

Convergence of  
Health & Technology



# Call for Proposals- Flagship Programs

Round 2022

**Submission deadline**

March 15, 2022 at 13.00hrs

**Submit proposal**

Exclusively by email to:

[Flagships@erasmusmc.nl](mailto:Flagships@erasmusmc.nl)

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**Let's Shape**

**the Future**

**of Health(care)**

**Together**

# 1. Introduction

## 1.1 Background

Novel scientific knowledge as well as new technologies offer great potential for improving human wellbeing. Human behavior plays a crucial role in the successful adoption and use of knowledge and technology in addressing grand societal challenges. This is especially true in the health domain. Increased life spans, socioeconomic inequalities in health and longevity, novel diseases and the threat of rapidly increasing healthcare costs challenge the sustainability of our healthcare systems. We face the challenge to improve health and well-being and societal participation for all in an equitable way. Convergence<sup>1</sup> of a wide range of disciplines is called for: only by bringing together experts from the medical and health sciences, life sciences, technical and data sciences, social sciences and humanities can we succeed in making our healthcare system more proactive, precise, participatory, and labor friendly, and, through that, improve health for all. At the same time, developing innovative solutions for this transition and delivering them to the world represents an unprecedented economic opportunity.

In our joint mission, we aim for:

- Life-long health and well-being, from pre-birth to end of life
- Socio-economic equality in health(care)
- Prevention and early diagnostics to proactively maintain health
- Individual-tailored precise medical treatment for all

## 1.2 Convergence Health & Technology Themes

Via the open 'Convergence Health & Technology Flagship program call 2022', we intend to establish so-called 'Flagship programs' across the four central (and interrelated) Convergence Health & Technology themes: Fundamentals of Health & Disease, Human Centered Technology and AI for Health, Improving Health Journeys, and Technology Supported Transitions in Health(care).<sup>2</sup>

All Convergence Health & Technology themes have four pillars: (i) Research, (ii) Education, (iii) Facilities & Data infrastructure, and (iv) Fast-track innovation. The current 'Convergence Health & Technology Call for Flagship programs' explicitly focuses on the *Research pillar*: ambitious research programs organized within (at least) one of the four themes.

## 1.3 Aim

The aim of the Call for proposals for Flagship programs is to establish a Convergence Health & Technology scientific core-program and, in doing so, to develop and strengthen the scientific Convergence Health & Technology community within the TU Delft, Erasmus MC and Erasmus University Rotterdam.

'Convergence Health & Technology Flagship programs' will be ambitious collaborative research and innovation programs, led by front-running convergence research clusters. These will shape (at least one of) the four central Convergence Health & Technology themes, and thereby target major challenges in health and science in line with our joint mission.

A Flagship program is based on scientific ambitions, translated into a five-year research strategy with clear research design and planning. The envisaged results of a Flagship program have the potential for a significant and sustained impact on science, health(care) and society. A Flagship program has an initial time horizon of five years, but also a clear vision on continued collaboration within the program after that initial period.

Flagship Programs are research programs that directly or indirectly have a lasting impact on health(care) and technology. They provide a basis for establishing new, joint, sustainable, leading research groups (thus scientific staff that build a convergence community, also involving BSc and MSc students) between and across the three institutes. Flagship programs are characterized by the aims and principles of convergence, as stated under 1.1.

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<sup>1</sup> Convergence: The crossing of boundaries between institutes and disciplines to create new perspectives, methods and solutions to societal problems.

<sup>2</sup> See <https://convergencealliance.nl/health-technology/> for more info on these four research themes.

Furthermore, Flagship Programs contribute to the larger convergence community within the three institutions involved and have the potential to play a leading role in strengthening the impact of Convergence Health & Technology in the region South Holland and/or (inter)nationally.

## 1.4 Available budget

In the 2021-2022 round of the Flagship Program, approximately 8-10 Flagship programs can be funded.

## 1.5 Timeline

The timeline of the Call for proposals for Flagship Programs round 2021 can be found below.



## 2. Guidelines for applicants

### 2.1 Who can apply?

A Flagship program is carried out by a consortium: a well-organized team of scientists, researchers, engineers, health professionals led by Flagship leads. Ideally, each consortium has three Flagship leads with a tenured position at the three knowledge institutions. As a **minimum requirement**, Flagships programs should have two leads with a tenured position at one of the three knowledge institutions, meaning that the leads have paid employment at one of the founding organizations lasting at least until the end of the research period for which the funding is requested. A third Flagship lead could then for instance be a researcher on a tenure track.

Moreover, each Flagship has a **representation** from each of the three institutes in their research staff. Each Flagship also has a representation from **at least four** departments or faculties across the three knowledge institutions. Flagships that only include researchers from two institutions or with only two leads from two institutions are discouraged, but possible. In those cases, the applicants need to (i) clearly motivate why only two partners would suffice given the aim and broader context of the convergence and (ii) **always include** a lead from Erasmus MC. The consortium forming a Flagship program has **at least 10 scientific staff members** (tenured or tenure track) as consortium members (including the Flagship leads). This consortium is *expected to grow over time*<sup>3</sup>.

Considering the overall aim of targeting today's and tomorrow's grand societal challenges, a diverse consortium (in terms of discipline, research age, background) is an assessment criterion. Early career researchers are explicitly targeted to join consortia, to build a balanced community and to ensure career opportunities aligned with convergence.

External partners (from outside our three Knowledge Institutions) are accepted in a consortium. Nevertheless, the core group of the Flagship Program must be represented within our Convergence Health & Technology community (*at least 10 scientific staff members from our three institutions*). A justification on the added value and complementary expertise of the external partner's participation to the consortium is required. Only staff members at our three knowledge institutions can benefit from the central Convergence Health & Technology's funding.

<sup>3</sup> A person cannot function as Flagship lead on more than one proposal. However, both scientific and support staff can join more than one consortium as members.

## 2.2 Available funding and matching funding accepted

Central funding is available for **8-10 Flagships**, amounting to a **maximum** of € 400.000 annually per Flagship, for 5 years. Each granted Flagship will therefore kick-start with funding up to the **maximum of € 400.000 per year for a period of five years**. The total amount of direct funding received should be **matched by at least the same amount of external funding**. Hence, if Convergence Health & Technology will provide € 400.000 per year to a Flagship program, the consortium must match this with *at least* € 400.000 per year of external funding. The central funding will be re-evaluated based on the yearly reports of matched funding (see section 2.5).

*Examples of what counts as external funding:*

- Regional, national, and international public funding granted to a staff member of one of the three Knowledge Institutions.
- Private funding (e.g. industries and foundations) granted to a staff member of one of the three Knowledge Institutions.

External matching funding can be *in cash* and *in kind*<sup>4</sup>, and comes from public and/or private money streams. **At least half of the external matching funding must be in cash** over the 5-year Flagship period. With '*in cash*' we here mean a transfer of external money to the project, that can be used in line with the goals of the program, e.g. to hire new staff at one of the three institutions. *In-cash* and *in-kind* matching funding should be confirmed in **letter(s) of intent or other confirmations/documentation of matching**, whenever available. An **overview of contributions** of committed and potential external partners that account for the matching funding (in kind and in cash) should be included in the application form and the budget table. Note that the listed matching funds do not need to cover the full period / amount requested during the full program but should substantiate the feasibility of attracting (sufficient) external funding. Budgets and financial sustainability will be evaluated by the assessment committee (see under 3.2).

### Matching external grants

Existing external grants can be used in the context of meeting the external matching requirements but should be clearly connected to the Flagship program and the Convergence within it. Hence, such existing external funds should be well aligned, thematically, with the Flagship program and be received by a researcher within the proposed consortium and already involve researchers from the relevant knowledge institutes. Matching funding from existing projects that meet the above requirements can be used as matching only during the **first two years** of the Flagship program and should at least cover one year.

The kick-start funding is mainly intended for **new staff** (preferably post-docs and tenure trackers) with the aim to support, educate, and stimulate researchers with explicit convergence skills. Existing fixed positions cannot be funded from these funds. Since the aim of the program is to build **sustainable communities, a plan for sustainability of a Flagship and its community** is mandatory. Staff funded must be employed by TU Delft, Erasmus MC or Erasmus University Rotterdam. **State-of-the art facilities and future-proof infrastructure** which are necessary to successfully conduct these Flagship programs are also eligible as part of the funding.

## 2.3 When can a proposal be submitted

The submission deadline for Flagship proposals is 15 March 2022, 13.00hrs. Proposals that are sent in later than this deadline will not be processed. Also, proposals cannot be altered after the submission deadline. You can however at any moment decide to withdraw your proposal.

All proposals need to be sent to [Flagships@erasmusmc.nl](mailto:Flagships@erasmusmc.nl) before the submission deadline.

It is possible to submit a full proposal without having submitted a pre-proposal. Nevertheless, contacting the Theme leads before submitting a proposal is highly recommended (see section 4.2 for contact details).

## 2.4 Preparing a proposal

When drawing up a full proposal for a Flagship Program, (i) the application form, (ii) the budget table, and (iii) the letter(s) of intent from committed external partners providing matching funding are mandatory. A justification on (a)

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<sup>4</sup> The salaries of employees from our three knowledge institutions do not count as in-kind contribution and cannot be used as matching funding. The salaries of employees from e.g. a private company can be considered as in-kind contribution.

how the matching funding from ongoing projects and (b) how the new planned grant applications are linked to the Flagship will be required in the application form. **No other documents or hyperlinks can be sent in.** Other documents accompanying the proposal will not be sent to the external jury. For any questions regarding consortium or expertise needed, it is advised to contact the Theme leads (see section 4.2).

***In sum, the eligibility criteria are:***

1. A Flagship has three leads at the three knowledge institutions. Two leads are accepted if thoroughly justified. At least two leads have a tenured position.
2. A Flagship must always have a lead from Erasmus MC.
3. The three knowledge institutions are represented in the research staff that is part of the consortium.
4. The consortium has a representation from at least four departments or faculties across the three knowledge institutions.
5. The consortium forming a Flagship program has at least 10 scientific staff members (tenured or tenure track) as consortium members (including the Flagship leads).
6. In the application form, the word count per section is respected. Exceeding the word count will lead to rejecting the whole application.
7. The application includes (i) the application form (in Word or PDF), (ii) the budget table (in Excel) and (iii) the letters of intent or other confirmations/documentation of matching funding. No other documents or hyperlinks are accepted.
8. The application is sent before **March 15, 13:00 by email, exclusively at: [Flagships@erasmusmc.nl](mailto:Flagships@erasmusmc.nl)**.

## 2.5 Funding conditions

The Convergence Health & Technology Program Board will monitor the progress of the Flagship programs on a yearly basis and will encourage them to participate at the forefront of the international research field. Therefore, it is preferred that the programs **align with relevant research agendas**, including the National Growth Fund (Nationale Groeifonds: o.a. MedTechNL), those of the Dutch National Research Agenda (Nationale Wetenschapsagenda: NWA), the Netherlands Federation of University Medical Centres (Nederlandse Federatie van Universitair Medische Centra: NFU), the high-tech systems and materials (HTSM), life sciences and health sectors, the European Research Area and the United Nations Sustainable Development Goals (SDGs), to name a few.

Applications with “high risk, high gain” plans that do not fit with the current (mentioned above) research agendas are also accepted through this Convergence Health & Technology Flagship Programs call. In those cases, it is even more important for the applicants to (i) thoroughly demonstrate the relevancy and novel aspects of their program and (ii) explain how the external matching funding (public or private) will be provided by including letter(s) of intent from your external partners.

When a proposal is granted, the budget will be made available to the department of one of the Flagship leads. This department will then be the financial secretary and provide a financial report on a yearly basis. This report, together with a brief update, will be discussed in the Convergence Health & Technology Management Board.

All Flagship programs granted in this first round will be undergoing a midterm review in the second half of 2025. Midterm results and recommendations will be discussed in the Management Board before the summer of 2025. The Management Board will also review the status of external funding. Based on progress made and expected external funding, the Management Board can decide to make financial adjustments in the central funding over the remaining period.

Changes to both the research program or the budget need to be put before the Management Board in a written request, explaining causes and effects of these changes.

All staff involved in a Flagship program is expected to adhere to their own institution’s policy related to research integrity and data management.

## 3. Assessment Procedure

### 3.1 Procedure

The first step in the assessment procedure is to test whether an application is admissible. Only those proposals that satisfy the points stated under 2.1 and 2.2. are admissible and will be taken into consideration. Related to personal interests, the KNAW Code of conduct related to conflicts of interest is applicable. See also <https://www.knaw.nl/shared/resources/actueel/publicaties/pdf/code-of-conduct-relating-to-conflicts-of-interest>.

For the assessment of the proposals, an **international committee** (chaired by a national technical chair) will receive all full proposals. The committee members will each assess a selection of the full proposals and score them according to the evaluation criteria stated in section 3.2. The **theme leads will provide guidance**<sup>5</sup> to the international committee on their vision for their respective theme. Based on these evaluations, a selected group of proposals will be **invited to an interview** with the entire committee to clarify questions. Afterwards, the committee will discuss the proposals and the interviews based on the assessment criteria and reach a final scoring of the full proposals. The task of the committee is to make their own independent consideration based on the proposal. The committee will issue an advice to the Management Board of Convergence Health & Technology about the evaluation and scoring of the proposals.

The Management Board will then make a final decision on which proposals will be granted, guided by the external committee's scoring and advice, but potentially also by broader strategic considerations.

### 3.2 Evaluation criteria

The full proposals for Flagship program will be evaluated on the following criteria:

#### Relevance to the Convergence Health & Technology mission (50%)

- The Flagship program contributes to the Convergence Health & Technology mission
- The Flagship program objectives fit with the guidance per theme provided by the theme leads, and/or fit with more than one theme of Convergence Health & Technology
- The Flagship program **merges approaches and insights from distinct disciplines** to reach its goals
- The staff granted by this call actively brings together different disciplines within the program, and creates visibility and attracts talents, partners, and funding for the program
- The Flagship program has a clear view on long term sustainability after the 5-year central funding period
- The envisioned results of the Flagship program have the potential for a significant contribution to healthcare, society and/or have scientific impact which has the potential for long-term societal impact
- The Flagship program provides opportunities for BSc and/or MSc students of the participating institutes to participate in (interdisciplinary) projects
- The proposal defines the pathway of how this contribution can be realized. The pathway includes concrete research and/or impact pathway (societal and/or economical) valorization strategies

#### Quality of the Flagship program (25%)

- The Flagship program contributes to excellent Convergence Health & Technology research, at the forefront of international research
- The Flagship program is both innovative as well as challenging in its research and approach
- The Flagship program has a clear strategy to engage students in its research plan
- The Flagship program has a clear aim and long-term work plan, including, if applicable, a specification of required facilities and a data-and infrastructure plan. Coherence within the program is clearly demonstrated
- The Flagship program aligns with or builds on (inter)national research agendas in this field.

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<sup>5</sup> The guidance per theme will be communicated with the Convergence Health & Technology's community before the end of 2021

or the Flagship program does not necessarily fit with the (inter)national research agendas but has a “high risk, high gain” main objective that is thoroughly explained

- The Flagship program is feasible in terms of research performed, staff and budget needed
- The Flagship program has a concrete plan for attracting external funding, which should result in **at least** the same amount as the central funding over the 5-year period

#### Quality of the consortium (25%)

- The Flagship program is driven and executed by a well-organized team of scientists from all three institutions and at least 4 departments or faculties in total. In exceptional cases, it is possible to form a Flagship program with only two leads from two institutions, but this should be clearly motivated
- Members of the consortium have a track record of excellence in academic research, translation of scientific results into clinical application or societal impact
- Members of the consortium have a significant track record in engaging and supervising BSc and MSc students in research projects
- Members of the consortium have demonstrated to be able to attract external funding, thereby enhancing the programs sustainability after the 5 years of central funding
- There is a demonstrable fit between the aims and objectives of the program and the expertise of the consortium members
- End users (private and/or public sectors) are involved from an early start and team members are well-connected to external partners in the ecosystem
- Governance should be clearly described and is organized in such a way that it facilitates collaboration and optimally makes use of the expertise of all participants

## 4 Contact details and other information

### 4.1 Contact

For specific questions regarding the Call for proposals, please send an email to: [Flagships@erasmusmc.nl](mailto:Flagships@erasmusmc.nl).

### 4.2 Theme leads

For questions about the themes, you can contact one of the theme leads

Fundamentals of Health & Disease	Joost Gribnau	j.gribnau@erasmusmc.nl
	Saša Kenjereš	s.kenjeres@tudelft.nl
Improving Health Journeys	Arfan Ikram	m.a.ikram@erasmusmc.nl
	Maureen Rutten-van Molken	m.rutten@eshpm.eur.nl
Technology Supported Transitions in Health(care)	Valentijn Visch	v.t.visch@tudelft.nl
	Manon Hillegers	m.hillegers@erasmusmc.nl
	Albert Wagemans	wagemans@ese.eur.nl
Human-Centered Technology & AI for Health	Wiro Niessen	w.niessen@erasmusmc.nl
	Jaap Harlaar	j.harlaar@tudelft.nl