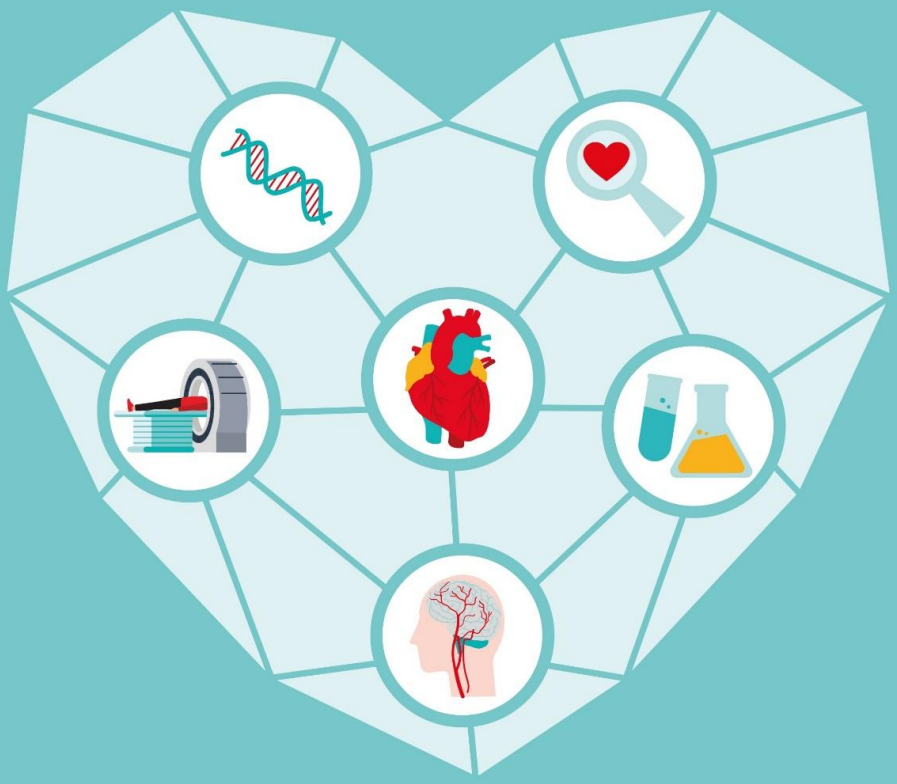


From Innovation to Implementation:

Cardiovascular Public Private Partnership programme 2026

Purpose of this call

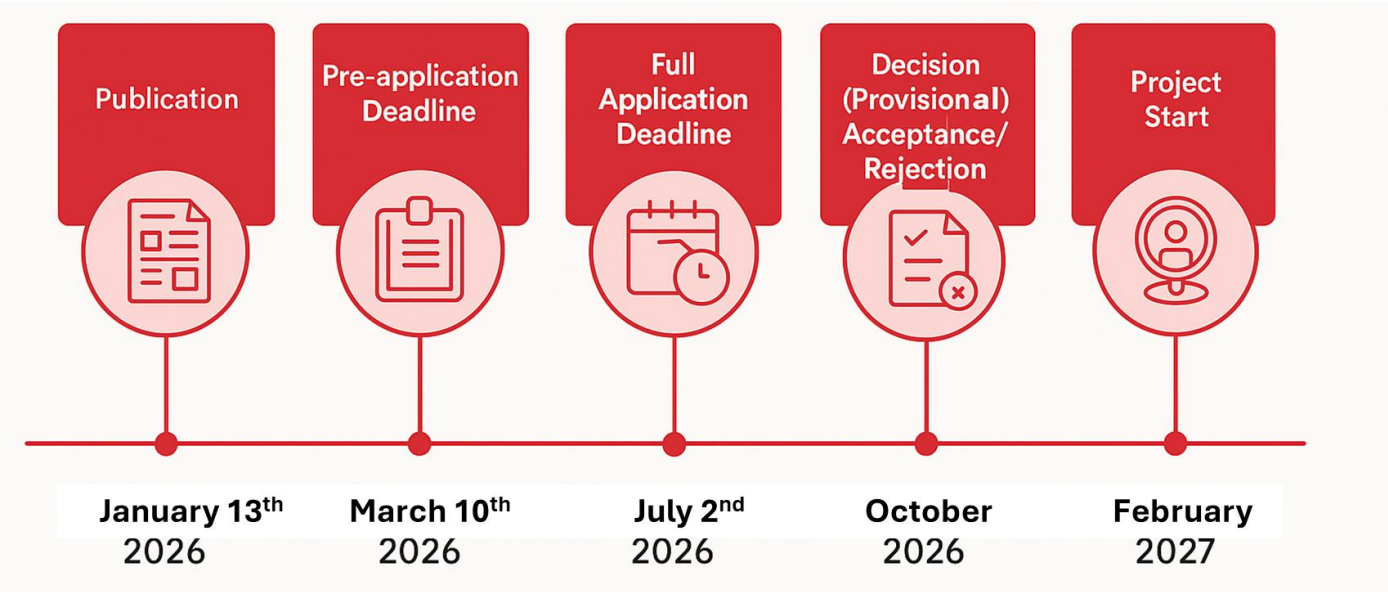
The Cardiovascular public-private partnership (PPP) programme addresses the major challenges in cardiovascular health as outlined in the cardiovascular agenda. The goal of this agenda is measurably better cardiovascular health in 2030, with reduced health inequalities as a key spearhead. The programme provides PPP funds for projects where academia and private parties collaborate to tackle the agenda's challenges. Three project types are supported: novel public-private projects (line 1); expanding existing academic consortia with public-private projects (line 2); and start-up/MKB public-private springboard funding (line 3).

Call summary

Call type:	Open call for programme line 1, invited call for line 2 and 3.
Aim:	Interdisciplinary research projects with private partners,
Total budget for this call:	€ 2.000,000
What can be requested:	Max. € 400,000 (line 1 and 2) and ~ € 150.000 (line 3)
Project duration:	1-4 years
Who can apply:	Researchers from Dutch knowledge institutes or a Dutch for-profit company (line 1 and 3)
Evaluation:	Pre-proposal, office and committee review, full proposal with committee review and interviews.

Timeline programme line 1 and 2

First round



Second round

NB: Whether there will be a second round depends on available budget after round 1.

Timeline programme line 3

No deadline for submission pre-applications, on invitation only

Funding decision:	Q2-Q3 2026
Expected start project:	Q4 2026-Q1 2027

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General information

Cardiovascular PPP programme

Cardiovascular disease is the second leading cause of death in the Netherlands and the main reason for hospital admissions. Currently, 1.7 million people in the Netherlands live with cardiovascular disease. If we do nothing, this number will grow by 1 million in the coming years. Cardiovascular disease, in the Netherlands alone, yearly results in €7 billion in healthcare costs and an increasing demand on healthcare personnel. With the increasing pressure on healthcare, choices and innovative solutions are essential.

To put a halt to this rising burden of disease, the Dutch Heart Foundation (DHF) has taken the initiative to invite patients, professionals, academics and other stakeholders, amongst which private parties, to create a national agenda for cardiovascular diseases. The aim of the agenda is for cardiovascular health to be measurably better in 2030 than it is today, with the reduction of health inequalities in society as an important spearhead. Each priority on the cardiovascular agenda offers specific challenges and research needs that cannot be achieved without public-private partnerships.

By increased collaboration in this programme between the Dutch Heart Foundation (DHF), the Dutch CardioVascular Alliance (DCVA) and the Netherlands Heart Institute (NLHI) we further strengthen the ecosystem for public-private partnerships in cardiovascular research. Together we guide the initiation of new PPPs, stimulate knowledge exchange, and offer services to facilitate valorisation and implementation of promising research results towards (clinical) practice.

Aim of this programme

With this programme for public private partnerships, we stimulate innovative research projects that are necessary for the next step to translate cardiovascular research findings towards application in health care**.** The programme consists of three lines:

- Programme line 1: Setting up **novel** public-private projects (for new and existing partnerships).
- Programme line 2: Developing/expanding **existing** academic partnerships into strong public-private partnerships (follow-up of the matching grant programme).
- Programme line 3: Supporting young companies (micro and small businesses) in their upscaling and achieving concrete and first milestones that **aim to trigger follow-up investment**.

This brochure contains information on how to submit projects in all lines. Differences in conditions between programme lines are indicated. For additional questions, see contact details. Please note that programme line 2 and 3 are on invitation only.

We are explicitly committed to connecting parties to achieve larger and/or new partnerships. This means that, on the one hand, efforts are made to explore the opportunities and possibilities for partnerships. On the other hand, we also explicitly invite researchers from public and private organisations to approach the programme group with innovative ideas. With this programme, we support start-up companies, existing partnerships and new

initiatives to be set up. We invite researchers and companies to join forces and create solutions to the challenges on the cardiovascular agenda.

The partners of the programme group

The Dutch Heart Foundation is working on concrete solutions to improve the heart health of the Netherlands. Our ambition: to ensure that we prevent, recognise and treat cardiovascular diseases earlier. With the invaluable support of our donors, we invest in the best cardiovascular research. We connect cardiovascular researchers, healthcare professionals and patient representatives to drive knowledge and innovations that will benefit patients, those at risk, and our society, faster. Our mission: a healthy heart for all, now and in the future.

The DCVA is a partnership of 23 partners. The DCVA brings together academics, healthcare providers, research funders and representatives of patients and private parties. The goal of DCVA is to reduce the burden of disease due to cardiovascular disease by a quarter by 2030.

The NLHI is the collaboration of the Dutch academic departments of cardiology and aims to develop new strategies for diagnosis, prevention and treatment of cardiovascular disease by stimulating collaboration in academic research.

Programme committee

The programme group has installed a programme committee to govern general aspects of the programme and guide the selection and decision process. The programme committee consist of three external experts with commercial, fundamental research and clinical research expertise and one member from each organization of the programme group. The composition of the programme committee can be found on the website.

Background to the Top Sector LSH and PPP programmes

The Top consortium Knowledge and Innovation (TKI) of the Top Sector LSH: TKI-LSH is known as Health~Holland. Health~Holland provides subsidy to financially support PPP programmes. Through PPP Programmes, researchers employed at public institutes and private parties are encouraged to jointly set up projects that develop sustainable innovative products and services within the LSH sector that contribute to the economic growth of the Netherlands. Within a programme, the organising parties are given the opportunity to select PPP projects that contribute to the goals of the Top Sector LSH. This call is part of the granted Cardiovascular Public Private Partnership (PPP) programme.

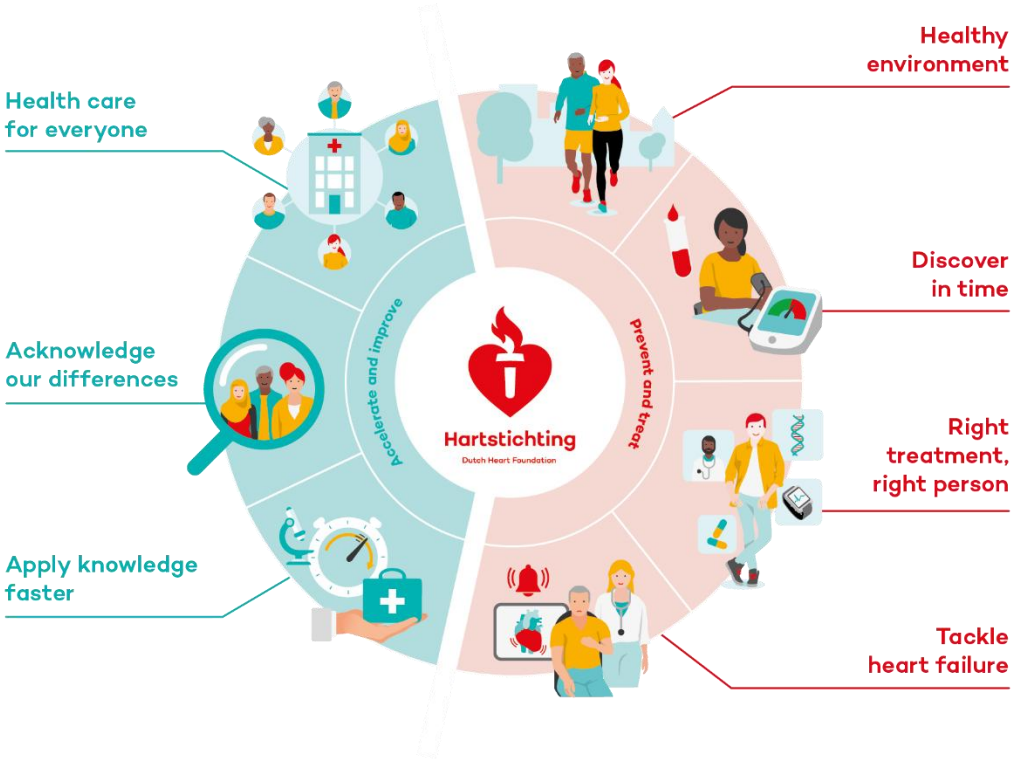
Social theme 'Health & Care'

The Ministry of Health, Welfare and Sport (VWS) drew up five missions for this social theme. One central mission and four focused missions. The central mission focuses on living in good health longer, while reducing health disparities between people of high and low socioeconomic status. The other four missions contribute to this central mission through changes in the living environment, providing more care in the right place, better prospects for people with chronic diseases and dementia and one aimed at societally disruptive health threats. The Knowledge and Innovation Agenda 2024-2027 (KIA) describes the ambitions and goals for the health and care missions within the field of public-private partnerships. Projects

submitted in this call should contribute to the mission of the KIA Health & Care. In addition, they should contribute to the National Technology Strategy and thereby to the Dutch growth markets (see appendix C) .

The cardiovascular agenda

With rising numbers of people affected by heart or circulatory diseases, society faces immense challenges. In a bid to tackle this burden, the DHF took the initiative to develop a national cardiovascular agenda, together with researchers, patients, health care professionals, entrepreneurs and other stakeholders, including the Dutch public, policy makers, volunteers and donors. This resulted in a new cardiovascular agenda with 7 themes. New to the cardiovascular agenda – a successor to the research agenda published in 2014 – is the approach, which is broader than funding research. The agenda holds challenging objectives that can only be reached by a combination of research, innovation, policy action and education. It includes, for example, topics such as future-proof health care, promoting prevention, increasing social awareness, and timely recognition of cardiovascular diseases.



Objectives on the cardiovascular agenda

The themes on the agenda were elaborated by seven working groups, consisting of patient representatives, researchers, healthcare providers, entrepreneurs and advisors. Each member participated in a personal capacity and from their own experience. The working groups formulated the ambition, objectives and approach for each theme.

The seven themes on the agenda can be categorised in two clusters:

1. **"Accelerate and improve"**
   This cluster (depicted in blue) consists of the themes *Health care for everyone*; *Acknowledge our differences*; and *Apply knowledge faster*. These themes are focused

on improving the healthcare system and implementing knowledge faster in society and health care.

2. **"Prevent and treat"**
   This cluster (depicted in red) consists of the themes *Healthy environment*; *Discover in time; Right treatment, right person;* and *Tackle heart failure*. These themes focus on prevention of cardiovascular diseases and their complications, on better and personalised treatments for all cardiovascular diseases, and concerted action for heart failure.

Note: Each application submitted in this call **must address** at least one objective from the **"Accelerate and improve"** cluster, and at least one objective from the **"Prevent and treat"** cluster.

For the complete list of objectives, please see **Appendix A** of this brochure. For further details regarding the themes and objectives on the cardiovascular agenda, please see the full report.

In addition, all projects must also contribute to the ambitions and objectives as elaborated in the Knowledge and Innovation Agenda 2024-2027 social theme Health and Care (see Appendix B for links to more information) of the Top Sector LSH. Projects must also contribute to one or more of the 10 priority technologies from the National Technology Strategy and contributes thereby to the Dutch growth markets (Appendix C).

Who can apply?

Only applicants who are employed by a Dutch research organisation[1] or a Dutch for-profit company for the duration of the project can apply. For line 2 only applicants who are employed by a Dutch research organisation can apply. There must be real, effective and equivalent collaboration between at least one research organisation and one for-profit company. Upon approval of the research application, the applicant bears the ultimate responsibility for the realisation of the research project.

Programme line 2

Programme line 2 is open to consortia only upon invitation. An application should be supported by the host consortium and can be submitted by work package leaders of, or newly invited members to, the consortium. We encourage consortia to expand their network by inviting new (young) researchers to apply and thereby expand the impact and network of the consortium. The research leaders of the host consortium are not eligible to apply.

Programme line 3

Programme line 3 is open to researchers upon invitation. The aim of this line is to accelerate commercial valorisation, with specific expertise and attention to early startups and private funding for Medtech and Biotech. To give academic spin-offs, so-called micro-SMEs, quick access to private funding to bridge the early funding gap. This fills an essential gap in the startup ecosystem and for new innovations to reach maturity and advance towards the patient.

[1] Definition of organizations is described in appendix F.

How can I apply?

If you are interested in applying for this programme, please contact the DHF (programme line 1 and 2) or the DCVA (programme line 3) to discuss whether your project can be expected to fit in this call. When eligible, we will ask you to submit a pre-application. Only pre-applications with a positive review can be elaborated into a full application. Before submitting your application, we recommend that you visit the DHF website (programme line 1 and 2) or the DCVA website (programme line 3) to check that you have the latest versions of the brochure and the agreements.

Budget

This programme is supported by PPP Subsidy from the TKI Life Sciences & Health programme 2026. Consequently, specific rules apply for applications submitted in this programme. Please read the guidelines carefully and contact us in case you have any questions.

Overview of the characteristics of projects:

	Minimum duration	Maximum duration	End date before	Budget available in 2026	Minimum PPP subsidy deployed per project	Maximum PPP subsidy deployed per project
Programme line 1	1 year	4 years	Sept. 30th 2031	€ 1,200,000	€ 200,000	€ 400,000
Programme line 2	1 year	4 years	Sept. 30th 2031	€ 400,000	€ 200,000	€ 400,000
Programme line 3	1 year	2 years	Sept. 30th 2031	€ 400,000	€ 75,000	€ 150,000

Building a public private partnership takes time, we therefore advise you to carefully consider the planned start and end date of the research project. Before applying for funding, you should thoroughly check if you can meet these timelines.

For the full application, a specific budget form is used in this programme which uses multiple built-in functions and redirects. Therefore, it is important to follow the instructions of the budget form (see the "Instructions" tab of the form).

Dutch research organisations, such as universities, UMCs, universities of applied sciences, TO2s, KNAW institutes and other organisations that meet the definition of research organisation, may fund up to 70% of their **own costs**[2] with PPP subsidy in the case of fundamental and industrial research and up to 60% in the case of experimental development. Dutch SMEs (for-profit and not-for-profit enterprises[3]) may fund up to 60% of their **own costs** using PPP subsidy to conduct fundamental and industrial research and up to 40% to conduct experimental development. For definitions of the types of research, see Appendix D.

[2] All eligible costs incurred by that particular partner, except any in-cash contributions

[3] Each unit, irrespective of its legal form or manner of funding, that carries out an economic activity. See Appendix F for definitions.

Large enterprises (Dutch and foreign), foreign SMEs, Dutch Enterprises in Difficulty[3] (OIM) and Dutch and foreign other parties are not permitted to apply for PPP subsidy; the expenses they incur should be equal to the in-kind contribution they provide.

Table 1.A shows these maximums in more detail. Consortia are encouraged to jointly organise the activities and budget within the project, with both research organisations and enterprises contributing equally in terms of content to the project.
Table 1.B illustrates the minimum percentage of **total project costs** that must be contributed by the research organisation(s) and enterprise(s) in the project. Appendix E provides more information about the budget and two calculation examples applying the funding requirements to two different types of consortia.

Table 1.A: Funding by type of research
Partner level

Max % PPP subsidy based on eligible costs partner	Fundamental and industrial research	Experimental development
Research organisation	70%	60%
Dutch SME	60%	40%
Large enterprises, non-Dutch SME, Dutch and non-Dutch other parties	0%	0%

The percentages listed in Table 1.A are percentages taken over the total costs of the organisation in question.

Table 1.B: Minimal contributions
Project level

Minimal contribution based on total project cost	Fundamental and industrial research	Experimental development
Research organisation(s)	min. 10%	min. 10%
For-profit and non-profit enterprise(s)	min. 15%	min. 30%

The percentages listed in Table 1.B are percentages taken over total project costs.

Conditions and points of attention for PPP subsidy:

- Co-funding by private parties that are not enterprises, such as foundations are appreciated. However, this does not count towards the compulsory enterprise contribution. The DHF will not co-fund applications submitted in this programme.
- Dutch research organisations, such as universities, university medical centres, universities of applied sciences, TO2 institutes, KNAW institutes and other organisations that satisfy the definition of a research organisation may apply for PPP subsidy.
- If a Dutch SME wants to apply for PPS subsidy, they must submit a signed 'verklaring geen onderneming in moeilijkheden' as well as an SME check. when submitting the full

[3] The definition of enterprise in difficulty is based on the definition as included in the General Block Exemption Regulation (EG) nr. 651/2014, Pb L187/1 (AGVV).

application. The Heart Foundation can ask for more information to check the submitted information.

- Projects are required to reserve funding (5%) for several types of support activities by the NLHI. Please contact the NLHI for the implementation of this budget as this depends on the project. Possible activities are (please note that they should fall under the eligible costs): scientific dissemination activities including a session at the DCVA/NLHI congress, programme/roadmap meetings, and dissemination based on reports as well as advice or support to the project group in involving patients and other end-users in the study, organizing meetings with end users, and advice on coherence and contact with other PPP programmes or projects.
- The NLHI supports projects in this programme with project management services. If a project does not wish to make use of these services, please motivate how project management will be organised.
- In addition to the in-kind contribution, it is also possible to contribute in cash. A cash contribution from one party must be used within the project to cover costs of another consortium partner.
- Applying for PPP-subsidy and making an in cash contribution by the same party is not permitted.
- Consortium partners may not send any invoices to the research organisations/ enterprises involved for project related costs.
- The definitions of small and medium-sized enterprises are explained in Appendix F.
- The definition of an enterprise is given in Appendix F.
- The project costs that can be incurred must be directly related to the R&D activities.

Eligibility requirements

The **application** must satisfy at least the following requirements:

- The proposed research must contribute to at least one objective from the "Accelerate and improve" cluster, **and** at least one objective from the "Prevent and treat" cluster on the cardiovascular agenda (minimum of two, maximum of four).
- The project has as deliverables innovative products and services that are of societal and economic added value.
- The project contributes to achieving the central mission and at least one of the five specific missions within the social theme 'Health & Care', as concretised in the KIA 2024-2027 Health and Care.
- The project fits in one or more of the 10 priority key enabling technologies from the National Technology Strategy[4].
- The project duration must not exceed 4 years (line 1 and 2) or 2 years (line 3) (note the latest possible end date).
- Programme line 1: The project covers fundamental research (**maximally 20%)**, industrial research or experimental development, or a combination thereof.
- Programme line 2 and 3: The project covers industrial research or experimental development, or a combination thereof. Projects may **not** contain fundamental research.

[4] https://www.rijksoverheid.nl/documenten/beleidsnotas/2024/01/19/de-nationale-technologiestrategie

- Programme line 2: The project build on translation of findings of the host consortium and has a clear added value to the consortium., or the project adds a new group and/or research line to the host consortium with clear and quick potential for translation and valorisation.
- Programme line 2: The project should **start** at least 12 months prior the end date of the host consortium.
- The translational and innovative character of the project should be clearly described in the application.
- The research described in the application is not already being funded in other ongoing research projects supported by the DHF or other parties.
- The project is not suitable for submission in one of the other funded 2025 PPP Programmes and 2026 PPP Programmes.
- The project is conducted without any interference from the tobacco industry in any form.
- The application and budget are in accordance with the PPP rules.
- The project must start within six months after the letter confirming the grant is awarded.

The **consortium** must satisfy the following eligibility requirements at least:

- An application must be jointly submitted by at least one partner from a research organisation and one for-profit enterprise.
- For programme line 1 and 3: Scientists employed at a Dutch research organisation or a Dutch for-profit company can apply. The consortium can decide for itself which party is the main applicant, a substantiation how this best suits the goals of the project is expected.
- For programme line 2: Only scientists employed at a Dutch research organisation can apply.
- Foreign for-profit enterprises and research organisations are also encouraged to participate in the consortium, as long as the results of the research project benefit the Dutch knowledge infrastructure and economy.
- There is a real, effective and equivalent collaboration[5], and the partners in the consortium will jointly bear the costs and risks of realising the project. This equivalence must also be visible in the cost allocation between the consortium partners.
- If the application links to an existing consortium financed (in part) by the Dutch Heart Foundation, a letter confirming the collaboration with the existing consortium signed by the consortium leader(s) must be included in the full application. The form and added synergistic value of the collaboration must be clearly described and substantiated. Collaboration with an existing consortium is required for programme line 2 applications.

[5] Definition of 'effective collaboration' according to the Framework for State aid for research, development and innovation: 'effective collaboration' means collaboration between at least two independent parties to exchange knowledge or technology, or to achieve a common objective based on the division of labor where the parties jointly define the scope of the collaborative project, contribute to its implementation and share its risks, as well as its results. One or several parties may bear the full costs of the project and thus relieve other parties of its financial risks. Contract research and provision of research services are not considered forms of collaboration.

For programme line 1, collaboration with an existing consortium is a positive asset but is not required.

- The consortium is required to participate in joint activities with other consortia funded in this programme. These activities should (1) support knowledge dissemination and exchange, and (2) enhance the impact of the project by discussing and improving impact plans. See the item about funding of these activities above.
- The contribution of all partners must comply with the PPP rules.
- All consortium partners should make an in-kind contribution. This means that all consortium partners at least incur in-kind payroll costs. These costs and contribution must appear on the budget form (Excel).
- The contribution by the parties is confirmed per participant in the full-application. For each partner, upload a letter of commitment in which a pledge of co-funding and the size of the cash/in kind contribution is stated. The main applicant does not need to upload a letter of commitment. A template letter of commitment can be found in appendix G. Letters of intent will not be accepted.
- All partners adhere to the guidelines for PPP partnerships of the DHF, except for the IP policy (see below). Richtlijnen voor samenwerking met bedrijven | Hartstichting voor Professionals
- The consortium partners are willing to sign the agreement and intra-consortium agreement (see website). By submitting an application, all consortium partners agree with these agreements.

Intellectual property policy

The consortium must reach agreements on the intellectual property (IP) related to the products and services developed in the project. These agreements are recorded in the intra consortium agreement. Agreements on IP follow the Kaderregeling betreffende staatssteun voor onderzoek, ontwikkeling en innovatie (specifiek artikel 2.2.2.) and the PPS-Innovatieregeling (Staatscourant 20 oktober 2023, 28651). The model intra consortium agreement is available through the DHF website.

The starting point is that the party that develops a result independently is also the owner of it (ownership follows inventorship). However, there are three exceptions when the IP generated by the research organization can become the property of the industrial partner. These three exceptions can be applied separately or in combination and are included together in the template.

Option A: Full funding (art. 8.2.1) – 'He who pays, decides'

If a research organisation develops a result, but the industrial partner bears the associated costs in full, the industrial partner becomes the owner of that result. This will hardly happen in practice, because PPP projects involve actual cooperation with shared commitment and financing. This option is included in the template for completeness.

Option B: Adequate reflection of contributions (art. 8.2.2 & 8.10 – OPTIONAL)

If applicable, the parties can explicitly stipulate in advance that certain Foreground that is (partly) developed by a research organisation will nevertheless become the property of the industrial partner. This is possible when it adequately reflects the significant contribution of the industrial partner to the achievement of those results. This option is optional and requires a concrete description and justification in Article 8.10 of both the intended Foreground and the contributions that justify the deviating allocation of ownership

⚠️ Adequate reflection of the contributions (Articles 8.2.2 and 8.10) is optional. The consortium may also remove clauses 8.2.2 and 8.10 from the consortium agreement where it does not apply.

Option C: Option right (art. 8.2.3 & 8.5-8.8)

Industrial partners who contribute substantially to the project budget (at least 10% in cash and/or in kind) can receive an option right on Foreground from the research organisation for:

- Obtaining a license to Foreground in the possession of the research organization;
- To obtain ownership of Foreground in the possession of the research organization.

When the option right is exercised, the parties make agreements about license or transfer in good consultation. These agreements contain at least:

- Market-based remuneration, with settlement of the company's project contribution.
- Anti-shelving: the company is committed to actually using the Foreground.
- Grant-back: The research organization holds a royalty-free, non-exclusive license for research and teaching.
- Indemnification: protection of the research organization against claims through use by the company.
- Access rights remain intact: Access Rights of other consortium members are not affected.

Parallel agreement (art. 8.11 – OPTIONAL)

If two or more parties already have (or want to conclude) a separate agreement, it can be used within a PPP subsidy project, provided that it fits within the framework regulation and has been submitted to the Heart Foundation in good time and confirmed in writing that it is not in conflict with the consortium agreement. In the event of a conflict, the consortium agreement always takes precedence. If no parallel agreement is or is not envisaged, Section 8.11 may be removed.

Results that are not subject to intellectual property rights must be widely disseminated.

Submission and Review process

Timelines

Programme line 1 and 2 round 1

Call open:	13 January 2026
Pre-application deadline :	10 March 2026 14:00 hr.
Full application invitation :	Mid-April 2026
Full Application deadline r:	2 July 2026 14:00 hr.
First selection by committee:	Begin September 2026
Interviews :	Mid-September 2026
Funding decision :	October 2026
Expected start project :	February 2027

Programme line 3

Call open:	13 January 2026

No deadline for submission pre-applications, on invitation only

Funding decision:	Q2-Q3 2026
Expected start project:	Q4 2026 – Q1 2027

The pre-application

Submission of a pre-application

If you are interested in applying for this programme, you are required to contact the DHF. Before you can submit a full application, you need to submit a pre-application. The pre-application for programme line 1 and 2 must be submitted via our data management system Cavaris (www.cavaris.nl). Registering and logging in to Cavaris is easy via the welcome portal. If you have any questions, please contact research@hartstichting.nl. The manuals for Cavaris can be found in the SmartFolders in Cavaris or via this link: Externe handleidingen (cavaris.nl).). See Appendix H for more information about components of the full application.

The submission of a pre-application for programme line 3 is continuously possible but only after consultation with the DCVA (see contact details).

Note: By submitting your pre-application, you give consent to bring you in contact with other PPP-programmes or applicants with related or relevant pre-applications. No confidential information about the project will be shared. Additionally, general non-confidential information of the pre-application can be shared with Health~Holland.

Review of the pre-application

Submitted pre-applications will be checked for eligibility by the DHF (line 1 and 2)/DCVA (line 3). Eligible pre-applications will be evaluated by DHF (line 1 and 2)/DCVA (line 3) representatives and the programme committee on:

- Contribution to the objectives on the cardiovascular agenda, taking into account the originality of the application (e.g. in relation to previously granted proposals for the same objectives)
- Scientific quality and feasibility of the research plan
- Fit with the strategy of TKI-LSH
- Adherence to the PPP requirements
- Availability of requested budget
- For programme line 2: if the pre-application fits with the host consortium.
- For programme line 3: potential to attract follow-up funding or market access

Only if the pre-application is reviewed positively, the applicant is invited to submit a full application. Please be aware that if the number of high-quality and innovative pre-proposals far exceeds the number of to be granted full proposals, a strict selection will need to be applied.

The full application

Submission full application

Full applications can only be submitted for line 1 and 2 via the electronic system Cavaris, which can be reached via the website www.cavaris.nl. You will automatically receive a confirmation email when your application has been successfully submitted to the DHF. If this does not happen, your application has not been received by us. In that case, please contact us as soon as possible. Applications cannot be submitted after the deadline. Please contact us before the deadline has passed, if you encounter any problems with submitting your application. We can be reached at research@hartstichting.nl.

For programme line 3 full applications are submitted via e-mail (see contact details).
See Appendix I for more information about components of the full application.
Appendix L contains a checklist for the submission of full applications.

Review full application

Eligibility check full application

Within one week after submission the DHF (line 1 and 2)/DCVA (line 3) will check the eligibility criteria. If the application is not eligible but can be amended, applicants are invited to amend the application within 3 working days. Changes to the content of the full application are not eligible for this. Please make sure you are available for up to two weeks after the deadline to adjust the application and any questions and make sure we have your mobile number in your Cavaris profile. If you are not available, please let us know in advance. If the application is not eligible based on the requirements the application is excluded from the review process.

External review of the full application

After the eligibility check, the external reviewing process will start.
Programme line 1 and 2: the application will be reviewed by an evaluation committee consisting of members of the International Scientific Advisory Committee (ISAC), national Scientific Advisory Board (SAB) and members of the Committee Societal Impact (CSI). The members of the committee are selected based on the topic and whether there is a connection to existing consortia. The evaluation committee is supplemented, by valorisation and/or implementation experts and chaired by the chair of the SAB.
The review of the application focuses on the criteria:

1. **Impact,** the full application is assessed on three impact domains**:**.
   - Scientific impact, the contribution to the programme goals and strategies; including the level and uniqueness of contribution to the cardiovascular agenda, and to the key enabling technologies and objectives of the LSH-TKI missions.
   - Economic impact and value, this includes innovativeness, value for the partners, value for the Dutch economy. Potential for attracting additional investments,
   - Societal impact, the contribution to reducing the cardiovascular burden of disease; including the broader health and societal impact of the project.
2. **Description of work**, this includes the quality of the methodology, feasibility and the available infrastructure.
3. **Strategy for impact creation,** this includes (depending on the phase and size of the initiative) the impact plan, with attention to commercial valorisation, stakeholder involvement, a sustainable financing model, and strategy for upscaling and implementation.
4. **Collaboration,** this includes the governance of the project, the equal and active involvement of all partners, and coordination with external parties.
5. **Value for money,** in the ranking, the requested budget is considered in relation to the expected outcomes, including health and societal impact..

The project must be rated 'good' or above on a 5-point scale from poor to excellent. The evaluation committee selects the best applications for programme line 1 and 2. The

applicants of these projects will be invited to present and defend their project in a (digital) meeting with the committee. Project partners are very welcome during this interview.

In programme line 3, because of the focus on start-up organisations, specific attention is paid to the contribution of the requested funding to obtain one or more milestones that aim to trigger follow-up funding and/or market access: does the outcome of the project contribute concretely to attracting follow-up funding.
For programme line 3 the application will be internally reviewed by at least three members from the DCVA Valorization Team including the F1RST-fund, according to criteria specified above. This is followed by an external review that will specifically assess valorization criteria, including the unmet need, technological development, investability (ability to secure follow-up financing) and market access. This is done through consulting an independent committee consisting of at least three independent experts: clinical or application-oriented, technical or development-oriented, commercial or investment-oriented, under the responsibility of the Valorisation pillar of the DCVA. The committee will give its review based on the written information.

Code of Conduct on Confidentiality and Conflicts of Interest

To ensure a fair assessment and transparency for researchers, the DHF uses a Code of Conduct on Confidentiality and Conflicts of Interest. This code stresses the necessity of confidentiality, identifies possible forms of conflicts of interest, and indicates the steps to be taken to avoid conflicts of interest. Parties subject to the code of conduct are referees, jury members, committee members, members of decision-making bodies and DHF officers. The full text of the code of conduct on conflicts of interest is available on the DHF website.

Decision process

The evaluation committees will advise the programme committee which applications are eligible for funding. A project with a negative recommendation cannot be nominated for funding. The CEO of the DHF makes the final funding decision, based on the advice of the evaluation committee and programme committee and the available funds. If an application is eligible for funding, but not enough funding is available yet, it is possible that the application will be partially funded, or the applicants are invited to submit the application in the next round. In this case, the best strategy will be discussed with the applicants.

Sharing information and personal data

The DHF will share the (pre-)applications including personal data within the programme group and programme committee. This programme committee shall act as joint controllers for the processing of personal data carried out for the following purpose:
The assessment of (pre-)Applications and the monitoring of funded projects.
For the privacy statement of the Hartstichting see Privacy_statement.pdf. of the DCVA see DCVA privacy statement, of the NLHI see NLHI Privacy statement
The programme group is allowed to share non-confidential information from the approved Application, interim reports and final reports in their research information system and, after consultation with and approval by the applicant, make this information public, including using social media.

Complaints procedure

A complaint can be submitted by the applicants after the decision of the DHF has been communicated. A form should be submitted to the Complaints Committee of DHF. It is not possible to appeal against the outcome of the procedure (funded or not funded) but only on execution of the procedure by the DHF. The form can be found on the DHF website. Complaints should be submitted within four weeks after receiving the notice from the DHF. More information about the complaints procedure can be found on the website of the DHF.

Post-decision process

After granting

After granting, the consortium partners must sign two legal documents:

1. A consortium agreement between the DHF and the consortium partners (available on the website) in which the legal and financial conditions are stated. This agreement is non-negotiable.
2. An intra-consortium agreement (ICA) (available on the website) containing paragraphs on IP, organisational and publication arrangements. The ICA becomes part of the consortium agreement. The ICA (not signed) must be submitted two weeks before the committee meeting. The IP paragraphs are non-negotiable.

The consortium is obliged to deliver signed agreements to the DHF office and start within 6 months after receipt of the grant approval letter. We explicitly advise you to read the agreements carefully and discuss them with the consortium partners before submitting your application. Upon submitting an application, all consortium partners are assumed to agree with the agreements. Please check the DHF website for the newest versions of the agreements.

Monitoring

The DHF will assign a contact person for each project from a member of the programme group. The contact person will be in close contact with the research leader to stay informed about the progress and discuss the progress of the project together with a member of the programme group.
Depending on the size of the project, a midterm review can form part of the monitoring.
Monitoring of projects will take place in accordance with the LSH-TKI rules meaning that the research leader shall provide the DHF with (more details are stated in the agreement):

1. within 15 month after the end of each calendar year, a periodic (scientific and financial) report.
2. Within 3 months upon completion of the project:
    a. an integrated final report providing an overview of the progress and results.
    b. a final audit of the Research Project costs, including an audit certificate prepared and certified by an independent auditor. The PPP Subsidy may not be used to cover audit costs.
        - If a consortium partner has not used any PPP subsidy or has used less than €125,000, a management statement must be issued regarding the total project costs of that consortium partner.
        - If a consortium partner has used €125,000 or more in PPP grants, an audit report must be issued regarding the total project costs of that consortium partner.

c. An updated project profile including the results of the completed project.

The final PPP grant payment[6] will take place when the above documents have been received and approved by the DHF.

The consortium is obliged to clearly state the support of Health Holland, the Heart Foundation, DCVA and NLHI in all (scientific) publications, lectures, (poster) presentations and/or interviews that arise from a Project. This concerns both attribution and (where possible) display of the logos (available on request).

Contact

Before submitting a pre-application please first contact the main contact person: Karin Eizema, k.eizema@hartstichting.nl, 070-3155566.

Contact persons per programme group member:
Dutch Heart Foundation: For specific questions about programme line 1 and 2 please contact Karin Eizema, k.eizema@hartstichting.nl, 070-3155566.
Dutch CardioVascular Alliance: For specific questions about programme line 3 please contact Luc Schoppink, l.schoppink@dcvalliance.nl 06-34578030.
Netherlands Heart Institute: For questions about the dissemination activities and project management services please contact Marti Boss, marti.boss@heart-institute.nl 088-2333606.

For question about Cavaris please contact research@hartstichting.nl. You can reach the manuals for the application system via: Cavaris manuals.

[6] Please note: the documents required for the final report may be subject to change, depending on any new requirements from RVO

Appendix A: objectives on the cardiovascular agenda

Below, all objectives on the cardiovascular agenda are listed, grouped per theme. For further details regarding please see the full report.

Note: Each application must address at least one objective from the **"accelerate and improve"** cluster, and at least one objective from the **"prevent and treat"** cluster.

Health care for everyone (HC) – "accelerate and improve" cluster

HC1.1 Better integration agreements between lines of care, between inpatient and outpatient care and within and between regions, with compliance guaranteed

HC1.2 Greater use of patient-centred outcome measures based on artificial intelligence and data analysis in care pathways, with an emphasis on the triage and referral process

HC2.1 Care processes and deployment of resources are better aligned within and between regions

HC2.2 More opportunities, such as digital infrastructure and financial resources, are created to support remote care, particularly to reduce physical check-ups in hospitals

HC3.1 More patients are aware of, and understand, their own objective health status

HC3.2 More patients are actively taking responsibility for their own care by following advice with and without medication

HC3.3 Patients' loved ones are more actively involved in the entire care process, where possible

HC3.4 Patients, specifically those with limited health understanding and/or a vulnerable socio-economic position, are appropriately supported by healthcare providers to influence their own health

Acknowledge our differences (AD) – "accelerate and improve" cluster

AD1.1 A growing scientific basis on the relation between different individual characteristics of people and their cardiovascular health, E.g., biological mechanisms, sex-specific symptoms, risk profiles, treatment outcomes.

AD1.2 Target groups with different personal characteristics are being researched. E.g. women, people with a low socioeconomic position, people with a migration background, people with limited health literacy.

AD1.3 Personal characteristics of the study population are taken into account if collecting survey data. E.g. standardised registration of personal characteristics such as ethnicity, in line with legal frameworks.

AD1.4 The composition of research teams is diverse to increase representation and support for research. E.g. diversity in gender, expertise, career stage.

AD2.1 Knowledge on reaching different groups is exploited in care, education, and research. E.g. culturally sensitive approaches, adapted communication materials.

AD2.2 Available knowledge on the causes, risk factors, complaints, symptoms, course, and treatment of cardiovascular disease in different groups is utilised in care, education and research. E.g. working with healthcare professionals to put group-specific knowledge into practice.

AD2.3 Knowledge about the causes, risk factors, complaints, symptoms, course, and treatment of cardiovascular disease in different groups is a regular part of healthcare education and further training. E.g. development of education modules on group-specific differences.

AD2.4 In guidelines and decision-making aids related to cardiovascular diseases, where relevant, a section on the relationship between personal characteristics and the cardiovascular disease is included. E.g. sections on sex- and group-specific differences.

AD2.5 It is clear to everyone which healthcare professional in cardiovascular care has expertise on person-specific characteristics. E.g. documenting expertise of involved healthcare professionals in the project.

Apply knowledge faster (AK) – "accelerate and improve" cluster

AK1.1 Researchers are supported in finding and engaging with relevant stakeholders. E.g. facilitate community building and use of existing networks.

AK1.2 Together with stakeholders, clear agreements are made on everyone's role in the route to knowledge application. E.g. role definition is part of the impact strategy.

AK1.3 In co-creation with patients, the problem and question are defined, the research is designed, and the knowledge gained is applied in practice. E.g. user committees and structural patient participation throughout the research and implementation.

AK2.1 It is known what existing knowledge there is on cardiovascular disease and how it is or is not used in practice. E.g. by mapping project results and its use in practice.

AK2.2 A method is available to identify all knowledge generated from projects and appreciate whether the knowledge should be further exploited. E.g. applying an assessment framework.

AK3.1 Researchers are provided with a roadmap of paths for applying different types of knowledge with the necessary stakeholders. E.g. actively use of the roadmaps of the Dutch Heart Foundation to plan the route of knowledge to practice.

AK3.2 Researchers are intensively supported in applying knowledge in practice with targeted activities, tools, and information. E.g. working with impact officers of the DCVA, use of implementation toolkits.

Healthy Environment (HE) – "prevent and treat" cluster

HE1.1 A healthier food environment through healthier food offerings in stores and environments, pricing measures, product improvement, and reduction of marketing and advertising of unhealthy food

HE1.2 A healthier living environment that discourages smoking and vaping and encourages exercise

HE1.3 A healthier school and study environment that encourages healthy eating, adequate exercise, and good mental health of students

HE1.4 A healthier healthcare environment through better nutrition and more encouragement of exercise

HE1.5 An improved living environment through better air quality, less noise, less pollution and sufficient greenery and heat resistance

HE2.1 New laws and regulations contribute to protecting and promoting health, i.e. integrated health policies ('health in all policies')

HE2.2 Concrete steps are being taken to legislate health objectives

HE2.3 Health protection has a broad definition that makes many more parties in fields other than public health feel responsible

HE2.4 There is acknowledgement that commitment to underlying goals and values of systems is necessary through clear understanding on how systems operate and integrate across various policy domains

HE3.1 The healthcare system, currently primarily focused on curing diseases, will become co-responsible for and equipped to protect and promote health

HE3.2 Prevention will receive an appropriate funding model

Discover in time (DT) – "prevent and treat" cluster

DT1.1 Healthcare providers are familiar with the most common risk factors for cardiovascular disease and know how to act to reduce this risk

DT1.2 Healthcare providers are aware of the higher risk of cardiovascular disease in people with severe mental illness and those with specific chronic and reproductive conditions, as described in the CVRM guidelines and know how to act to reduce this risk

DT1.3 People with severe mental illness and those with specific chronic and reproductive conditions, as described in the CVRM guidelines, are aware of their greater higher risk of cardiovascular disease and know how to lower this risk

DT1.4 People with a vulnerable socio-economic position or migration background are familiar with the most common risk factors, know how to act to reduce this risk, and receive support to do so

DT2.1 The emotional impact of early detection in the target population is clear and how it should be taken into account

DT2.2 It is clear what the health benefits and cost-effectiveness are of early detection of cardiovascular disease or a high risk thereof

DT2.3 It is known how early detection can be implemented effectively

DT3.1 Early detection and follow-up are tailored to different target groups

DT3.2 People with good health knowledge can identify their specific risk of cardiovascular disease and, if possible, engage in more self-management

DT3.3 Effective and efficient opportunistic screening for cardiovascular disease is carried out by primary and secondary care

DT3.4 Of those with inherited cardiovascular disease in the family, at least 75% undergo screening with predictive genetic testing

'Right treatment, right person' (RT) – "prevent and treat" cluster

RT1.1 There are validated decision aids for people with cardiovascular disease and healthcare providers, and healthcare providers and patients systematically use them to decide together

RT1.2 The majority of healthcare providers have received training in collaborative decision-making

RT1.3 For healthcare providers, sufficient time is available for shared decision-making

RT1.4 People with cardiovascular disease and healthcare providers are satisfied with the way co-determination has been implemented

RT1.5 There is knowledge about the health effect of applying prediction models for starting, stopping, or not treating at all

RT1.6 Four in five patients take medicines to prevent or treat cardiovascular disease as decided together by healthcare provider and patient

RT2.1 A reliable and clinically applicable prediction model integrating all currently known relevant factors is available for all patients with common syndromes

RT2.2 Predictive models estimate the risk of all health outcomes relevant to patients

RT2.3 Sufficient representative healthcare data of patients with cardiovascular disease are available to aid development of new prediction models, and enrich and calibrate existing ones

RT2.4 Innovations in modern statistics and artificial intelligence are implemented in prediction models used in healthcare practice

RT3.1 We are better able to recognise the causes of cardiovascular disease and use this knowledge to tailor treatment

RT3.2 We know of more characteristics that determine the effect and side effects of a treatment

RT3.3 Treatments are routinely evaluated in practice cohorts to identify possible differences in safety and effectiveness between patients

"Tackle heart failure" (HF) – "prevent and treat" cluster

HF1.1 Half of the adult Dutch population knows what heart failure is; its severity and symptoms

HF1.2 Healthcare providers working in primary care recognise all people at high risk of heart failure

HF1.3 All healthcare providers recognise the symptoms of heart failure, resulting in 80% of people with symptoms getting a diagnosis

HF1.4 All healthcare providers deploy appropriate diagnostics, reducing the time between recognition and diagnosis, from days to weeks instead of weeks to months

HF2.1 More knowledge on the pathophysiology of the development of heart failure, in particular HFpEF and underlying disease states

HF2.2 More knowledge about the function and origin of the pathophysiology of the right ventricle

HF2.3 More knowledge on early detection of HFpEF and right ventricular failure

HF3.1 We treat heart failure with impaired pump function (HFrEF) better, according to guidelines, and by being better at implementing existing therapies;

HF3.2 It is clear why some patients with heart failure are not treated according to guidelines and we use this knowledge to optimise treatment

HF3.3 The caregiver and heart failure patient have the right conversation at the right time in the context of pro-active care planning: focusing on patients' and loved ones' daily lives and the palliative phase

HF3.4 Half of heart failure patients are connected to a telemonitoring programme

HF3.5 Seamless heart failure care is the standard as financial barriers are overcome

Appendix B: Links

- RVO - Verklaring geen onderneming in moeilijkheden
- Missiedocument 2024-2027
- Kennis- en Innovatieagenda 2024-2027
- Kennis- en Innovatieconvenant 2024-2027

Laws and regulations

- Definities Onderzoek & ontwikkeling uit het EU Steunkader
- Kaderregeling betreffende staatssteun voor onderzoek, ontwikkeling en innovatie
- Regeling nationale EZK- en LNV-subsidies
- Kaderbesluit nationale EZK- en LNV-subsidies
- PPS-Innovatieregeling Staatscourant 20 oktober 2023
- Verordening (EU) nr. 651/2014 van de Commissie van 17 juni 2014
- definitie onderzoeksorganisatie
- Definitie daadwerkelijke samenwerking (Hoofdstuk 1.3., artikel 16.h).
- https://www.rvo.nl/subsidies-financiering/pps-innovatie/definities
- https://www.rijksoverheid.nl/documenten/beleidsnotas/2024/01/19/de-nationale-technologiestrategie

Appendix C: Nationale Technology Strategy: Definitions key-technologies [22]

Key technology	Definition (NTS)
Biomolecular & cell technologies	*Biomolecular and cell technologies* fall within the broader field of biotechnology, with a specific focus on molecules and cells. This key technology encompasses the mapping, measurement and utilisation of molecules such as DNA, RNA and proteins/metabolites. Sub-technologies include omics, gene editing, stem-cell technology and synthetic cell technology.
Imaging Technology	*Imaging technologies* involve the generation, acquisition, duplication, analysis, modification and visualisation of images (optical and non-optical). They encompass the entire imaging chain—requiring both hardware and software—and are widely applied in the medical sector, semiconductor industry, security domain, agriculture, manufacturing, transportation and aerospace.
Artificial Intelligence & Data	*Artificial Intelligence (AI) is a systems technology aimed at enabling machine behaviour that resembles natural intelligence.* *Data Science, Data Analytics & Data Spaces encompasses all aspects of collecting, managing, unlocking, sharing, processing and analysing data using data-processing technologies to create value.*
Optical Systems & integrated photonics	*Optical systems* are engineered systems designed to refract, reflect or manipulate light to fulfil specific optical functions (e.g., photon-based communications). *Integrated Photonics* is a technology that integrates multiple photonic functions—generation, modulation, detection, etc.—onto a single functional photonic chip.
Mechatronics & opto-mechatronics	*Mechatronics* concern the integrated design of mechanical systems and their control and regulation systems, combining mechanical engineering, physics, electrical engineering and ICT. *Opto-mechatronics* is described as the integration of optical technology into mechatronic systems. Opto-mechatronic solutions play a key role in semiconductor manufacturing, scientific instrumentation, 3D printing, medical devices, aerospace and robotics.
Semiconductor technologies (Microelectronics)	*Semiconductor technologies* cover semiconductor components and/or highly miniaturised electronic subsystems, and their integration into larger products and systems. This includes the fabrication, design, packaging and testing of semiconductor components, systems-on-chip that integrate multiple functions, and the development and construction of the machines required for these processes.
Quantum technologies	*Quantum technologies* exploit the dual nature of the smallest particles we know—such as photons, atoms and electrons—as well as analogous systems exhibiting quantum properties. They enable quantum computing, quantum communication and quantum sensing, providing solutions to complex challenges.
Cybersecurity technologies	*Cybersecurity technologies* focus on reducing digital risks and encompass measures to prevent damage or failure of digital systems, safeguarding the availability, integrity and confidentiality of data. They aim to prevent and detect cyber incidents, mitigate harm and facilitate recovery.
Process technologies, including process intensification	This key technology focuses on the optimal, stable and safe design of (green) chemical production processes. It covers scalability, heat integration, safety, optimal downstream processing, footprint minimisation and cost efficiency. Emphasis is placed on using sustainable feedstocks, reducing by-products and waste streams, and maximising their reuse.
Energy materials	*Energy materials* comprise all materials that enable the storage, transport, efficient capture and conversion of (sustainably generated) energy into other forms or carriers. They make an essential contribution to the energy and climate transition—for example, in wind turbines, batteries and electrolysers

[22] https://www.kia-st.nl/kia-sleuteltechnologieen/nationale-technologiestrategie-nt

Appendix D: Definitions of the types of research and TRL's[7]

Definitions of the types of research

Fundamental research means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct commercial application or use in view.

Industrial research means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services. It comprises the creation of component parts of complex systems, and may include the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation.

Experimental development means acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services. Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real-life operating conditions where the primary objective is to make further technical improvements of products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product, and which is too expensive to produce for it to be used only for demonstration and validation purposes. Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

Technology Readiness Levels [9]

The Technology Readiness Levels (TRLs) indicate the maturity of a technology, ranging from basic principles (TRL 1) to a proven system in practice (TRL 9). The scale is used internationally to position innovations and determine the next steps towards market introduction..

TRL	Definition
TRL 1	Basic principles observed
TRL 2	Technology concept formulated
TRL 3	Experimental proof of concept
TRL 4	Technology validated in lab
TRL 5	Technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
TRL 6	Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
TRL 7	System prototype demonstration in operational environment
TRL 8	System complete and qualified
TRL 9	Actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)

[9] For more information and examples: TRL's and Societal Readines Levels (SRL)'s are also explained in the roamaps: Drug development and Non-implantable medical devices.

Below examples of TRL's applied for different developments (only in Dutch).

Appendix B2: Ondersteuning *Technology Readiness Levels* voor bepaling type onderzoek

Let op: onderstaande richtlijnen zijn ter ondersteuning! Iedere aanvraag wordt op individuele basis beoordeeld; hierbij zijn de definities voor de drie typen onderzoek zoals gesteld door RVO in Append D altijd leidend.

Fase	TRL	Betekenis	Type onderzoek	Farma	Biotech	MedTech	ICT (AI)	Organ-on-Chip
Discovery	**1**	Fundamenteel onderzoek/ concept en ontwerp	Fundamenteel onderzoek (beperkt subsidiabel binnen de PPS-I regeling)	Biologisch principe/ Identificeren doelwit	Biologisch principe (enzym, *pathway*, biomarker) ontdekt / conceptueel platform beschreven	Klinische behoefte en technisch concept in kaart gebracht	Probleemdefinitie en opzetten *data dictionary*	Specificeren micro-omgeving, celtypes, *microfluidic layout*.
	2			*In vitro* tests resulterend in een experimenteel *proof-of-concept*			*Proof-of-principle* en de ontwikkeling van het systeem zonder directe toepasbaarheid (TRL 2 en 3)	Eerste CAD-ontwerpen
	3	Toetsing (*proof-of-concept*)		*Target Discovery* en *Hit Identification* worden geclassificeerd als fundamenteel onderzoek (TRL 2 en/of 3)	Eerste haalbaarheidstesten resulterend in een *proof-of-concept* / eerste werkende assay-prototype	Proof-of-concept van de technologie nog zonder toepassing; lab-prototype op basale veiligheid/functietests	Het ontwikkelen en testen van het *framework computational model* (model heeft nog geen specifieke taak en/of toepassing)	Eenvoudige in vitro *proof-of-concept* opstelling ter verificatie van barrièrefuncties en transportprocessen
Development	**4**	Implementatie en test prototype	Industrieel onderzoek (subsidiabel binnen de PPS-I regeling)	Verdere *in vitro* en *in vivo* studies om veiligheid en werkzaamheid aan te tonen	Verdere preklinische studies *in vivo*/diermodellen om reproduceerbaarheid, veiligheid en werkzaamheid aan te tonen vallen onder de definitie van industrieel onderzoek.	De studies benodigd om *PoC* om te zetten tot een *minimum viable product*, inclusief eerste technische tests en gebruikstest voor veiligheid. Hieronder vallen o.a.: - Prototypeontwikkeling - Technische validatie - Eerste *usability study*	Toepasbaarheid-gedreven ontwikkeling valt binnen TRL4. TRL 4 t/m 6 bevat de verdere ontwikkeling van de (*machine learning*) technologie naar een productvorm, inclusief de applicatieontwikkeling.	Prototype fabricatie: Fysiek prototype met geïntegreerde basale sensoren
	5	Validatie prototype		*Hit-to-Lead conversion, Lead Optimization* en verder preklinische onderzoek tot aan de start van Fase I klinisch onderzoek wordt geclassificeerd als industrieel onderzoek (TRL 4 t/m 6)				Lab validatie: Meerdere celdonoren; meten van fysiologische parameters onder *flow*
	6	Demonstratie prototype in testomgeving		Fase 0 studies vallen binnen TRL6, zolang de studie niet gericht is op het bestuderen van het klinische effect (bv. farmacokinetiek)	Demonstratie functioneel prototype in een relevante testomgeving	*Usability studies* vallen onder TRL6 wanneer dit plaatsvindt in een gecontroleerde omgeving ((living) lab of testomgeving)		Optimalisatie: Verfijning extracellulaire matrix-coatings en *flow-parameters*; verhoogde levensduur en reproduceerbaarheid
Demonstration	**7**	Demonstratie prototype in operationele omgeving	Experimentele ontwikkeling (subsidiabel binnen de PPS-I regeling)	Fase I en II klinische studies worden beoordeeld als experimentele ontwikkeling (TRL7)	Opschaling Fase I en II klinische studies worden beoordeeld als experimentele ontwikkeling (TRL7)	(Pilot)studies in de operationele/realistische setting, t.b.v. klinische effectiviteit/waarde, inclusief bewijslast t.b.v. compliantie aan regelgeving. Verdere klinische studies	Start van de demonstratiefase Integratie van het product in bestaande systemen, inclusief het testen in een realistische setting	Validatie met *test-set reference compounds* (en relevante humane cellen); Simuleren van pathologieën
	8	Compleet en operationeel product/ dienst	**Niet** subsidiabel binnen de PPS-I regeling	Fase III klinische studies en verdere ontwikkeling	Fase III klinische studies en verdere ontwikkeling	Opschaling en regulatoire goedkeuring Volledig ontwikkeld product	Opschaling en regulatoire goedkeuring	Reproduceerbaarheidstest in meerdere laboratoria. Ontwikkeling gestandaardiseerde testprotocollen
Deployment	**9**	Marktintroductie product/dienst		Marktintroductie	Marktintroductie	Marktintroductie	Marktintroductie	Marktintroductie

Appendix E: Explanation of budget categories and calculated examples

Eligible costs

Only those costs that are directly related to the R&D activities within the project (eligible costs) can be entered on the budget form. Examples include: scientific staff, technicians, support staff, consumables and the use of equipment specifically required for the project (depreciation system). Historical cost should be used when entering the cost of consumables. Entering commercial rates is not permitted. For an explanation of the (calculation of) eligible costs see the Commission Regulation (EU) No. 651/2014 of June 17, 2014, Article 25 and the Framework Decision National EZK and LNV Grants, Chapter 4, Article 10-14.

1. Labor costs

Parties that use PPP subsidies are obliged to use one of the wage cost systems prescribed by the Framework Decision on National Economic Affairs and Climate Policy and Agriculture. Parties that do not use PPP subsidy are not required to use one of the payroll costing systems prescribed by the Framework Decision on National EZK and LNV Grants. These parties may also use their own hourly rate. A condition is that the calculation of the costs takes place on the basis of a customary and verifiable method and is based on business principles and standards that are considered acceptable in society and that the participants in a collaborative project apply systematically. On the budget form, these parties should choose "fixed hourly rate" and adjust the standard hourly rate of EUR 60 to an hourly rate that is customary and verifiable for them.

When entering the wage costs, one of the following options can be used:

1. Integral cost system
2. Wage costs + 50% direct storage system
3. Fixed rate

1. Integral cost system (Article 12 of the Framework Decision on National EZ Subsidies)

This method is especially suitable for large organizations that regularly apply for subsidy from RVO. The IKS method must be approved by RvO.

2. Wage costs + 50% direct storage system (Article 13 of the Framework Decision on National EZ Subsidies)

The direct wage costs of project employees will be increased and increased by a 50% mark-up. Direct costs consist of the costs directly attributable to the employee conducting the research, such as gross salary, employer's contributions, pension charges, bonuses (if laid down in the employment contract), etc. The annual cost is divided by 1650 hours to get the hourly rate

3. Fixed hourly rate of € 60 (Article 14 of the Framework Decision on National EZ Subsidies)

NB! An organization may only use one of the above methods!

It must be possible to submit an hour administration for all rates. In an integrated cost system and wage costs plus surcharge, the underlying documents can be submitted to

substantiate the amount of the rate.

2. Cost of Material and Tools
Materials from stock
You can increase the cost of the consumption of materials that were not purchased specifically for the project if you register the consumption. Use historical purchase prices. If you do not have an administration of the consumption of materials from stock, you cannot allocate the costs directly to the project.

3. Cost of using machines and equipment
Purchased for the project only.
You enter the costs of equipment that you buy and use especially for a project or certain eligible activities under 'Cost of use of machines and equipment'. These are costs of which the amount can be demonstrated on the basis of an invoice. However, for the determination of the eligible costs, you must deduct the residual value of the equipment from the purchase price (depreciation system). For the determination of the residual value of equipment specially purchased for a project, the residual value is determined on the basis of linear depreciation with a (minimum) depreciation period of 5 years. This is an accounting residual value.

Not purchased solely for the project
If you did not purchase the machine or equipment solely for the project, you may only include the depreciation charges or lease instalments if a conclusive time registration is kept. The costs are then included in proportion to the time during which the machine or device is used for the project, related to the normal occupancy. If you use an integral cost system, you can only enter costs here if the costs are not part of the integral cost rate.

4. Costs attributable to third parties
If some of the activities are subcontracted, those costs due to third parties can be allocated to the project and entered on the budget form. Care should be taken to ensure that the costs due to third parties are in proportion to the rest of the budget. Should this cost category be particularly high, this could influence and is part of the evaluation committee's assessment.

Examples of ineligible costs
An overview of costs that are ineligible is given below. Therefore, these costs may not be entered on the budget form.

- Patent applications and costs for retaining a patent (patents purchased at arm's length conditions or for which external parties grant a licence are eligible for funding);
- Auditor's statement;
- Bench fee (Note: costs for consumables are eligible);
- Travel within the Netherlands;
- Supporting personnel who are not directly involved in the R&D activities, such as a project auditor, business developer, administrative employee;
- Preparation of a business case;
- Costs related to open access publishing
- Costs related to implementation of the developed innovation;

- Conducting effectiveness studies (Health Technology Assessment, HTA);
- Overhead;
- Non-Scientific Dissemination. However, scientific dissemination, including attending a scientific conference is eligible;
- Project management tasks that are not directly related to the specific R&D activities, such as: escalating to a steering group, drawing up a risk management model, drawing up reports to satisfy funding requirements, administrative accountability. Project management tasks that are directly related to the R&D activities (e.g. discussions with employees, analysing technical risks, drawing up research reports, drawing up specifications) are eligible for funding

Calculated examples of project budgets using PPP Subsidy

Please note that the maximum PPP subsidy deployed per project is depicted on page 7 of this brochure, below are general examples not specific for this call.

Calculation example 1 - Research organization and Dutch SME.

The calculation example assumes a project consisting entirely of industrial research.

Consortium partners	Costs
Research organization X	€ 600,000
Dutch SME Y	€ 400,000
Total	**€ 1,000,000**

Consortium partners	Max. % PPP subsidy	Max. € PPP subsidy
Research organization X	70%	€ 420,000
Dutch SME Y	60%	€ 240,000
Total	**66%**	**€ 660,000**

**Percentage of PPP subsidy is calculated over the total cost of the partner in question.*

Minimal required contributions	% of total cost*	Minimal contribution (€)
Research organization(s)	10%	€ 100,000
Enterprises (for-profit and non-profit).	15%	€ 150,000
Open amount to be freely funded based on cost and minimum required contribution	***=€1.000.000 (cost) - €660.000 (max. PPP subsidy) - €250.000 (min. contributions)***	**€ 90,000**

** Percentages for minimal required contributions are calculated over the total cost of the project.*

Funding per partner

Consortium partners	Total cost	In kind	In cash	PPP subsidy
Research organization X	€ 600.000	€ 180.000	€ 0	€ 420,000
Dutch SME Y	€ 400.000	€ 160.000	€ 0	€ 240,000
Total	**€ 1.000.000**	**€ 340.000**	**€ 0**	**€ 660,000**

In this example, the open fundable amount of € 90,000 is divided between the research

organization and the SME, with both parties using their maximum allowable amount of PPP subsidy.

Calculation example 2 - Consortium consisting of four parties

The calculation example assumes a project consisting entirely of industrial research.

Consortium partners	Cost
Research organization X	€ 500,000
Dutch SME Y	€ 150,000
Large enterprise Z	€ 250,000
Hospital A	€ 100,000
Total	**€ 1,000,000**

Consortium partners	Max. % PPP subsidy	Max. € PPP subsidy
Research organization X	70%	€ 350,000
Dutch SME Y	60%	€ 90,000
Large enterprise Z	0%	€ 0
Hospital A	0%	€ 0
Total	**44%**	**€ 440,000**

**Percentage of PPP subsidy is calculated over the total cost of the partner in question.*

Minimal required contributions	% of total cost*	Minimal contribution (€)
Research organization(s)	10%	€ 100,000
Enterprises (for-profit and non-profit).	15%	€ 150,000
Open amount to be freely funded based on cost and minimum required contribution	***=€1,000,000 (cost) - €440,000 (max. PPP-subsidy) - €250,000 (min. contribution)***	**€ 310,000**

**Percentage of PPP subsidy is calculated over the total costs of the project.*

Funding per partner

Partijen	Total cost	In kind	In cash	PPP subsidy
Research organization X	€ 500,000	€ 125,000	(€ 25,000)*	€ 350,000
Dutch SME Y	€ 150,000	€ 60,000	€ 0	€ 90,000
Large enterprise Z	€ 250,000	€ 250,000	€ 50,000	€ 0
Hospital A	€ 100,000	€ 75,000	(€ 25,000)*	€ 0
Total	€ 1,000,000	€ 510,000	€ 50,000	€ 440,000

**The numbers in parentheses mean that these partners receive and use the private cash to cover part of their costs. In this case, the in cash contribution from the Large Enterprise is divided between Research Organization X and Hospital A.*

Appendix F: Types of organisations within a PPP grant application

A PPP subsidy application distinguishes between different types of organisations. Correctly categorising your organisation is important, among other things, to check whether the consortium composition meets the conditions of the call and whether your organisation is eligible to use PPP grants. The following types of organisations are mentioned:

Research organisation[8]

A research organisation is an entity that is primarily engaged in independent fundamental research, industrial research or experimental development, and/or in the broad dissemination of knowledge through education, publications or transfer. The legal form and method of financing (public or private) are not decisive in this respect. If the organisation also carries out economic activities, the financing and proceeds thereof must be kept in separate accounts. Companies that can exercise a decisive influence (e.g. as a member or shareholder) should not have privileged access to research results obtained. Examples of research organisations in the Netherlands are universities, UMCs, universities of applied sciences, TO2 and KNAW institutes.

Company

According to the settled case law of the European Court of Justice, an undertaking is any entity that carries out an economic activity, regardless of its legal form and method of financing. These economic activities generate turnover and income, for example through the provision of goods or services for more than a symbolic fee. The financing of the unit may not consist entirely of grants or gifts. No profit motive is required to qualify as a company, competition on the market (economic activities) is sufficient.

For-profit company

A for-profit company carries out economic activities with the aim of generating profits that may be distributed to shareholders, owners and/or participants.

⚠ Please note: In PPP calls for grants, *the term 'company'* always refers to a for-profit company.

Non-profit company

A non-profit company meets the same general definition of a company as a for-profit company, where economic activities take place from which turnover and income are generated. However, the profit streams are not distributed to shareholders, owners and/or participants, but are fully used for the objectives of the organisation, such as research and development, societal goals and/or cultural initiatives.

⚠ Please note: A foundation cannot be categorized as a for-profit enterprise, only as a non-profit enterprise, other party or research organization (provided it meets the criteria set for this).

Both for-profit and non-profit companies are also distinguished on the basis of their size (FTE) and annual turnover or balance sheet total.

[8] Definition of research organisation according to the Framework for State aid for research, development and innovation (Chapter 1.3, Article 16.ff). More information: https://www.rvo.nl/onderwerpen/subsidiespelregels/ezk/onderzoeksorganisatie

Small and medium-sized enterprises (SMEs)
According to Recommendation 2003/361/EC of the European Commission, a company is a small and medium-sized enterprise (SME) if it has fewer than 250 full-time equivalents (FTEs) and whose annual turnover does not exceed 50 million euros, or whose annual balance sheet total does not exceed 43 million euros. Within SMEs, a distinction is made between micro-enterprises, small enterprises and medium-sized enterprises. More information about the (type of) SME can be found via the User Guide and SME Wizard of the European Commission. For more details 'The revised User Guide to the SME definition' can be downloaded here.
Or use the European SME Wizard.

Large companies
A company is considered to be a large company if it employs 250 FTEs or more, and/or has an annual turnover of more than 50 million euros and a balance sheet total of 43 million euros.

Other organisations
Organisations that do not meet the definition of research organisation or enterprise are categorised as other organisations. In general, this includes: health funds, top clinical hospitals, general hospitals, ROMs, and organizations with an ANBI status.

Appendix G: Letter of commitment template

[Use headed paper of party]

[Name and address of the main applicants' duly authorised representative ("bestuurlijk verantwoordelijke")]

[Date]

LETTER OF COMMITMENT
for the
[name of] PROJECT

Dear [main applicants' duly authorised representative],

I, [first name and family name], in my capacity of [position in the organisation (has to be a duly authorised person)] at [name legal entity] hereby confirm that [legal entity] is committed to contribute to the [project name] project, on the condition that the Heart Foundation grants the PPP Subsidy as applied for by the main applicant, [first name and family name], [position] at [name organisation].

[Name legal entity] is aware that it is mandatory for the consortium to use the most recent version of the intra consortium agreement (ICA) of the Heart Foundation. [Name legal entity] is aware that only minimal non-essential changes to this template are permitted and agrees to the content of the model ICA regarding Foreground and intellectual property. As consortium partner we will share responsibility for a prompt completion of the ICA. I also declare that I have read and agree to the PPP agreement belonging to this grant

[Name legal entity] will contribute € [•] in cash towards the project costs in accordance with the budget in the project application and budget form.

[Name legal entity] will provide an in kind contribution of [description of the contribution], representing a monetary value of € [•] and further detailed in the project application and budget form.

Yours sincerely,

_____

Name:
Position:
Date:

Appendix H. Information for the pre-application

1. **General**

In the pre-application applicants must **explicitly specify which objectives** (minimum of two, maximum of **four**) from the Dutch Cardiovascular Agenda the project aims to contribute to. This can be explained in the section: 'Contribution to relevant research agendas'. The contribution is a criterion in the assessment process.

Note: At least one objective from the "Accelerate and Improve" cluster and one from the "Prevent and Treat" cluster must be included.

Do not hesitate to contact the DHF for clarification on the objectives of the Dutch Cardiovascular Agenda.

2. **Submitting and signing the pre-application**

Submission system Cavaris

The pre-application must be submitted by the research leader of the consortium using Cavaris (www.cavaris.nl), the online proposal system of the DHF.
The person who creates the pre-application in the system is also the research leader. The institution of this person will become the lead institute for the agreement. Please be aware of this aspect.

Signing the pre-application

The pre-application should be signed by the applicant (research leader) and the project partners ('co-signers'). By signing the proposal the co-signers endorse and support the pre-application. The consortium partners declare to have read and agree to the agreements and that they authorise the applicant to submit the application form and to handle any further correspondence..
You can invite persons in a specific role to sign your proposal on the left side in the red menu under 'Invitations'. This person will receive an email with an invitation to sign. They must register on our proposal system to be able to sign. The signing of the proposal consists of two steps: first the invitation needs to be accepted by the invited person after which the actual signing takes place. The invited person can sign at any time while the proposal is being written and does not have to wait until the proposal is fully ready to submit. You will receive an email notification once all required signers have signed the proposal.

After completing all fields and uploading all necessary documents, you can sign for approval at acceptance conditions in the tab 'General Information'. For questions about signing the proposal, please consult the Cavaris manual or contact us at research@hartstichting.nl.

Note 1: If one person has multiple roles within the consortium (e.g. consortium leader and work package leader) this person has to sign the application only once.
Note 2.: Stakeholder/Public partner/End user partners, These persons can be added under General Information'. These persons do not have to sign the application.

3. Overview of pre-application components

Below you will find an overview with a brief description of the components of your pre-application.

General Information

In this section, we request general information such as the title, duration, and any partners involved in the project. It is important to also include the project team members who will be involved in the research.

Summary

The Dutch summary should be written in understandable language for non-medical professionals. This summary may be used for communication and fundraising purposes towards the general public. Do not use jargon and IP-sensitive information. The English summary, among other purposes, is intended for reviewers. Upon approval of an application, we publish the English summary via the search engine for research funded by the DHF. This search engine is available on our professionals' website: https://professionals.hartstichting.nl.

Impact

This programme aims to create societal impact by focusing on creating and implementing solutions for cardiovascular healthcare problems. Project should define the scope, size and impact of the healthcare problem and show how the project contributes to reducing the cardiovascular burden of disease.

It should be explained how the consortium contributes to the cardiovascular agenda and the strategy of LSH-TKI (can be explained in the section: 'Contribution to relevant research agendas' of the application in Cavaris).

The consortium must clearly indicate which elements of the ambition are addressed in the project application and which parts are beyond the scope of the current application. In case additional funding is required, a strategic plan on how to acquire these funds should be part of the application.
For programme line 2 projects: Describe how the application contributes to the objectives and outcomes of the current consortium, builds on findings of the consortium and has a clear added value to the goals of the consortium. How does it contribute to the reduction of the cardiovascular burden of disease?

Societal theme 'Health & Care'

The Ministry of Health, Welfare and Sport (VWS) drew up five missions for this societal theme. One central mission and four focused missions. Projects submitted in this call should contribute to the mission of mission of the KIA Health & Care. In addition they should contribute to the national technology strategy.

Route to Societal Impact

The aim of the programme to significantly reduce the burden of cardiovascular disease. Solely focussing on defining a clear healthcare problem and the design of a (research) application that addresses this problem by finding a solution is not sufficient to realize this

ambition. To create real societal impact, results should be implemented into practice. We define societal impact as an economic, cultural or social change by applying new and existing knowledge in practice at pace, to better prevent and treat cardiovascular diseases.

The Impact Plan approach stimulates impactful collaborations and guides the translation of science into healthcare practice. An Impact Plan can contain both commercial valorisation and implementation activities, and includes collaboration with relevant stakeholders. It also describes the steps that need to be taken in order to reach the ultimate impact goals of the consortium.

For programme line 2 projects: The consortium has already developed a strategy to translate their research findings towards solutions (valorisation) and thereafter introduce these solution(s) into clinical practice (implementation). Describe how this project contributes to bringing results of the consortium to the next step.

In programme line 3, because of the focus on start-up organisations, extra attention is paid to the contribution of the requested funding for follow-up funding and/or market access: Does the outcome of the project contribute concretely to attracting follow-up funding?

Collaboration

Multidisciplinary aspects of the consortium

Describe the multidisciplinary aspects of the consortium and the role and added value of each consortium partner.

Mandatory additional uploads:

- The 'Additional Questions' pre-application form. This form can be downloaded from the General Information page of the call in Cavaris.

Appendix I. Information for the full application

1. **General**

In the full application, applicants must **explicitly specify which objectives** (minimum of two, maximum of **four**) from the Dutch Cardiovascular Agenda the project aims to contribute to. This can be explained in the section: 'Contribution to relevant research agendas'. The contribution is a criterion in the assessment process.

Note: At least one objective from the "Accelerate and Improve" cluster and one from the "Prevent and Treat" cluster must be included.

The DHF will conduct an internal consistency check to ensure that the full application aligns with the pre-application. If the DHF believes that the application deviates too much or the contribution to the agenda is too limited, it reserves the right to decline further assessment. Do not hesitate to contact the DHF for clarification on the objectives of the Dutch Cardiovascular Agenda.

2. **Submitting and signing the application**

Submission system Cavaris

The full application must be submitted by the research leader of the consortium using Cavaris (www.cavaris.nl), the online proposal system of the DHF. The research leader can log in the system with the email address used for the invitation to apply for a full application.
The person who creates the full application in the system will have the role of Lead applicant. The institution of this person will become the lead institute for the agreement. Please be aware of this aspect.

Signing the application

All applicants (max 3) and partners need to sign the application.
By signing, the applicant(s) declares to have completed the form truthfully and declares that the correct official(s) of his/her employing organisation of this submission are informed. Additionally, the applicant declares to have read and agree to the agreements and that the obligatory letter(s) of commitment of the other consortium partner(s) has/have been submitted separately.
By signing, the consortium partners declare to have read and agree to the agreements and that they authorise the applicant to submit the application form and to handle any further correspondence. We explicitly advise applicants to carefully read the agreements and discuss them with the consortium partners before submitting the application.

Roles in the consortium

You can invite persons in a specific role to sign your proposal on the left side in the red menu under 'Invitations'. This person will receive an email with an invitation to sign. They must register on our proposal system to be able to sign. The signing of the proposal consists of two steps: first the invitation needs to be accepted by the invited person after which the actual signing takes place. The invited person can sign at any time while the proposal is being written and does not have to wait until the proposal is fully ready to submit. You will receive an email notification once all required signers have signed the proposal.

Possible roles::

- Second applicant, next to Lead Applicant. Applicants (max 3) (research leaders) are responsible for the proposal. Applicants can fill in fields and submit the relevant proposal.
- Optional Workpackage leaders: are responsible for a workpackage (part of the project) within the consortium. Workpackage leaders can also fill in fields in the proposal. They cannot submit the proposal. This person does not have to sign the proposal:
- Optional Project Manager: the person who provides administrative and financial support. This person can also fill in the fields. He/she cannot submit the proposal. This person does not have to sign the proposal.

For questions about signing the proposal, please consult the Cavaris manual or contact us at research@hartstichting.nl.

Note 1: If one person has multiple roles within the consortium (e.g. consortium leader and work package leader) this person has to sign the application only once.
Note 2.: Stakeholder/Public partner/End user partners, These persons can be added under General Information' These persons do not have to sign the application.

3. Overview of application components

Below you will find an overview with a brief description of the components of your application.

General Information

In this section, we request general information such as the title, duration, and any partners involved in the project. It is important to also include the project team members who will be involved in the research.

Summary

The Dutch summary should be written in understandable language for non-medical professionals. This summary may be used for communication and fundraising purposes towards the general public. Do not use jargon and IP-sensitive information. The English summary, among other purposes, is intended for reviewers and must contain all necessary elements for a referee to decide whether to assess your application. Upon approval of an application, we publish the English summary via the search engine for research funded by the DHF. This search engine is available on our professionals' website: https://professionals.hartstichting.nl.

Budget

Refer to appendix D. 'Instructions for completing the budget form'.

Impact

This programme aims to create societal impact by focusing on creating and implementing solutions for cardiovascular healthcare problems. Project should define the scope, size and impact of the healthcare problem and show how the project contributes to reducing the cardiovascular burden of disease.

It should be explained how the consortium contributes to the cardiovascular agenda and the strategy of LSH-TKI (can be explained in the section: 'Contribution to relevant research agendas' of the application in Cavaris).
The contribution of the application to the 10 priority technologies from the National Technology Strategy (see below) must be explained in the 'Additional questions' form, which must be submitted as an attachment to the application.
Projects should also describe the expected economic value created, where relevant. This may include scalability and cost-effectiveness.
The consortium must clearly indicate which elements of the ambition are addressed in the project application and which parts are beyond the scope of the current application. In case additional funding is required, a strategic plan on how to acquire these funds should be part of the application. .
For programme line 2 projects: Describe how the application contributes to the objectives and outcomes of the current consortium, builds on findings of the consortium and has a clear added value to the goals of the consortium. How does it contribute to the reduction of the cardiovascular burden of disease?

Acknowledge our differences
The central mission of the societal theme Health and Care is that "by 2040, all people in the Netherlands will live at least five years longer in good health and the health differences between the lowest and highest socio-economic groups will have decreased by 30%". It is important to focus research and innovation efforts on what makes innovations effective for people in vulnerable situations and with a health disadvantage. This is aligned with the aim of the cardiovascular agenda: cardiovascular health will be measurably better in 2030 than it is today, with the reduction of health inequalities in society as an important spearhead. Health inequalities are defined as avoidable differences in health outcomes between groups – such as differences in how long we live, or the age at which we get preventable diseases or health conditions. There is ample evidence that social factors, including education, employment status, income level, gender and ethnicity have a marked influence on how healthy a person is. Therefore, these aspects need to be taken into account in research and innovation.

Under the Impact section in the application form, it should be described how the research accounts for differences between people. In the 'Description of Work' you can provide more details on how you will achieve this. It is desirable to address as many differences as possible, such as age, sex and gender, socioeconomic status, migration background, and health literacy. Describe how you address the reduction of health inequalities in the appropriate question in the form 'Additional questions'. Also, describe the activities necessary to engage specific groups and any potential barriers that may arise during the research. For inspiration: The website Gendered Innovations offers guidelines on how to consider sex and gender differences at every step of the research process.. The ROCKET-principles have been drawn up to promote active interaction with people in a low socio-economic position. For more information on conducting inclusive research, see the APH Quality Handbook: Inclusive Recruitment in (Qualitative) Research.
It is allowed to hire an external centre of expertise in the field of reducing health disparities. These costs are, within the duration of the project, eligible and fundable with PPP subsidy.

Societal theme 'Health & Care'
The Ministry of Health, Welfare and Sport (VWS) drew up five missions for this societal theme. One central mission and four focused missions. The central mission focuses on living in good health longer, while reducing health disparities between people of high and low socioeconomic status. The other four missions contribute to this central mission through changes in the living environment, providing more care in the right place, better prospects for people with chronic diseases and dementia and one aimed at societally disruptive health threats. Given the current challenges surrounding the workload in healthcare, labour-saving innovation is a theme that deserves cross-domain attention in addition to reducing health disparities. The missions have a time horizon up to 2040. The Knowledge and Innovation Agenda 2024-2027 (KIA) describes the ambitions and goals for the health and care missions within the field of public-private partnerships. Projects submitted in this call should contribute to the mission of the KIA Health & Care.

National Technology Strategy (NTS) and key methodologies
The National Technology Strategy defines building blocks for a strategic technology policy in the form of priority key technologies where the Dutch knowledge field and business can make a positive impact and which are essential for the future. For almost all of these key technologies, application in the medical world plays an important role to further develop and market the technologies. The most telling examples for the LSH sector are the key technologies: 'Biomolecular and cell technologies', 'Imaging technologies' and 'Artificial Intelligence and Data Science'. But the seven other key technologies are also of value to the LSH sector. Each submitted project must therefore actively contribute to the further development of at least one of the ten priority key enabling technologies from the NTS.

Description of Work
Part of the application is a clear and solid description of the anticipated scientific impact and the expected contribution of the project to reducing the burden of cardiovascular disease. The work packages of the application are coherent and synergistic. The aims and the description of work must be feasible in terms of project duration and available budget.

Route to Societal Impact
The aim of the programme to significantly reduce the burden of cardiovascular disease. Solely focussing on defining a clear healthcare problem and the design of a (research) application that addresses this problem by finding a solution is not sufficient to realize this ambition. To create real societal impact, results should be implemented into practice. We define societal impact as an economic, cultural or social change by applying new and existing knowledge in practice at pace, to better prevent and treat cardiovascular diseases.

The Impact Plan approach stimulates impactful collaborations and guides the translation of science into healthcare practice. An Impact Plan can contain both commercial valorisation and implementation activities, and includes collaboration with relevant stakeholders. It also describes the steps that need to be taken in order to reach the ultimate impact goals of the consortium.

The DHF and DCVA Impact Officers can support the consortium by organising an Impact Plan workshop at crucial points in the course of a consortium's lifecycle.

For programme line 2 projects: The consortium has already developed a strategy to translate their research findings towards solutions (valorisation) and thereafter introduce these solution(s) into clinical practice (implementation). Describe how this project contributes to bringing results of the consortium to the next step.

In programme line 3, because of the focus on start-up organisations, extra attention is paid to the contribution of the requested funding for follow-up funding and/or market access: Does the outcome of the project contribute concretely to attracting follow-up funding?

Talent Development

There is no separate talent development programme possible within this programme. Please fill in the application form (section Talent Development): 'not applicable in agreement with DHF'. Costs made for visits of conferences or courses necessary to execute the research are eligible for reimbursement and can be included in the budget under Cost of Travel and Lodging.

External Collaboration

The consortium describes their collaboration with other consortia/research groups working on relevant healthcare problems, relevant stakeholder organizations and end users. Possible stakeholder organizations are, for example, partner organisations of the DCVA.
The application includes a description of which stakeholders are involved (including names), both national as well as international. The application also includes how support is created and how patient groups and societal stakeholders are involved.

User committee

The committee advises the consortium on the steps needed to bring results to practice and monitors the use of the acquired knowledge. Describe in the application how collaboration with stakeholders will be organized, what expertise is needed and how this expertise is present in the described composition of the committee. It is strongly advised to reach out to the envisioned user committee members already in an early stage (application phase). By doing so, they can provide feedback to the application and align expectations. Patients are an essential part of an user committee. The consortium can contact DHF for more information about patient participation. More information about user committees can be found on the website of the DHF. Please also take note of our user committee guidelines. It is advised to reserve budget for the user committee.
For programme line 2 projects: The project is part of the current consortium. Therefore, the progress of the project will be presented and discussed in the user committee of the consortium. The user committee can be expanded in response to this project.
The DHF may participate in the user committee, this will be discussed after granting support of the project.

Data management

A well-organized data infrastructure is essential for excellent science. The DHF promotes this by focussing on the following aspects:

- Sustainable use and re-use of data
- Registry-based research
- Data communities
- Biobanks

Projects funded are strongly encouraged to make use of the services of the DCVA. The data infrastructure team of the DCVA can be contacted via data-infrastructure@dcvalliance.nl.
A project application should include a detailed description in the application on how the acquired data will be handled (data stewardship). Therefore, the consortium is strongly advised to involve a data-expert in their consortium and is obliged to allocate resources for data management in the budget. In addition, the FAIR principles are applied. FAIR stands for Findable, Accessible, Interoperable and Reusable. After having been awarded the grant, the consortium will be asked to hand in a Data Management Plan (DMP). A DMP is a dynamic document and will also be used to monitor progress on data management.

Open access

The DHF adheres to an Open Science policy aimed at making research knowledge more accessible to scientists, patients, the public, and entrepreneurs. All articles resulting from research funded by the DHF must be made publicly accessible either immediately or within six months of publication. Possible routes to follow are:
Publication in a fully open access journal or platform that is registered in the DOAJ
Publication in a subscription-based journal with deposition of at least the author's version of the article in an Open Access repository registered in OpenDOAR;
Publication in a journal that has a transformative Open Access agreement between the UNL (University of the Netherlands) and a publisher. See also openaccess.nl.
Check the Open Access Journal Browser to see the agreements made with journals regarding article processing charges. Other routes for covering these costs are also available, such as through institutional Open Access budgets.
Costs associated with open access publishing are non-eligible project costs.
More information about data management policy and support can be found on the website of the DCVA and DHF.

Mandatory additional uploads:

- Letters of commitment of all partners except the applicant.
- The 'Additional Questions' form. This form can be downloaded from the General Information page of the call in Cavaris. Please pay attention to the Conflict of Interest section (see appendix K)
- Each participant needs to upload a Curriculum Vitae. See for the format Appendix J.
- Signed 'Verklaring geen onderneming in moeilijkheden' and 'SME check' for every SME that applies for PPP Subsidy. Template to be downloaded from RVO - Verklaring geen onderneming in moeilijkheden
- Applications for programme line 2: a letter confirming the collaboration with the existing consortium signed by the consortium leader(s).

Other uploads
Figures and references can be added by an additional upload.

Intra Consortium Agreement

The intra-consortium agreement (ICA) (available in Cavaris and on the DHF website) contains paragraphs on IP, organisational and publication arrangements. The ICA becomes part of the consortium agreement. The ICA can be amended but the IP paragraphs are non-negotiable. The ICA (not signed) must be part of the submission or submitted two weeks before the committee meeting. You will receive a separate e-mail with this deadline after the committee meeting is planned.

Appendix J: Curriculum Vitae

Provide the following information of all partners in the consortium. State relevant information for the application. **Maximum of 2 A4 per CV.**

Name:
Year of birth:
Current job title:
Affiliation: *(mention all institutions/organisations to which you are affiliated)*
Role in the consortium: *(e.g., research leader, WP leader, consortium partner, end user representative etc)*

Profile *(max 5 sentences)*
Introduce yourself in short. Explain which qualities and expertise you add to the consortium. Think of this summary as a snapshot of your skills, knowledge, accomplishments, and ambition.

A. Scientific track record

1. Five most impactful scientific achievements, please explain shortly the impact of these achievements to the field and/or patients.
2. Scientific honours and awards.
3. Scientific grants, please explain the impact of these grants e.g. on your line of research.

B. Professional track record

1. Relevant professional positions and activities: (e.g., management, board or advisory tasks, clinical tasks, teaching etc.).
2. Other experience and professional memberships (e.g. membership of a scientific society, membership of boards, participation in user committees, etc.)

C. Societal track record

1. Relevant societal positions and activities: (e.g. advisory role, volunteer work, organisation of events, collaboration with patients, communication activities for a broad public etc.)
2. Five most impactful non-scientific outputs, e.g. policy documents, implementation in guidelines, newspaper articles, etc. Please shortly explain the impact of these outputs.

D. Valorisation track record

1. Relevant positions and activities for valorisation and implementation of research (e.g. collaboration with industry, IP rights claimed, contribution to start-up companies, seed money/commercialisation grants, etc.).

Appendix K: Conflict of Interest

1. Introduction and Legal Framework

According to Articles 29.d and 30.c of the Framework, applicable to the PPP Subsidy regulation, research organisations must receive remuneration equivalent to the market price for the intellectual property rights generated during the project. The absence, or inadequacy of agreements pertaining to a remuneration based on the market price leads to the indirect granting of state aid to the participating industrial parties.

'Remuneration equivalent to the market price' entails a best-effort obligation for the parties involved. It means that the research organisation and the participating industrial parties are expected to actively negotiate this remuneration on so-called 'arm's length' terms – conditions that reflect what would reasonably be agreed upon between unrelated parties in a competitive, commercial setting. Any transaction resulting from an open, transparent and non-discriminatory procedure will be deemed to comply with the arm's length procedure.

2. Definition of Conflict of Interest (COI)

Every project has the potential for a conflict of interest between the research organisation and one or more industrial partners. A conflict of interest can exist on a personal (individual) level or on an organisational (institutional) level. An objective conflict of interest exists when a situation has the potential to create undue advantage or disadvantage – regardless of whether harm or benefit actually occurs. The presence of a conflict of interest means that the arm's length conditions are potentially not met.

Conflict of Interest often arises when financial interests are present that may influence the objectivity of decision-making or project execution. Examples of financial interest may be: the PI or its direct family member have shares, options and/or other participation in any of the industrial participant(s); a participating company is a recent spin-off from the research organisation with, for example, overlapping personnel, shared IP rights, or ongoing financial interests

Individual Conflict of Interest: An individual conflict of interest arises when a person's personal interests — such as financial gain, intellectual property rights, or family ties — have the potential to influence their professional responsibilities and objectivity within the project.

Examples, but not limited to:

- A researcher, for example, the Principal Investigator (PI), working on the project holds shares in or has a formal role (founder, advisor, or board member) within a (spin-off) company participating in the consortium.
- A researcher receives royalty payments from a patent licensed to an industrial partner within the consortium.
- A project member has been paid over €10,000 in consulting fees by a partner company in the last year.
- A researcher is employed by both the research institution and a company in the consortium.
- A close relative of a researcher is a shareholder or executive at one of the participating industrial partners.

Institutional Conflict of Interest: An institutional conflict of interest occurs when an organisation involved in the project has financial, structural, or governance-related ties to another participating organisation, which could affect objective project decisions or create preferential outcomes.

Examples, but not limited to:

- A participating company is a recent spin-off from the research organisation, with, for example, overlapping personnel, shared IP rights, or ongoing financial interests.
- A research organization and a participating industrial partner share employees, board members or management.
- One consortium partner holds equity in another partner without being a formal affiliate.
- An industrial partner funds sponsored research in the same department that is executing the PPP project.
- Decision-making authority within the consortium is disproportionately influenced by a single institution.

It is up to the parties concerned – and in particular the directors of the participants – to recognize, interpret and report such an objective conflict of interest. This obligation to report may already exist at the time of the application being made.

3. Identifying Conflicts of Interest

To help identify potential conflicts of interest, the following questions can be used as a reference. These are not exhaustive but aim to prompt transparent disclosure.

3.1 Individual potential COI

- Is any individual involved employed by both (one of) the research organization(s) and (one of) the industrial partner(s)?
- Does the Principal Investigator (PI) in the project have any financial interest in (one of) the industrial participant(s)? If so, how many shares, options and/or other financial benefits do the PI (or the relatives) have rights to?
- Does any other investigator(s)/employee(s) of the research organisation have any financial interest in the industrial participant(s)? If so, how many shares, options and/or benefits do the investigator (or the relatives) have rights to?
- Have the PI or their immediate relatives received financial benefits (e.g. shares, patent rights, consultancy fees) from any industrial participant(s) involved in the project?
- Does the Principal Investigator (PI) have an inventorship role in a patent that has been licensed to, or is being developed by, a participant in the project?
- In the last 12 months, did any commercial entity or any of the entities that are participating in the project pay for or reimburse you (your employer, or your relatives) for consulting services, salaries or otherwise? If, so does such payments exceed €10.000 per year? If so, will the company in question benefit from the outcome of the Project?

3.2 Institutional potential COI

- Are any of the consortium partners in the project affiliated or associated with another consortium partner in the project? If so, how?

- Does any consortium partner have directly or indirectly any shares, options and/or any other participation in another consortium partner despite not being an affiliated entity? If so, how many shares, options and/or participations?
- If the financial interest as stated in the two points above does not apply, would a consortium partner exercise any control over any of the other consortium partners' decision-making? If so, how?
- In the last 12 months, did any Industrial partner in the Project pay for or reimburse any sponsored research or services to the Research Organisation(s) to the same research group(s) involved in the Project? If, so does such payments exceed €10.000 per year? If so, will the company in question benefit from the outcome of the Project?

4. Reporting Obligations

Upon identification of a (potential) conflict of interest, the Programme group must be notified immediately. This includes situations already present at the time of application. The following questions must be answered in a separate document:

- What is the nature of the potential conflict of interest? Please use the questions in 3.1 and/or 3.2 to describe the nature of the potential COI.
- Have the involved participants, including relevant directors, adequately weighed the interests?
- Has the potential conflict of interest been adequately addressed?
- Is there a transparent procedure in place to ensure that the participants, PI's, researchers or directors can abstain from involvement in certain decisions (which may involve a conflict of interest)?
- How are the arm's length conditions adequately met?
- Has the participant/director provided for the involvement of other researchers who can make these decisions without bias?
- Can the director involve his or her fellow director(s) in the decision-making process and is it possible in the management relationship for the director concerned to abstain from making management decisions (four eyes principle)?

The responsibility for answering these questions rests exclusively with the consortium partners. This means that the consortium parties involved have to assess whether and to what extent the potential conflict of interest has been adequately addressed and whether they are satisfied with the precautionary measures that the director(s) concerned have taken.

5. Role of Programme group and Health~Holland

The Programme group, and by extension Health~Holland, will not subjectively evaluate the conflict of interest. The Programme group will assess whether the performance of the consortium will be hindered or compromised by the existence of such a potential conflict of interest. The Programme group, and by extension Health~Holland, will therefore require full transparency if and when an objective conflict of interest arises or is likely to arise.
If, as a result of a conflict of interest, situations occur that violate the arm's length conditions, the consortium parties are liable for any resulting damage, including implications of indirect state aid.

6. Legal Support

For the sake of completeness, Health~Holland recommends involving legal support from the consortium partners, preferably from the research organisation, in order to adequately address a potential conflict of interest.

Appendix L: Checklist application form

- ☐ The consortium must consist of at least one research organisation and one for-profit enterprise
- ☐ The main applicant is located in the Netherlands
- ☐ The project has a duration of a maximum of 48 months, the end date should be before September 30th 2031
- ☐ The starting date is within six months after the awarding letter will be received
- ☐ Programme line 2: The project should start at least 12 months prior the end date of the host consortium.
- ☐ The chamber of commerce number or equivalent is listed for all consortium partners
- ☐ Effective collaboration takes place and is clear from the application. This means, for example, that the project is realized at joint cost and risk
- ☐ All consortium partners should make an *in-kind* contribution. This means that all consortium partners should at least incur payroll costs
- ☐ Research organisations may finance a maximum of 70% of their costs (e.g. man hours, consumables and the use of equipment etc.) with PPP subsidy in the case of fundamental/industrial research and a maximum of 60% of their costs in the case of experimental development.
- ☐ Dutch SMEs may finance a maximum of 60% of their costs (e.g. man hours, consumables and the use of equipment etc.) with PPP subsidy in the case of fundamental/industrial research and a maximum of 40% of their costs in the case of experimental development.
- ☐ The research organisation(s) must contribute at least 10% of the total project costs.
- ☐ Depending on the type of research the enterprise(s) must contribute at least 15% to 30% of the total project costs.
- ☐ Programme line 1 projects may consist of max 20% fundamental research. Programme line 2 and 3 projects contain no fundamental research.
- ☐ All parties, with the exception of the Lead applicant, must submit a letter of commitment using the provided format; a letter of intent is not sufficient
- ☐ If the application links to an existing consortium financed (in part) by the Dutch Heart Foundation, a letter confirming the collaboration with the existing consortium signed by the consortium leader(s) must be included in the application. Mandatory for applications in line 2.
- ☐ The consortium must submit an (unsigned) draft intra-consortium agreement (ICA) using the mandatory DHF template preferably with the submission of the application. If this is not possible the ICA (unsigned) must be submitted two weeks before the committee meeting.
- ☐ The budgeted costs are directly related to the R&D activities, and do not include non-eligible costs.
- ☐ All questions on the application form are answered.
- ☐ All SME's that apply for PPP Subsidy must submit a signed version of *'Verklaring geen onderneming in moeilijkheden' and a 'SME check'*.

Colofon

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