which activities are necessary to achieve the sector’s ambitions while maintaining and strengthening an efficient mobility system and reducing environmental impact. The Top Sector Logistics is not simply about transporting more goods, but about smarter ways to do it: more cargo with fewer kilometres and lower CO₂ emissions, more high-quality services, more cost savings.

The ambitions of the Top Sector Logistics are to ensure that the Netherlands holds a leading international position (1) in the processing of flows of goods, (2) as a chain director of domestic and international logistics activities and (3) as a country with an attractive business and innovation climate for the logistics and shipping industry. These ambitions are set out in the Multi-Year Programme Top Sector Logistics 2016-2020:

1. Additional revenue from new chain management activities
2. Number of freight kilometres taken off the road
3. CO₂ savings
4. Number of companies with logistics or chain management activities which are established in or have logistics activities carried out or directed in the Netherlands
5. Outflow of qualified professionals from training into the labour market, with logistics training and thorough knowledge of the innovation themes
6. Top rank in Europe on the International Logistics Performance Index.

When the economy picks up, it will accelerate the growth of freight flows, especially in containerised transport (Maasvlakte 2). This will affect our mobility system and physical and environmental space. The challenge facing the Top Sector Logistics is to increase the efficiency of freight transport, to make it more sustainable and at the same time to generate more revenue in an advanced logistics system. By strengthening the chain management function in the Netherlands the logistics sector can take on these challenges. The Netherlands has a strong chain management function in international logistics networks. It is precisely by collaborating with other Top Sectors that this function can be strengthened even further. In addition, this chain management function can make a strong contribution to addressing the broad societal challenges that the Top Sectors are facing.
Chapter 1: Introduction / Accelerator 2019

This call implements the Multi-Year Programme 2016-2020, as defined in the Top Sector Logistics in consultation with the Ministry of Infrastructure and Water Management.

1.2 Available budget

The budget available for this call is €2.648.000. These funds have been made available by the Ministry of Infrastructure and Water Management.

Co-funding is compulsory for each research proposal in this call.²

1.3 Validity of the call for proposals

This call for proposals is valid until the date on which the Board of TKI Dinalog decides on the funding applications.

For this call it is mandatory to submit an Expression of Interest. The deadline for the Expression of Interest is Tuesday 30th of July 2019, at 14:00 hours CEST.

Full proposals must be submitted before Tuesday 1st of October 2019, at 14:00 hours CEST.

² If the URL does not open, see the Top Sector website via https://www.topsectorlogistiek.nl/publicaties/
² See Section 3.2 for the exact co-funding percentages.
Chapter 2: Aim / Accelerator 2019

2 Aim

Introduction

The aim of this call is to fund high-level innovative research, which is transdisciplinary, international in orientation and focused on priority themes of the Top Sector Logistics. Research projects awarded funding should make a long-term contribution to the goals and ambitions of the Top Sector Logistics.

The societal context

Logistics plays a crucial role in developing solutions to major challenges facing society, such as food supply, the switch from retail to internet sales, changes in the healthcare sector, the difficulties of maintaining complex installations and the development of a sharing economy. Bundling of flows and capacity, vehicle loading rates, better use of transport options, intensive use of data and optimum support of decision-making play an important role in these solutions.

Logistics has a strong connection towards several important societal challenges. Specifically in the societal challenge Mobility and Transport four cross-sectoral opportunities have been identified where logistics together with other sectors should focus on. Some examples are the development and deployment of autonomous vehicles and vessels, design of circular networks, use of sustainable developed materials in products and packaging, new networks for (local) food systems. Furthermore the role and creativity of humans in logistics systems is important for innovation and transition of the sector itself.

The logistics sector in the Netherlands is substantial. Tens of thousands of companies and hundreds of thousands of employees in transport and storage businesses, logistics service providers and the support sector make a major contribution to the Netherlands’ export value. Moreover, logistics contributes indirectly to a wide range of other activities. The Top Team Logistics’ area of interest covers not only the companies in the logistics sector but also the logistics function. Virtually every company dealing with physical flows of goods has a logistics function. This includes decisions such as the positioning of stocks and the design of networks.

Both the sectoral companies and the logistics function in manufacturing businesses are under constant pressure to improve their competitive position. Market participants seek productivity gains (more added value per hour worked), cost reductions, flexibility, reductions in environmental influences (such as environmental impact and congestion), increased reliability, and the development of new services and business models. Excellent logistics performance contributes to this competitive position.

From the perspective of society and policy, this call was prompted by the fact that the Netherlands plays an important role in European freight transport and in the management of many logistics chains in (and via) Europe. Logistics and freight transport are therefore of crucial importance to Dutch society and flows of goods in, from, to and through the Netherlands are vital for Europe and beyond.
In socioeconomic terms, there are multiple issues, such as unemployment among the lower-educated (the logistics sector is a major employer for this group of workers), decisions regarding sector structure (logistics services are less “footloose” than many other service categories) and a healthy balance of payments. Logistics and freight transport are also an “enabler” for various other economic activities. Reducing the dependence of freight transport and other logistics activities on fossil fuels, especially given the depletion of oil resources and the scarcity of raw materials more generally, is another important economic issue.

**Active participation of industry**

An important precondition for the research projects is the active participation of industry, both financially and in terms of content. The projects should generate knowledge that contributes to the vitality, innovative strength and sustainability of Dutch industry and the logistics sector in particular. In addition, the projects should contribute to the training of young researchers and practitioners, using modern research and teaching resources, and should help to connect research with policy and policy makers. The projects should thus contribute to a broad strengthening of the knowledge infrastructure in the Netherlands.

**Contribution to the Top Sector Agenda**

The original Top Sector Logistics programme had 11 action lines, six of which have been developed into research roadmaps in the Multi-Year Programme 2016-2020. In the new agenda, these action lines have been reformulated into three main themes. Research proposals should be linked to one or more of the new themes. In addition, research should address, as much as possible the human factor element. In logistics human behaviour determines to a large extent how successful adoption of new solutions and insights will be. The three main themes are:

**Sustainable logistics**

This theme focuses on emission reduction in transport and logistics and defining together with companies the best transition paths to zero emission logistics. Realizing this transition asks for 1) innovation in fuels, 2) the application of new technology in engines and vehicles and 3) logistics optimisation and behavioural change. Although all three are important, emphasis will be on logistics optimisation and behavioural change. Another important topic is the transition to a circular economy and reducing waste in supply chains. Logistics can play an essential role in this transition.

**Data driven logistics**

This theme focuses on effective data and information exchange to improve supply chain processes. Supply chain visibility, transparency and accuracy of information are essential for transport and logistics. Further digitisation will have a clear impact on supply chains. Innovation in IT-infrastructure, data exchange and cybersecurity therefore remain central topics. Further research should focus on technical opportunities for real-time data monitoring and exchange, smart data analysis with artificial intelligence, processing data to forecasts and associated business model development. Attention should also be payed to the development of accessible low-cost solutions for modernization of IT-systems, especially for SMEs.

**Chain management**

This theme focuses on optimal supply chain coordination and collaboration. Dynamic planning solutions on operational, tactical and strategic level and control tower functionality were already important research topics. Further research should continue to focus on advanced supply chain design, including planning integration, pricing, financing and new models for supervision of international flows of goods. But focus should also be on soft factors like trust and other preconditions for supply chain collaboration. In addition to research it is important to make developed concepts applicable and broadly implemented. Special attention should be payed to the position and behaviour of SMEs and the role of governments.
Chapter 2: Aim / Accelerator 2019

At programme level, the focus is on maximising the contribution that projects and activities make to the ambitions listed in Section 1.1. This call is therefore in line with the priorities of national policy and the interests of Dutch industry. Research proposals should include specific intermediate and end products, which are relevant to the public and private consortium partners.

This call prioritises the following topics:

**Sustainable logistics**

**Transition to the hydrogen economy**
In the longer term, hydrogen is probably the most sustainable option as a generic fuel supply. For the logistics sector, however, the transition to this fuel has yet to begin. Nevertheless, it is important to start thinking about the contours of a hydrogen economy today. In this, the production, distribution and use of hydrogen all play a role. Logistics will play a role in this in two ways: on the one hand, as a knowledge field that can contribute to the establishment of the hydrogen economy and, on the other hand, as a possible market for hydrogen as a fuel. Both issues should be considered in a project.

**Logistics for a smart and sustainable infrastructure**
Within the multiannual programme Intelligent Infra, the Directorate General for Public Works and Water Management, together with the large construction companies and engineering consultancy firms, has drawn up a sector vision document entitled Ground, Road and Water Construction. The reason for this is a very dated infrastructure and a vast replacement task with important investment decisions. Driven by both sustainability and new mobility concepts, the question arises as to what this new infrastructure must look like and how it should be brought about. This entails various (service) logistics research questions, such as new business models / types of contract, changing roles in the chain, smart maintenance and logistics planning, and circular raw materials chains.

**Electrical charging infrastructure in cities**
The trend towards electric vehicles has been initiated, partly through programmes and policies such as the Green Deal Zero Emission City Centres, and the proposed policy to establish an environmental zone for zero-emission in 30 to 40 cities in the Netherlands. A major issue is the charging infrastructure for (heavy duty) electric vehicles that will support this development. This research focuses on the design of an effective, efficient and smart and scalable charging infrastructure in urban environments that will also consider whether that charging infrastructure should be linked to the infrastructure or to the (logistics) real estate, be third party accessible, public, semi-public or private, etc. The research should build further upon previous research about the redesign of logistics networks in cities due to the use of electric vehicles.

**Circular business models in logistics**
Making our economy circular is seen as one of the most important contributions to the climate agreement objectives. The logistics sector can make an important contribution to this development from the perspective of thinking in chains and networks. The closing of cycles, integration of forwarding and returning goods movements, and the minimisation of value leaks such as empty runs, are all examples of how logistics can contribute to the circular economy. The logistics sector has a lot of experience in organising information and physical flows which is required for sustainable circular business models. However, logistics models for the circular economy have not been worked out sufficiently. What are the barriers for further development of the coordination and chain management function? What are the opportunities from a service logistics perspective to organise production and supply chains in a sustainable manner? It is preferred that this research investigates different types of supply chains (biological and technical) to stimulate interdisciplinary exchange of knowledge and experience. In addition, next steps should be taken to develop an integral vision on logistics in a circular economy.
Chapter 2: Aim / Accelerator 2019

Data-driven logistics

Convoys and Intelligent Traffic Regulation Systems: The through-flow of fresh product transport
The interaction of vehicles with (parts of different) infrastructure is an important technological step that has been made in recent years. This technology is now being installed and will eventually become commonplace. At present, however, we know little about the contribution that this type of technology makes to through-flow, and cost savings and efficiency improvements in logistics. This research will therefore require research into the contribution of Intelligent Traffic Regulation Systems on the through-flow of fresh product transport to the various market areas within the Netherlands and abroad. For this, particular attention should be devoted to the use of groups of lorries in convoys.

Innovative support in logistics processes in operational services
Many operational government organisations (police, fire service, defence material organisations, customs) have to deal with everyday logistics processes, such as allocating personnel to vehicles, maintenance plans for vehicles, procurement of materials and fuel, the planning of routes, coverage analysis of vehicles across areas or regions, et cetera. During the realisation and possible renewal of these processes, and in making them smarter, these organisations only receive ad-hoc support from knowledge institutions. There is also little connection with the more programmatic fundamental and applied research to organise such operations in a modern and robust manner. This research will focus on combining knowledge management in the area of basic logistics planning issues for operational services from government bodies, and the introduction of modern solutions and improvements for these issues.

Agro logistics
Together with construction logistics, agriculture and food logistics cause one of the biggest commodity flows over our road network. One of the main challenges in this area of logistics is the inclusion of the degradation of the product in logistics planning. This plays a role in the transportation of fresh produce, but also in the transportation and logistics of advanced food components. This research will focus on these specific cargo types and develop planning approaches that combine smart technology (IoT), real time data and planning approaches.

Innovative aviation
In aviation, several important developments are taking place that require further research so that broad application in goods transport and logistics will become possible. First, the introduction of autonomous (freight) planes is complex from both a technical and organisational viewpoint. Nevertheless, this innovation could make a significant contribution to strengthening the logistics sector. Secondly, the development of electric planes is another important trend. Thirdly, the use of drones in a range of logistics environments (warehouses, storage tanks, delivery situations in peripheral regions) offers a wealth of opportunities.

Building logistics control tower
In the Top Sector Logistics, a lot has already happened in the area of logistics innovation in the building industry. The next step is to truly integrate building planning and logistics planning. The Building Information Model (BIM) plays a key role in this. It is advisable to directly link research to practical applications around one of the big cities in the Netherlands.

International

Impact of geopolitical developments on the position of the Netherlands as a logistics node in the world
The major Dutch ports and airports play a key role in supporting the position of the Netherlands as a global logistics node. In recent years, new East-West routes have been developed that can strengthen or harm this position. Some research has already been done into the scale and geographical development of the Belt & Road connections to China. However, insufficient attention has been paid so far to the geopolitical significance of these developments for the Netherlands: is the position of the Netherlands in Europe threatened by these developments and to what extent will this influence the logistics position of the
Netherlands in the longer term? For this research, it is recommended that connections are sought with research groups and institutes in the Netherlands that are involved in international relations.

**Regulation**

**Smarter legislation for innovation in goods transport and logistics**

Many innovations in the Top Sectors introduce new solutions for existing problems. Legislation or the lack of this sometimes limits the effectiveness of these solutions. Consequently, research is needed into how the government makes legislation and the extent to which this does or is able to take innovation into account. Research is also required into the effectiveness of new legislative arrangements, such as experimental space with few regulations. Finally, the relationship between national and regional governments for several policy themes related to logistics is another subject for research. Several responsibilities that are now realised at the regional level require national coordination, such as the establishment of zero-emission environmental zones in cities. It remains to be seen how this coordination could be effectively realised.
3 Guidelines for applicants

3.1 Who can apply

Applications are submitted by the main applicant on behalf of the project consortium. Researchers 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;
  - NWO and KNAW institutes;
  - Universities of applied sciences situated in the Kingdom of the Netherlands;
  - TO2 institutes.\(^3\)
- also 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 are excluded from applying.

Additional conditions:
- An exception to the required duration of appointment can be made for:
  - Main applicants with a tenure-track appointment that covers at least half of the required duration. Applicants should submit a letter demonstrating that adequate supervision of all researchers for whom funding is sought will be guaranteed for the full duration of the research.
  - Co-applicants, if they can prove that adequate supervision of all researchers for whom funding is sought can be guaranteed for the full duration of the research. A letter demonstrating this should be submitted.
- The main applicant (and any co-applicants) should be actively involved in the project during the period for which funding is requested. The research institute(s) should enable applicants to guarantee adequate supervision of the research throughout the application process and the duration of the project.
- The main applicant applies for funding on behalf of the entire consortium. As a result, the main applicant is responsible for scientific coherence, results, and financial accountability.
- In this funding round, main applicants may only submit one application.

3.2 What can be applied for

Range of funding that can be requested from NWO

The minimum funding contribution that can be requested for research projects is €150,000 and the maximum funding contribution that can be requested for research projects is €400,000.

---

\(^3\) The members of the TO2 federation are Deltares, ECN, Marin, NLR, TNO and WUR/DLO. See also [http://www.to2-federatie.nl](http://www.to2-federatie.nl) (in Dutch).
Chapter 3: Guidelines for applicants / Accelerator 2019

Required co-funding

Private and/or public partners in the consortium should jointly make a contribution to the research that is at least equivalent to the amount of the funding requested from NWO. This means that the minimum co-funding is 50% of the total project budget. Co-funding may be in-kind only, but cash co-funding is also allowed.

Example
You apply for €150,000 from NWO. The required co-funding in that case is at least €150,000, and this co-funding may be in-kind only. As a result, the total project budget is €300,000. If you apply for the maximum amount available within the call, i.e. €400,000, then the co-funding is in that case at least €400,000 and the total project budget is €800,000.

Additional budget is also possible
In addition to the required 50% co-funding, the project budget could be supplemented with private and/or public co-funding and/or matching from knowledge institutions other than the organisations listed under Section 3.1. These contributions must be included in the project budget, but they do not count towards the required co-funding of 50%. Please note that if the final budget at the end of the research project is lower than the submitted budget, the difference between both budgets will be distributed proportionally. As a result, the funding received from NWO may turn out to be lower than the funding requested from NWO.

Further guidelines
Funding:
- can be requested only for projects that involve independent and new research, and which start within six months after receiving the funding award decision. Costs incurred before the formal starting date of the project are not eligible for funding.
- may not replace any existing funding.
- is not provided for contract research.
- should comply or be compatible with European legislation on state aid.\(^4\)

Modules

The budget is built up using the NWO-wide standardised building blocks, the so-called modules. These modules are described below. In the proposal budget, applicants choose which combination of modules are needed to answer the research question and how often each module will be deployed. The following modules are available for an application within this round:

*Please note: Projects must end December 2021 the latest.*

Module 1 Personnel

a) PhD student/PDEng/MD PhD;

b) Postdoc;

Chapter 3: Guidelines for applicants / Accelerator 2019

c) Non Scientific Personnel;
d) Personnel at universities of applied sciences (HBO) and TO2 institutes;
e) Research leave;
f) Other scientific personnel;

NB: Remunerations for PhD scholarship students at a Dutch university are not eligible for funding from NWO.

NB: For all personnel options, the maximum size of the appointment is 1 FTE.

Module 1a) PhD student/PDEng/MD PhD student
Please note: Projects must end December 2021 the latest. As a result, funding for PhD students cannot be applied for.

The guideline is that 1 fte PhD for 48 months or 0.8 fte for 60 months can be applied for. If a different duration of appointment is desired for the realisation of the proposed research, then the guidelines may be deviated from as long as this is well justified (e.g. PDEng 2 years or MD PhD longer than 4 years). The salary costs will be remunerated according to the agreements in the ‘Agreement for Funding Scientific Research’ made with the Association of Universities in the Netherlands and are based on the collective labour agreement of the Dutch universities. In addition to salary costs, the project employee funded by NWO will receive a one-off individual bench fee (€ 5000) to encourage his or her scientific career. The agreement and the maximum amounts for personnel costs can be found at Approval of funding for scientific research 2008 and nwo.nl/en/funding/funding+process+explained/salary+tables.

Module 1b) Postdoc
Please note: Projects must end December 2021 the latest.

The guideline is that the appointment period of a postdoc can be between 12 and 48 months. The minimum size of the appointment is 0.5 fte for 12 months. This deployment can be spread over a longer or shorter period, for example across the entire duration of the project.

If the applicants wish to deploy expertise for a shorter period of time, then the material credit can be used for this.

The salary costs will be remunerated according to the ‘Agreement for Funding Scientific Research’ made with the Association of Universities in the Netherlands (for ZonMw, the costs are based on the collective labour agreement of the Netherlands Federation of University Medical Centres).

Module 1c) Non-scientific personnel
For the appointment of non-scientific personnel, specifically needed for the research project which funding is applied for, a maximum of € 100,000 can be requested with this module. This can concern personnel such as student assistants, programmers, technical assistants, analysts, et cetera. This module can only be applied for in combination with modules 1a and/or 1b.

The minimum size of the appointment is 0.5 fte for 12 months. The minimum appointment can be spread over a longer period of time. If the applicants wish to deploy expertise for a shorter period of time, then the material credit can be used for this.

Salary costs are dependent on the level and are remunerated in accordance with the agreements in the most recent ‘Agreement for Funding Scientific Research’ made with the Association of Universities in the Netherlands and are based on the collective labour agreement of the Dutch universities. The agreement and the maximum amounts for personnel costs can be found at https://www.nwo.nl/approval-of-funding-for-scientific-research-2008 and https://www.nwo.nl/salarytables.
Chapter 3: Guidelines for applicants / Accelerator 2019

**Module 1d) Personnel at universities of applied sciences and TO2 institutes**

For the appointment of personnel at universities of applied sciences the system of the Handleiding Overheidstarieven (HOT) has been applicable since 1 January 2017. In particular the column ‘cost covering rates per hour’ (table 2.2, Integrale loonkosten), which is based on the collective labour agreement for universities of applied sciences with respect to the salary scale of the employee concerned [https://www.nwo.nl/documents/magw/projectbeheer/nro-handleiding-overheidstarieven-2017](https://www.nwo.nl/documents/magw/projectbeheer/nro-handleiding-overheidstarieven-2017). These rates are maximum values. For students, only the actual amounts paid to students can be entered as costs within the project. A maximum hourly rate of € 25.00 always applies to students. For other personnel at universities of applied sciences and TO2 institutes, the maximum hourly rate is € 125,-.

**Module 1e) Research leave**

In this module, the replacement costs for the main applicant and/or co-applicants can be applied for, so that they can be released from educational, administrative and management tasks. The research leave grant can only be used in combination with and for the purposes of the projects or programmes applied for. For the research leave grant, a maximum size of 5 months per project applies based on 1 fte at the level of the postdoc employee as described in module 1b, with the hourly rates according to the agreement with the Association of Universities in the Netherlands. This budget is intended for the release of the applicants from educational and supervisory tasks so that they can work on the research for which funding has been requested. The employer can use the research leave grant to cover the costs of the replacement for the non-research tasks of the applicant(s) such as education, administrative and management tasks. These tasks must be specified in the proposal.

**Module 1f) Other scientific personnel**

*Please note: Projects must end December 2021 the latest.*

Budget for other scientific personnel such as university graduates, graduate physicians and graduate physicians training to be specialists that are needed for the research project that funding is requested for. This module can only be applied for in combination with module 1a and/or 1b. The maximum period of appointment is 48 months for 1fte and 60 months for a part-time appointment. The minimum size of the appointment is 0.5 fte for 12 months. This deployment can be spread over a longer or shorter period, for example across the entire duration of the project.

**Module 2 Material credit**

A maximum of € 15,000 per year per full-time scientific position (modules 1a, 1b and/or 1d) can be applied for, specified according to the three categories stated below:

---

**Project-related goods/services**

- consumables (glassware, chemicals, cryogenic fluids, etc.);
- equipment and/or software (e.g. lasers, specialist computers or computer programs, etc.);

For these small items of equipment and/or software, the amount may not amount to more than € 160,000 per application.

- measurement and calculation time (e.g. supercomputer access, etc.);
- costs for acquiring or using data collections (e.g. from Statistics Netherlands);
- access to large national and international facilities (e.g. cleanrooms, synchrotrons, datasets, etc.);
- work by third parties (e.g. laboratory analyses, data collection, etc.);
- personnel costs smaller in size than those offered in module 1.

**Travel and accommodation costs** (for the employees for which a personnel grant was requested in modules 1a and 1b)

- travel and accommodation costs (national and international);
- congress visits (max. 2 per year);
Chapter 3: Guidelines for applicants / Accelerator 2019

- fieldwork;
- work visits.

Implementation costs
- national symposium/conference/workshop organised by the project;
- costs of open access publishing;
- data management costs;
- recruitment costs (incl. advertisement costs);
- costs involved in applying for licences (e.g. for animal experiments).

Costs that cannot be applied for are:
- basic facilities within the institution (e.g. laptops, desks, et cetera);
- 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. The only exception to this is the amount for small equipment (€ 160,000).

Module 3 (Investments) is not available in this call for proposals.

Module 4 Valorisation/Impact

Module 4a) Knowledge Utilisation
The aim of this module is to facilitate the use of the knowledge\textsuperscript{5} that emerges from the research. The contribution requested may be no more than € 25,000 and must be specified.

As knowledge utilisation can assume very different forms in the various scientific disciplines, it is up to the applicant to specify which costs are needed, for example for producing an educational package or realising a feasibility study into application possibilities, or the costs of submitting a patent application.

Module 4b is not available in this call for proposals.

Module 5 Internationalisation

Module 5a) Internationalisation
The aim of this module is to encourage international collaboration. The contribution requested may be no more than € 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 insofar as these are direct research costs that emerge from the international collaboration and for additional costs that are not covered in a different manner,

\textsuperscript{5} For the purposes of this module, the definition for “knowledge transfer” as set out in the Framework for State aid for research and development and innovation (OJ 2014, C 198) applies.
Chapter 3: Guidelines for applicants / Accelerator 2019

For example from the bench fee. For an overview of the fixed maximum prices per country, see the listings of the Dutch government (Tarieflijst verblijf en andere kosten buitenland);
- travel and accommodation costs for foreign guest researchers
- costs for the organisation of international workshops/symposia/scientific meetings.

Module 5b) Money follows Cooperation (MfC)
The aim of this module is to encourage international collaboration via the principle of Money follows Cooperation, for which the national research budget is used for cross-border collaboration. This module creates the opportunity to carry out a part of the project at a knowledge institution outside of the Netherlands.

In order to use the MfC-module, applicants need to convincingly demonstrate that the foreign knowledge institution contributes specific expertise to the research project that is not available or not on the level required for the project in the Netherlands. If the arguments are not sufficiently convincing or unsubstantiated, then the funds for this module cannot be made available.

This condition does not apply when NWO has a bilateral agreement regarding Money follows Cooperation with the national research council of the country in which the knowledge institution is located.

Furthermore, the applicant states the amount required for this module in the budget. The amount requested for this module must be less than 50% of the total amount of the requested budget.

Due to international sanctions, knowledge institutions located in the following countries are excluded of participation in research projects funded by NWO:
- The Islamic Republic of Iran
- The Democratic People’s Republic of Korea.

A (researcher of the) foreign knowledge institution must meet the criteria for co-applicants as stated in section 3.1 of this call for proposals, with the exception of the condition that a co-applicant has to located within the Kingdom of the Netherlands.

The knowledge institution of the main applicant receives conform the NWO Grant Rules the full grant budget, and is thereafter responsible for transferring the MfC-part of the grant in accordance with the approved budget to the foreign knowledge institution.

3.3 When can applications be submitted

In order to gauge the interest in this call and to organise the assessment procedure appropriately, this call includes a requirement to submit an Expression of Interest. The deadline for submission of the Expression of Interest is July 30th 2019, 14:00 hours CEST.

The deadline for submission of full proposals is October 1st 2019, 14:00 hours CEST.

When you submit your application to ISAAC you will also need to enter additional details online. You should therefore start submitting your application at least one day before the deadline of this call for proposals. Applications submitted after the deadline will not be taken into consideration.
3.4 Preparing an application

Expression of interest
The Expression of Interest should be submitted via the online application system ISAAC. To this extent, you may use the form ‘Expression of Interest Accelerator 2019’ which can be found on the webpage of the funding instrument.

Please note: in order to submit a full proposal you need to convert your Expression of Interest to an application in ISAAC. You are not supposed to use the button ‘apply for funding’ on the funding page of the programme to submit your application. More information about converting an Expression of Interest to a full proposal can be found in the ISAAC user manual, which can be found under the ‘help button’ on the ISAAC website: www.isaac.nwo.nl.

Full proposals
You should submit a full research proposal as follows.
1) Download the form for writing a full proposal (Annexe 6.1) from the online application system ISAAC or from the NWO website (bottom of the webpage of the funding instrument concerned). Save the form as a PDF file and upload it in ISAAC.

2) Download the budget template (Annexe 6.2) and complete it. Save the form as a PDF file and upload it in ISAAC (section Other).

3) Download the letter of commitment from private and/or public co-funders (Annexe 6.3 and 6.4) and complete it. Save the signed statements as PDF files and upload these in ISAAC (section Embedding guarantee).

The statement consists of the following two parts:
   a. letter from the main applicant entitled “Statement agreements made with private and/or public co-funder(s)” (Annexe 6.3). In this letter the agreements with the partner(s) are confirmed.

   b. the letter of commitment signed by each individual co-funder (see Section 5.2 of this call) (Annexe 6.4)

This letter of commitment should be written in accordance with the template on the stationary of the organisation concerned. In this letter, each co-funder pledges its own individual contribution to the main applicant. Paper on which the Dutch Chamber of Commerce number is stated is sufficient for self-employed persons.

With the letter of commitment the private party commits itself to the pledged contribution for the project if this is awarded funding by NWO. The letter of commitment states no conditions and contains no cancellation clauses.

N.B. The submission of a digital version of the letter with the original signature is sufficient as long as this is written in accordance with the conditions given in the template. NWO retains the right to request the original letter from the main applicant.

4) Statement of approval from the institute of the main and co-applicants (Annexe 6.5).
Download the template for the statement of approval. The statement of approval should, in accordance with the template, be written on the stationary of the knowledge institution. Save the signed statement of approval as a PDF file and upload it in ISAAC (section Other).

The statement should be signed by the applicant and a person authorised to sign/responsible official of the institution. With the submission of the statement of approval, the institution where the project will be carried out after the proposal has been awarded funding, states that it has been informed of the application
3.5 Conditions on granting

The NWO Grant Rules 2017 and the Agreement on the Payment of Costs for Scientific Research apply to all applications.

Proposals must satisfy the following requirements: proposals must fit within the objectives of this call for proposals as formulated in Chapter 2.

Setting up a consortium

The programme focuses on cooperation between knowledge institutes and private and/or public partners such as companies, government and civil society organisations. These partners are expected to make a financial contribution (cash and/or in-kind) to the research project. To implement this principle, all partners involved in the project should set up a consortium. A minimum of two private and/or public partners should be involved in the application and the subsequent project. See Section 5.2 for the NWO definition of private and public parties.

NB: A specific consortium (i.e. combination main applicant, co-applicant(s) and all co-funding private and/or public parties) can only submit one proposal in this call for proposals.

Letter of commitment of consortium partners

The consortium must be formalised at the time the application is submitted. A letter in which participating partners express their commitment to the project and explain and confirm the co-funding and intellectual property & publishing arrangements as set out in the application must be appended to the application. In its letter of commitment, a partner must also declare its willingness to adopt further arrangements in a consortium agreement (see below) if the grant is awarded. Each letter of commitment should be appended to the application. Letters of commitment should be signed by an authorised signatory and printed on the partner’s headed stationery. If a grant is awarded, NWO will ask the partners to confirm their contributions (amongst other things for invoicing purposes).

Consolidum agreement

According to Article 4.2.4.3 of the NWO Regulation on Granting, the project partners should draw up a consortium agreement before the start of the project. The project partners are free to choose between the two models for the distribution of IP rights mentioned in Article 4.2.4.3. A model agreement will be made available via the ISAAC system once an application is awarded funding. Deviations from the model are permitted. A review may be carried out on the basis of the NWO Regulation on Granting and the EU state aid rules. If the IP rights accrue to the institute where the research results were generated, the categories listed under 4.2.4.5 will apply and the private co-funder(s) will hold the associated rights of access to those results.

As the sponsor of this call, the Ministry of Infrastructure and Water Management will have rights of use over all documents (specifically models, arithmetic methods, etc.). NWO claims no rights of use or property rights.

Required Co-funding

- In a project, at least two private and/or public partners and at least one (applying) knowledge institution collaborate with each other (see Sections 3.1 and 3.2 of the conditions for participation). NWO does not give any additional funding to contributions to the project from
universities and similar research institutions. The main applicant and co-applicant can both work at the same knowledge institution.

- The private/public co-funding is at least 50% of the amount requested from NWO. Co-funding may be in-kind only, but cash co-funding is also allowed. See Section 5.2 for the NWO definition of private and public parties.
- The cash and in-kind contributions entered in the budget correspond with the letters of commitment in which the contribution by the private (and possible public) co-funder(s) is pledged to the main applicant. If the co-funder has a charitable (ANBI) status, then the statement confirming this should be submitted.
- The required co-funding that is contributed in kind must be capitalised according to the provisions stated in Section 5.2 below.
- Supervision and consultancy may not form part of the contribution.
- All consortium partners should remain effectively involved in the research related to the proposal throughout the period for which funding has been requested.
- The main applicant (also official secretary) is responsible for collecting the cash co-funding from the partners. The consortium agreement will contain agreements about such payments.

**Intellectual property**

- With respect to NWO IPR policy the conditions as described in the NWO Grant Rules 2017 apply. The project leader is responsible for allocating the intellectual property rights. The parties involved in the consortium agreement determine how IP rights for project results will be allocated between the project participants and (where applicable) users.
- In principle, this programme follows the NWO policy with respect to intellectual property which offers room for the project parties to make individual agreements, for example dependent on the composition of the consortia and the size of the financial or other contributions. These agreements should, however, fit within the European Commission’s Framework for State aid for research and development and innovation (2014/C 198/01), to ensure that it does not constitute forbidden state support. This Framework offers two models as described in Article 4.2.4 of the NWO Grant Rules:

  a) making prior agreements about the allocation of IP rights on results as long as such an allocation is an appropriate reflection of the efforts, contributions and respective interests of the parties in the project, or

  b) allowing the IP rights to be allocated to the project party that has generated the results concerned; in the case that another project party wishes to acquire exclusive rights with a view to commercialisation – this will usually be a private party – then this party will have to pay a going market rate to the generating party.

**Other specific funding conditions**

TKI Dinalog reserves the right to require an application to be shortened or amended on scientific, policy or budgetary grounds as a condition of a possible award. If an application is granted, the main applicant is generally designated as project leader. The latter receives the instructions for project leaders and the NWO general subsidy conditions.

TKI Dinalog, via NWO, monitors progress and evaluates the results of the funded research compared to the planning and intended returns stated in the application. To this end, progress reports should be provided twice a year. If a significant change, in a negative sense, is found in the approved proposal and/or budget, NWO and TKI Dinalog reserve the right to carry out an on-the-spot audit and/or to impose penalties as specified at the time of the award.
Conditions for start and realisation of the project

Start
The research must start within six months after the date on which the funding decision was announced. At
the start of the project, at least one researcher must have been appointed to the project. If the project does
not start within at most six months after the date on which funding was awarded, then the funding body
can decide to withdraw the funding.

The project can start if the following documents have been approved by NWO:
- The project start form with payment information;
- a personnel information form;
- a data management plan;
- a collaboration agreement signed by all parties involved;
- (if applicable) an approval statement from the ethics review committee.

Duration
The research must start within six months after the date on which the funding decision was announced.
Research projects must be finished 31 December 2021 the latest. It is possible for research projects to end
before 31 December 2021.

Extension
Extension to the duration of the project after 31 December 2021 will not be permitted.

Publications
Publications of results from the research funded should state the support received from NWO as equally the
programme name "NWO – Accelerator 2019". Logos are available from the NWO office or via
www.nwo.nl/logo.

Reporting about the project to NWO

Progress report
Every year, a progress report should be submitted to NWO. The applicant will be informed about this in
advance and supplied with the template and instructions. The progress report must be submitted via ISAAC.

Publication data
NWO expects that throughout the duration of the project, and in the subsequent years, the details of every
form of output from the project will be separately registered for the project in ISAAC.

Final report
Once the project has ended a final research report about the course of the research and the results
achieved should be submitted within three months. At the same time, the main applicant and the
auditor/financial manager of the institution should submit a signed financial end report specified according
to the approved budget categories. This should, amongst other things, include the actual duration (period)
and size (FTE) of the appointment of all personnel appointed to the project and (if applicable) the extent to
which the research leave grant was used. Furthermore, all realised cash and in-kind contributions from the
co-funders should be accounted for. See Section 5.2 for more information about the accounting for in-kind
contributions.

Open Access
All scientific publications resulting from research that is funded by grants derived from this call for proposals
are to be immediately (at the time of publication) freely accessible worldwide (Open Access). There are
several ways for researchers to publish Open Access. A detailed explanation regarding Open Access can be
found on www.nwo.nl/openscience-en.
Chapter 3: Guidelines for applicants / Accelerator 2019

Data management

Responsible data management is part of good research. NWO wants research data that emerge from publicly funded research to become freely and sustainably available, as much as possible, for reuse by other researchers. Furthermore NWO wants to raise awareness among researchers about the importance of responsible data management. Proposals should therefore satisfy the data management protocol of NWO. This protocol consists of two steps:

1. Data management section

The data management section is part of the research proposal. Researchers should answer four questions about data management within their intended research project. Therefore before the research starts the researcher will be asked to think about how the data collected must be ordered and categorised so that it can be made freely available. Measures will often need to be taken during the production and analysis of the data to make their later storage and dissemination possible. Researchers can state which research data they consider to be relevant for storage and reuse.

2. Data management plan

After a proposal has been awarded funding the researcher should elaborate the data management section into a data management plan. The data management plan is a concrete elaboration of the data management section. In the plan the researcher describes whether use will be made of existing data or a new data collection and how the data collection will be made FAIR: Findable, Accessible, Interoperable, Reusable. The plan should be submitted to NWO via ISAAC within a maximum of 4 months after the proposal has been awarded funding. 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 about the data management protocol of NWO can be found at www.nwo.nl/datamanagement.

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 assumes that researchers will take all necessary actions with respect to the Nagoya Protocol.

Admissibility criteria

The administrative admissibility of the applications is determined at the NWO office. An application will not be admitted to the funding round if it has not been correctly or fully completed, and the applicant has not satisfied the request to submit a corrected application on time.\(^6\)

---

\(^6\) If correction of the proposal is possible, then the applicant will be given the opportunity to correct his/her full proposal within 48 hours and/or to submit the required annexes. Only if the applicant cannot or will not satisfy this requirement, the proposal shall not be taken into consideration. If the proposal is corrected on time, then it will still be taken into consideration, but only upon approval, of course.
In concrete terms, NWO will not consider proposals where at least one of the following situations occurs:

1) the application was not submitted via ISAAC;
2) the Expression of Interest has not been submitted;
3) the application was submitted after the deadline;
4) the application is not written in English;
5) the application has not been completed in accordance with conditions stated in this call, or has not been correctly or fully completed, and the applicant has not satisfied the request to submit a corrected application on time;
6) the application was not submitted by an experienced researcher appointed at an institution as stated in Section 3.1;
7) several identical or very similar proposals were submitted at the same time in this particular call for proposals;
8) the application contains research costs that have previously been awarded funding or for which obligations have already been entered into.
9) the required annexes are missing and/or have not been attached to the application as separate PDF files. This concerns the following documents:
   a. a balanced budget - see Section 3.4 of this call;
   b. the letter of commitment or letters of commitment from private and/or public partners – see Sections 3.4 and 5.2 of this call;
   c. the letter “statement of agreement made with private and/or public co-funders with the overview of the partners involved” signed by the applicant – see Sections 3.4 and 5.2 of this call;
   d. a signed statement from the applicant and from a person authorised to sign/responsible official of the institution that the project, after the proposal has been awarded funding, shall be carried out at the research institution concerned – see Section 3.4.4 of this call.
10) The application has not been submitted on behalf of a consortium consisting of at least one main applicant, at least one co-applicant and at least two private and/or public party and/or with the required co-funding as described in Section 3.2;
11) a researcher is the main applicant for more than one application;
12) a researcher is the co-applicant for more than one application;
13) the project cannot start within six months after the funding is awarded;
14) the project duration extends 24 months and/or exceeds the date of 31 December 2021;

3.6 Submitting an application

The Expression of Interest and the full application can only be submitted to NWO via the online application system ISAAC. Applications not submitted via ISAAC will not be taken into consideration.

A principal applicant must submit his/her application via his/her own ISAAC account. If the principal applicant does not have an ISAAC account yet, then this should be created at least one day before the application is submitted to ensure that any registration problems can be resolved on time. If the principal applicant already has an NWO-account, then he/she does not need to create a new account to submit an application.

When you submit your application to ISAAC you will also need to enter additional details online. You should therefore start submitting your application at least one day before the deadline of this call for proposals. Applications submitted after the deadline will not be taken into consideration.

For technical questions please contact the ISAAC helpdesk, see Section 5.2.1.
Chapter 4: Assessment procedure / Accelerator 2019

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 3.5 are admissible and will be taken into consideration.

**Code of Conduct on Conflicts of Interest**

The NWO Code of Conduct on Conflicts of Interest applies to all persons and NWO staff involved in the assessment and/or decision-making process. See also: [https://www.nwo.nl/en/common/subsidies/funding-process-explained/code-for-dealing-with-personal-interests](https://www.nwo.nl/en/common/subsidies/funding-process-explained/code-for-dealing-with-personal-interests).

**Selection committee**

For the assessment process, the standing Programme Committee (PC) of TKI Dinalog will act as the selection committee for this call. All applications will be processed by this committee.

**Selection procedure**

The steps of the selection procedure are as follows:

**Admissibility**

The administrative admissibility of all research proposals is determined at the NWO office based on the admissibility criteria stated in Section 3.5 and after the deadline for submitting proposals. Only proposals that satisfy these conditions will be declared eligible and taken into consideration. For applications that failed to satisfy the conditions and/or cannot be corrected in time, the main applicant will be informed of this decision in writing.

**Hearing, Rebuttal and Interview round**

Based on the assessment criteria, the selection committee will draw up provisional recommendations. Applicants will be given the opportunity to respond to the provisional recommendations ("rebuttal" phase). Researchers will receive at least five working days for a response.

The main applicant will be invited for the interview together with a maximum of two consortium partners. The interview is an integral part of the assessment and counts towards the qualification and ranking of the proposal.

In case of many submitted proposals, the programme committee may decide not to invite all applicants for an interview. When this happens, there will be made a provisional prioritisation based on the provisional recommendations of the committee ("pre-advise") and the rebuttal of the applicants. Subsequently the highest prioritised applications, receive an invitation for the interview. In the case of a high application pressure it will not be possible to interview all candidates.

**Assessment and ranking**

The selection committee will assess and rank full proposals based on the assessment criteria stated in Section 4.2. During the assessment, the spreading of proposals of the same quality equally across the research areas can lead to adjustments in the final ranking by the committee.
Based on the full proposal, the provisional recommendations of the selection committee, the rebuttal and the possible interview with the (main) applicant, the selection committee will establish a final assessment about the quality of the proposals in accordance with the criteria in Section 4.2, and it will establish a final ranking. Highest quality proposals will receive the highest ranking and, as a result, will be the first to be considered for awarding funding. Based on this, the committee will produce a motivated advice that will be submitted to the Board of TKI Dinalog.

**Granting decision**

The Board of TKI Dinalog will evaluate the assessment procedure and subsequently take a final decision about which proposals to award funding based on the advice of the selection committee.

Based on the final assessment all full proposals will receive a qualification (excellent/very good/good/unsatisfactory). This qualification is made known to the applicant with the granting decision. To be eligible for funding, a proposal must receive a qualification that is at least "very good". See the NWO website for more information about the qualifications.

**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 referees and the committee 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 referees and the committee when writing the data management plan. A project awarded funding can only start after NWO has approved the consortium agreement.

**Indicative Timetable**

**Expression of Interest**

- 30 July 2019: Submission deadline compulsory Expression of Interest

**Full proposals**

- 1 October 2019: Submission deadline full proposals
- October 2019: Selection committee members are consulted to write pre-advice
- October-November 2019: Applicants can submit a rebuttal
- November 2019: Selection committee meeting
- November-December 2019: Interviews
- December 2019: Selection committee meeting
- December 2019: Decision Board of TKI Dinalog

**4.2 Criteria**

All full proposals are assessed on the basis of three assessment criteria that are weighted equally,

1. Fit within the aims of the call
2. Quality
3. Consortium composition and knowledge valorisation
Chapter 4: Assessment procedure / Accelerator 2019

I. Fit within the aims of the call

To what extent does the proposal contribute to the objectives set out in Section 1.1 and Chapter 2 of this document? To what extent are the insights and problems taken a step further? Can a contribution be expected to the central issues of the Top Sector Logistics? Is there a connection with the three main themes of the Top Sector Logistics as described in Chapter 2?

II. Quality

A. Research questions and objectives

Are the problem and the research questions clearly defined, sufficiently delineated and adequately elaborated?

B. Approach and methods

Does the proposal have a clear (theoretical) foundation? Are the proposed methods and techniques and the proposed framework suitable for investigating the problem and answering the research questions? Is the work plan logical in structure, properly phased and realistic? Are the sources mentioned accessible and suitable to answer the research questions? Is the proposed schedule feasible and realistic?

C. Past performance of the applicants

What have the applicants achieved in terms of publications, past scientific performance or results of previous grants, demonstrating the quality of the applicants?

D. Scientific relevance

Does the proposed research make an original contribution to theory, methods, design or knowledge? Is the proposed research innovative? Is there any inter-university cooperation? Is there any multidisciplinary cooperation within and between sub-projects in the research? Are there good cross-connections between the sub-projects?

E. Finance and organisation

Is the proposed research practicable and feasible? Is the requested budget in proportion to the central research question?

III. Consortium composition and knowledge valorisation

A. Composition of the consortium

What is the added value of the consortium partners? Is the consortium vital, balanced and coherent? What experience do the knowledge partners have of practice-oriented research? Does the consortium have a trans-disciplinary composition? Is the organisation of the consortium robust? Is coherence sufficiently guaranteed? How is professional practice represented in the consortium and involved during the research?

B. Knowledge valorisation

What steps will be taken to make the knowledge usable by third parties? Will activities be undertaken to reach the target group? Is the proposed approach appropriate? Will the consortium’s potential be fully exploited? What returns will be generated by the specific activities? Is the activity or product suitable for the intended purpose and usable by the target group?
5 Contact details and other information

5.1 Contact

5.1.1 Specific questions

For specific questions about Accelerator 2019 and this call for proposals please contact:

At NWO:
Inge Drijfhout
070 – 344 0936
i.drijfhout@nwo.nl

At Dinalog:
Albert Veenstra
076 – 531 5300
veenstra@dinalog.nl

Jasper de Graaf
076 – 531 5300
degraaf@dinalog.nl

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. However, you can also submit your question by e-mail to isaac.helpdesk@nwo.nl. You will then receive an answer within two working days.

5.2 Other information

Definitions/explanations of some of the terms used

Definition of private co-funder
Private co-funders are considered to be businesses, organisations or partnerships which conduct activities in the context of this programme/project that are or can be considered market activities according to objective standards. NWO defines a business as an organisational relationship or a person who focuses on long-term participation in commercial activities with the help of labour and capital and with the intention of generating profit. SMEs fall into this category, as do self-employed persons (registration with the Chamber of Commerce as an entrepreneur is required). Institutions with ANBI (Dutch charitable) status can act as private partner.

Definition of public co-funder
Public co-funders are considered to be institutions and knowledge institutions which are not knowledge institutions recognised by NWO (such as heritage institutions, municipalities, intermediate organisations or foundations) and do not belong to the category of private parties (such as healthcare funds, health insurers and government institutions which do not act as administrative bodies in the context of the activities they
carry out in the programme/project) as long as they do not perform any activities in their role as “partner” which could be defined as market activities according to objective standards.

Provisions on in-kind contributions by public and private co-funders

1. Possibility of participation by public or private parties via in-kind contributions

Private parties usually participate in NWO projects by means of a financial contribution (cash contribution) to the project budget.

In the projects, private and public co-funders can also participate with a (partial) in-kind contribution under the following conditions:

- Included in the budget approved by NWO for the research costs of the project proposal in which the public or private party participates (for in-kind contributions see provision 3) and fall under one of the 3 cost categories stated.

2. Commitment

If a co-funder is to participate in the research project by making a (partial) in-kind contribution as described above, the co-funder will commit himself to the relevant in-kind contribution plus the financial (cash) contribution to the NWO project.

3. In-kind contributions

Co-funders may make the following in-kind contributions to a research project; these costs must be directly attributable to the research project and should be incurred by the public or private party (see also provision 1):

- Labour costs, provided they are expressed in terms of an hourly rate, calculated on the basis of annual pay for full-time employment according to the wages column for wages and salaries tax on the payroll, increased by statutory increments or increments agreed in an individual or collective employment contract for social security contributions, and on 1650 productive hours a year. An increment may be added to this for other general expenses, not exceeding 50% of the labour costs referred to above. The resulting hourly rate attributable to the project, including the 50% increment for general expenses referred to above, is capped at €125. Costs of supervision or project management may be contributed only if the intended supervisor or project manager is an active participant in the research project.
- Costs of consumables, aids, software or software licences that are directly related to the project, based on the original purchase prices.
- Use of equipment and machines:
  - Costs of purchasing and using machines and equipment, provided they are based on the depreciation costs attributable to the project, calculated on the basis of the original purchase prices and a depreciation period of at least five years;
  - Costs for consumables and maintenance during the period of use;
  - Costs of purchasing and using machines and equipment that have not been purchased exclusively for the project will be taken into account on a pro rata basis only if balanced time sheets are kept of the hours spent on each machine or item of equipment;
  - Discounts on the prevailing commercial price (list price) of machines and equipment. The discount should be at least 25% of the list price. The costs charged to the equipment budget of the project are the list price minus the discount;
  - In-kind contributions taking the form of software made available.
4. **Justification of in-kind contributions**

Co-funders must justify their in-kind contributions to NWO by providing the official secretary with a statement of contributed costs, within three months of the end of the relevant research project. The application to determine the in-kind contribution must be submitted by the official secretary to NWO at the same time as the application for funding, accompanied by a joint final report. If the in-kind contribution to be justified exceeds €125,000, an auditor's report should be submitted; otherwise, a written statement confirming that the in-kind contributions are actually attributable to the project is sufficient.