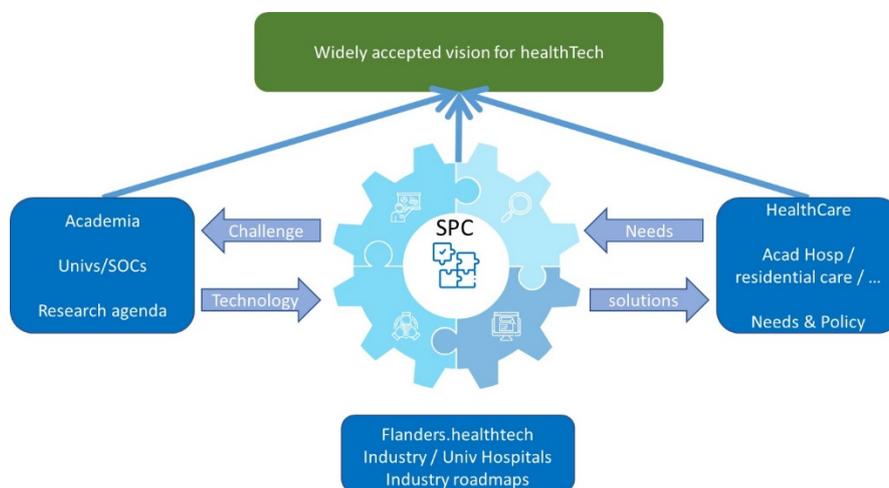


Project call 2021 flanders.healthTech

Flanders' healthTech spearhead cluster stimulates innovations and collaboration within the technology crossover between the domains of biotech, medtech and nanotech (=electronics, photonics and ICT). It solicits innovative projects that address at least two of the three domains.

Flanders.healthTech acts as a central innovation facilitator focused on projects that on the one hand boost technology development by companies and research institutions (technology/solutions), and on the other hand alleviate concrete needs in healthcare (needs/challenges) through innovation. Based on this vision, this first call deals with two types of projects that fit the above criteria.



1 Type “Fast experimental exploration”

1.1 Embedding in the cluster strategy:

The cluster approach stimulates innovations and collaboration within the technology crossover of biotech, medtech and nanotech (=electronics, photonics and ICT). Each project must fit within this cross-over approach, therefore at least two of the three domains must be addressed.

Each project of type "Fast experimental exploration" must fall within one of the four overarching themes of the spearhead cluster - and associated 14 sub-themes. Those are:

1.1.1 Value based efficient healthcare

- Develop technologies to reinforce operational excellence in advanced clinical trials
- Support better performing and interconnected medical practice workflows (hospital and beyond) – and personal care trajectories
- Create faster access for physicians to appropriate diagnostics data & comparative treatment options

- Use technologies to optimise use of required resources during COVID-like acute events/healthcare crises + continuity of care

1.1.2 Personalised medicine

- Supportive technologies to improve patient stratification in selection of treatments
- Merge technologies to support approval of personalised Cell & Gene therapies
- Realise more patient specific manufacturing & logistics
- Build optimised implants, surgical tools, exoskeletons,...

1.1.3 Digital medicine

- Intensify the development and use of better, evidence based, digital diagnostics & therapeutics + biofeedback
- Support medical decisions for physicians by smarter medical algorithms

1.1.4 Disruptive Health solutions

- Create new disease insights through unmatched technologies & cross tech platforms
- Gain new insights through exploration of existing clinical data
- Explore the promise of new smart sensing and smart delivery technology
- Strengthen the development of innovative biocompatible materials

1.2 Eligibility :

- The project proposal is pre-notified to flanders.healthTech before applicable deadlines.
- The project proposal meets the admissibility criteria of the VLAIO business innovation support.
- The project fits within the crossover approach of flanders.healthTech: at least two of the three domains must be addressed. The domains are: biotech / medtech / nanotech (electronics or photonics or ICT).
- Each project must fit within the 4 overarching themes and the 14 sub-themes of flanders.healthTech.
- The project duration is between 6 months and 12 months.
- Each project must consist of a consortium of at least three independent Flemish companies (whereby Flemish hospitals/care institutions count as Flemish companies).
- At least one of the company project partners is a member of flanders.healthTech.
- There should be substantial collaboration between the different partners.
- No dominant partner in the consortium (representing more than 70% of the project budget).
- The project application is written in English.
- The application meets the DNSH criterion (do no serious harm).

1.3 Evaluation criteria:

The evaluation of the project proposals is based on a combination of the VLAIO evaluation criteria as described in the explanatory document for Development and Research Projects.

Criteria specific to the flanders.healthTech cluster strategy and to the specific themes of the project call are added to the VLAIO criteria

1.3.1 VLAIO-criteria

- **Additionality: Incentive effect of the aid.** This criterion evaluates the extent to which the aid effectively has an incentive effect and is necessary for the company to carry out the project.
- **Impact: Quality of the business case & Expected economic and social effects for the company and for Flanders.** This criterion examines whether there is a quality business case that can lead to short-term growth for the company and is also in line with its strategy. The impact of this on the Flemish economic and social ecosystem is also evaluated.
- **Potential to achieve impact:** External and internal factors of influence. This criterion assesses whether the company has the necessary competencies and a suitable starting position to realize the proposed business case. In addition, it assesses whether market conditions and other external factors are sufficiently favourable.
- **Objectives: Innovative character.** This criterion evaluates whether the project objectives meet the legal framework for support: Is there a clear and innovative objective with challenges (i.e. development risks) and is there sufficient internal knowledge building?
- **Potential to achieve objectives: Relevance and quality of approach & Expertise and resources.** This criterion assesses whether the project approach is adequate to achieve the stated objectives and is sufficiently aligned with the challenges and valorisation goals. It also evaluates whether the right expertise is used and the deployment of people and resources is effective.

1.3.2 Specific cluster criteria

- Fit within the themes of the call
- The project must fit within the crossover approach of flanders.healthTech: at least two of the three domains must be addressed. The domains are: biotech, medtech and nanotech (=electronics, photonics, ICT).
- Each project must fit within the 4 overarching themes and the 14 sub-themes of flanders.healthTech.
- The project aims at realizing a demonstrator at level of minimum TRL5 (demonstration in a relevant environment) to maximum TRL7 (demonstration in operational environment).

1.4 Support rate:

The support rates are governed by the guidelines of the VLAIO business innovation support.

Given the substantial cooperation requirement, a 10% top-up is applied, resulting in attainable support rates for organisations between 35% and 50% if the project is granted development aid and between 35% and 60% if the project is granted research aid after evaluation by VLAIO.

The maximum project budget is set at 220,000EUR per project partner.

For a consortium of 3 partners and a project lead time of 6 months to a year, this yields a maximum project budget of 660,000 EUR and a maximum research support of 396,000 EUR (assuming 3 SME companies).

For a project with 4 partners, the maximum project budget then increases to 880,000 EUR and the maximum project funding to 528,000 EUR of research support.

2 Type “Focused collaboration on concrete opportunities”

2.1 Themes

The cluster approach stimulates innovations and collaboration within the technology crossover of biotech, medtech and nanotech (=electronics, photonics and ICT). Each project must fit within this cross-over approach, therefore at least two of the three domains must be addressed.

Five priority themes were defined for the “Focused collaboration on concrete opportunities” type of projects within this crossover strategy:

2.1.1 Theme 1: Interconnected ICUs

Ensuring and further improving high quality care to patients in an intensive care unit requires the development of an innovative software platform (including generation of associated database(s)) with 3 different synergistic and integrated functionalities:

- Real-time data capture of the relevant clinical parameters of all "intensive care unit" (ICU) patients to support real-time/"live" interactions and advice between healthcare providers and hospitals.
- A performant state-of-the-art "clinical trial module" to enable fast and efficient inclusion and follow-up (linked eCRF,) of ICU patients in clinical trials.
- Extensive data capture with highly granular data (e.g., physiological variables) to facilitate high-level research for the development of prediction models and other AI applications.

2.1.2 Theme 2: Virtual Hospital / Hospital@Home

Integrated care and prevention, in collaboration with primary care, needs to focus on further development of digital care pathways to enable virtual consultations, education, digital therapy, remote monitoring, etc. An app or a different method of digital interaction with the patient can ensure that a patient is followed up, for example after an operation, receives further advice and/or adjustment, as a result of which new hospitalization and unnecessary outpatient consultations can be avoided. Interacting digitally with the patient can also help the patient -for example- to better prepare themselves prior to an admission to the hospital. The use of innovative technologies such as wearables for telemonitoring and care via digital means will contribute to shorter hospitalization times/faster return home for the patient.

2.1.3 Theme 3: Image analysis & AI

The development and controlled implementation of new image analysis techniques for a use beyond the usual state-of-the-art of medical images. This includes (further) implementation of innovative data/image analysis techniques (based on artificial intelligence/machine learning/deep learning) that allow for support in the analysis of images, such as for example in post-operative imaging for follow-up examinations over time, for computer-assisted interpretation of images of frequently occurring pathologies or (big volume) screening examinations, to deploy images in augmented reality supported robotic laparoscopy, for

characterization of certain lesions, in image processing of CT scans to follow up muscle mass,...

2.1.4 Theme 4: Multi-omics healthcare – screening/prevention

The goal of "multi-omics-healthcare" is, among others, to extract different aspects of preventive medicine (such as disease carrier, polygenic risk scores (PRS), pharmacogenetic aspects) from genomic data and use them for preventive care. Another important application of multi-omics-based healthcare is linking genomic (and other biomarker) information with patient's medication outcomes to understand the effect of genetic variation and adjust medication accordingly.

2.1.5 Theme 5: Small meaningful data/big data lakes

The theme "small meaningful data/big data lakes" deals with the (further) development of applications of, among others, machine learning in predictive care models with associated methodologies of decision support. Examples include the application of AI to patient data where, based on about 12 patient-based characteristics, the expected hospitalization time is calculated, decision support for the identification of admission units and set treatments after registration in the emergency department, decision support for surgical treatments, etc.

2.2 Eligibility:

- The project proposal is pre-notified to flanders.healthTech before applicable deadlines.
- The project proposal meets the admissibility criteria of the VLAIO business innovation support.
- The project fits within the crossover approach of flanders.healthTech: at least two of the three domains must be addressed. The domains are: biotech / medtech / nanotech (electronics or photonics or ICT).
- Each project proposal must fit within one of the five priority domains defined for this call for projects.
- Projects have a maximum duration of 2 years.
- A consortium of at least four partners:
 - o 3 independent Flemish companies
 - o One hospital/care institution and/or knowledge institution
- At least one of the company project partners is a member of flanders.healthTech.
- There should be substantial collaboration between the different partners.
- No dominant partner in the consortium (representing more than 70% of the project budget).
- The project application is written in English.
- The application meets the DNSH criterion (do no serious harm).

2.3 Evaluation criteria:

The evaluation of the project proposals is based on a combination of the VLAIO evaluation criteria as described in the explanatory document for Development and Research Projects. Criteria specific to the flanders.healthTech cluster strategy and to the specific themes of the project call are added to the VLAIO criteria

2.3.1 VLAIO-criteria

- **Additionality: Incentive effect of the aid.** This criterion evaluates the extent to which the aid effectively has an incentive effect and is necessary for the company to carry out the project.
- **Impact: Quality of the business case & Expected economic and social effects for the company and for Flanders.** This criterion examines whether there is a quality business case that can lead to short-term growth for the company and is also in line with its strategy. The impact of this on the Flemish economic and social ecosystem is also evaluated.
- **Potential to achieve impact:** External and internal factors of influence. This criterion assesses whether the company has the necessary competencies and a suitable starting position to realize the proposed business case. In addition, it assesses whether market conditions and other external factors are sufficiently favourable.
- **Objectives: Innovative character.** This criterion evaluates whether the project objectives meet the legal framework for support: Is there a clear and innovative objective with challenges (i.e. development risks) and is there sufficient internal knowledge building?
- **Potential to achieve objectives: Relevance and quality of approach & Expertise and resources.** This criterion assesses whether the project approach is adequate to achieve the stated objectives and is sufficiently aligned with the challenges and valorisation goals. It also evaluates whether the right expertise is used and the deployment of people and resources is effective.

2.3.2 Specific clustercriteria

- Fit within the themes of the call
- The project must fit within the crossover approach of flanders.healthtech: at least two of the three domains must be addressed. The domains are: biotech / medtech / nanotech (electronics or photonics or ICT).
- Each project must fit within one of the five priority domains defined for this call for projects.
- The project aims at realizing a demonstrator at TRL7 level (demonstration in operational environment).

2.4 Support rate:

The support rates are governed by the guidelines of the VLAIO business innovation support.

Given the substantial cooperation requirement, a 10% top-up is applied, resulting in attainable support rates for organisations between 35% and 50% if the project is granted development aid and between 35% and 60% if the project is granted research aid after evaluation by VLAIO.

The maximum volume of support per project per year is limited to 500,000 EUR, or 1mio EUR for a two-year project. This represents a project budget of approximately 3mio EUR for a two-year project.

3 Procedure for both projecttypes

1. Application

- Each project proposal should be notified in advance to flanders.healthTech prior to July 17, 2021.
- Notification website: <https://flandershealth.tech/call-for-projects/> Each project can be notified through the form at the bottom of the page.
- Given the short deadlines, the notification can be done in an early stage based on the preliminary information such as project idea, project type, cross over technology domain. This means that project ideas for notification do yet not need a fully identified consortium, nor do all partners need to be present at the sparring meeting.
- At least one preliminary meeting should take place between representatives of the project consortium and flanders.healthTech staff.

2. Abstract:

- 5 page abstract, deadline Monday, August 23, 2021- 8h00
- Content:
 - o Consortium partners + budget
 - o Project idea: starting point and intended innovation & demonstrator
 - o Available expertise of the consortium in the context of the envisaged innovation
 - o Valorisation rationale (no detailed business plan yet). In accordance with VLAIO guidelines, the valorisation must be substantiated; this can be both with an economic and social finality.
 - o Valorisation rationale (no detailed business plan yet). In accordance with VLAIO guidelines, the valorisation must be argued; this can be both with an economic and social finality.
 - o Integration in the cluster approach
- Pitch + Q&A of abstract before an external jury on September 1,2 or 3, 2021. This pitch will be organised live on location, conform the COVID guidelines at that time.
- Jury makes a ranking of the proposals
- Decision based on jury's advice will be communicated by Wednesday, September 8.
- No appeal possible on decision abstract

3. Full project proposal (if positive recommendation on abstract)

- Full project proposal in accordance with VLAIO guidelines
- Deadline: Monday, October 4, 2021 - 8h00.
- Evaluation through VLAIO procedure (admissibility, experts, etc.)
- Decision to grant support: December 2021

4. Start project: January 2022