

Vinnovate Call 2024 – Guide for Applicants

This Guide for Applicants is the main practical reference document for preparing and submitting Vinnovate 2024 proposals.

*N.B: Persons with reading disabilities can contact the Vinnovate Secretariat
(vinnovate@s3vanguardinitiative.eu)*

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1. Intro and background- Grants available for supporting interregional projects

VInnovate Call 2024 will support the implementation of **interregional collaboration projects (TRL6-TRL8¹)** through the issuing of grants. The call aims at enabling the development and deployment of SMEs-led solutions, directly contributing to the transitions towards a more sustainable, a smarter or a less dependent industry. Interregional cooperation is very often instrumental in developing such complex solutions, connecting expertise and technologies across borders.

As detailed in chapter 2, projects consortia will be composed of at least one **SME cooperating** with either other SMEs, Large Companies, Universities, Research/Facility centres or Research and Technology infrastructures. The scope of the supported projects will be thematically linked to at least one of the current **8 pilots of the Vanguard Initiative** (see chapter 2 for more information).

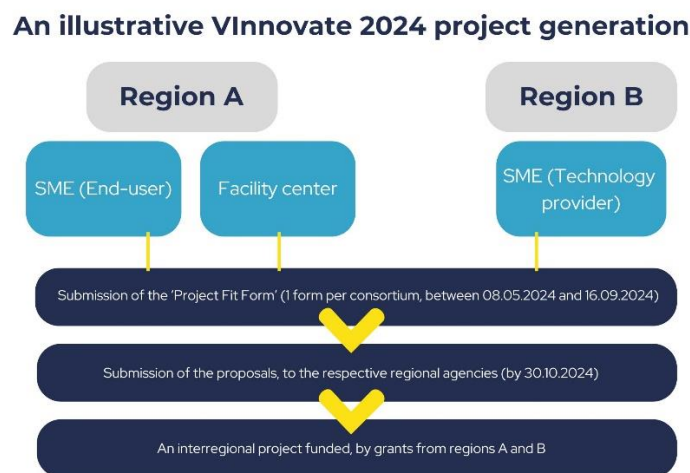
VInnovate Call 2024 is the first Call issued through the VInnovate Mechanism. The VInnovate mechanism has been developed² by the **Vanguard Initiative (VI)** and its participating regions. The strategic objective is to offer appropriate and timely funding opportunities for the implementation of industry-led and strategic interregional projects, therefore fully **realising VI ambition**.

As detailed in chapter 4, the **following key milestones characterise the submission process**:

- First, an interregional consortium will elaborate and submit a **‘Project Fit Form’** (during the period 08-05-2024-16.09.2024).
- Then, pending a positive assessment made by the VInnovate Secretariat, each applicant from the consortium will submit, by no later than 30.10.2024, the project **proposal to its respective regional agency, and following the corresponding regional instrument’s requirements**.
- The project is **selected for funding if all regions involved do select the project for funding** (see chapter 4).

The figure below illustrates the submission process and associated funding logic, based on a **purely illustrative (!) example**. Note that such an example does not provide any indications in terms of e.g. types and optimal number of participating partners, nor in terms of optimal number of regions. See chapter 2 for more information regarding the projects requirements and eligibility criteria.

Figure 1: VInnovate main funding principle, a purely illustrative example



¹ See [here](#) for a definition of Technology Readiness Levels (TRLs).

² Following a project coordinated by [IDEA Consult](#), which included the following analyses: funding needs of VI pilots, current interregional funding landscape (including review of initiatives like from IRA-SME, ERA-Learn, etc.), preferences and ambitions of regions in terms of mechanisms, operationalisation of preferred option.

2. Vinnovate Call 2024 Projects requirements

2.1. Targeted beneficiaries

The following eligibility criteria will hold for Vinnovate Call 2024 projects:

- The Vinnovate beneficiaries must be all be located in a Vinnovate 2024 member region/country, i.e. East NL (*Gelderland and Overijssel provinces*), Norte, Wallonia, South NL (*Noord Brabant province*), North East Romania, Flanders, Galicia, Lower Saxony, Emilia-Romagna, Lower Austria, Wales.
- The project consortium can be eventually complemented with additional partners (“associated partners”); not funded through instruments activated in Vinnovate 2024. Such associated partners should therefore secure other funding sources (private, regional, etc.).
- Each project consortium will be composed of Vinnovate beneficiaries (excl. “associated partners”) complying with the following criteria:
 - at least 2 organisations located in at least 2 distinct Vinnovate member regions/states (see list above) AND at least 2 distinct countries (namely Italy, Austria, Germany, Spain, the Netherlands, Belgium, Wales, Romania, Portugal). Beyond ‘interregional cooperation’, each project should therefore promote international cooperation;
 - at least one SME (following EC definition available [here](#)).

In addition to one or several SMEs, a Vinnovate consortium can potentially be composed of Large Companies, Universities, Research/Facility centres or Research and Technology infrastructures. **Applicants are requested to consult the description of their respective regional/national instrument (see instruments descriptions [here](#)) in order to be informed about the specific regional/national eligibility criteria in terms of the types of possible beneficiaries.** In general, and in addition the criteria above, every Vinnovate applicant will have to comply with requirements of the regional/national instrument to which the beneficiary is applying. We list in a box below [examples](#) of specific restrictions/requirements applying at regional level. Below, you will find a general overview regarding the type of actors eligible per region.

Type of organisations eligible for funding, per region

SMEs	Large companies	Universities	Research / facility centers
<ul style="list-style-type: none"> East NL (Gelderland and Overijssel provinces) South NL (Noord Brabant province) North East Romania Norte Wallonia Lower Austria Emilia-Romagna Lower Saxony Galicia Wales Flanders 	<ul style="list-style-type: none"> East NL (Gelderland and Overijssel provinces)* South NL (Noord Brabant province) Wallonia* Emilia-Romagna Galicia Wales Flanders 	<ul style="list-style-type: none"> East NL (Gelderland and Overijssel provinces)* South NL (Noord Brabant province) Norte* Wallonia* Emilia-Romagna Lower Saxony* Wales Flanders 	<ul style="list-style-type: none"> East NL (Gelderland and Overijssel provinces)* South NL (Noord Brabant province) Norte* Wallonia* Emilia-Romagna Lower Saxony* Wales Flanders

* In cooperation with at least one SME from the region

Box 1 : Examples of national/regional instruments' specificities regarding possible beneficiaries

- EAST NL: in order to be eligible, projects involving actors from EAST NL need to be composed of at least one SME located in the region (i.e. not possible to have a project with only one university or facility centre located in EAST-NL, without a corresponding SME partner from the region)
- Wallonia: in order to be eligible, projects involving actors from Wallonia need to be composed of at least one SME located in the region (i.e. not possible to have a project with only one university or facility centre located in Wallonia, without a corresponding SME partner from the region)
- Lower Saxony: in order to be eligible, projects involving actors from Lower Saxony need to be composed of at least one SME located in the region (i.e. not possible to have a project with only one university or facility centre located in Lower Saxony, without a corresponding SME partner from the region)
- Norte: in order to be eligible, projects involving actors from Norte need to be composed of at least one SME located in the region (i.e. not possible to have a project with only one university or facility centre located in Norte, without a corresponding SME partner from the region)
- Etc.

For an overview of the instruments please visit the instruments descriptions [here](#).

2.2. Supported activities: types, costs and duration

- VInnovate Call 2024 will support activities at TRL6, TRL7 and/or TRL8, i.e. VInnovate will support post-prototyping activities³.
- The total project costs will be of minimum 100.000 € project cost per project (i.e. the sum of total costs of each partner in the project must be higher than 100.000 €).
- The project duration will be of maximum 36 months.

In addition to such criteria, every VInnovate candidate will have to comply with requirements (for example, regarding a maximum grant amount possibly set at regional level) of the regional/national instrument to which the beneficiary is applying. For an overview of the instruments please visit the instruments descriptions [here](#).

In general, the following types of costs can potentially be eligible for funding: Personnel costs, Subcontracting costs, Purchase costs (travel, equipment, consumables), indirect costs. Applicants are requested to check the regional instrument descriptions [here](#) for a confirmation of eligible costs.

2.3. Scope

Each project will aim at developing solution(s) that will support at least one of the following transitions: 1) a smarter and/or 2) a more sustainable and/or 3) a more autonomous/less dependent⁴ industry.

In addition to the previous criteria, each project must be linked (thematically) to at least one of the 8 VI pilots: 1) *New Nano-Enabled Products*; 2) *Bio-Economy*; 3) *Efficient Sustainable Manufacturing*; 4) *High-Performance Production through 3D Printing*; 5) *Advanced Manufacturing for Energy-related Applications in Harsh Environments*; 6) *Smart Health*; 7) *Artificial Intelligence*; 8) *Hydrogen*. More information about **the scope of each pilot can be found in the Annex of the present document**. (N.B.: should applicants have any questions or concerns regarding the linkages between their project idea and the pilots

³ While this is not the core target, activities at TRL5 can be potentially eligible for funding in a VInnovate project if a substantial part of the project activities (more than 50% of the project costs) are associated to activities at higher (post TRL6) TRL levels.

⁴ Projects developing solutions for that transition must demonstrate they will considerably reduce the European dependency on other regions for deep-tech innovations as well as for services of strategic interest.

scope, they are invited to first consult the annex of the present document and then, if needed, contact the pilots leads, whose contact details are indicated on the respective [webpages](#)).

In addition to such criteria, every VInnovate candidate will have to comply with requirements of the regional/national instrument to which the beneficiary is applying. For an overview of the instruments please visit the instruments descriptions [here](#).

3. Timeline VInnovate Call 2024

Below, the timeline is presented. Please consult chapter 4 for information about processes and requirements at every main step.

- 8th of May 2024 (17:00 CET) : Opening of the Call
- 15th of May 2024 (11:00 – 12:30 CET): Info Day, register [here](#)
- 16th of September 2024 (23:59 CET): Closing of the submission of project fit form (1 form per consortium)
 - o *N.B.: We highly recommend applicants to submit their project fit form as early as possible, before the 16.09.2024, in order to 1) receive the assessment on the project fit form as early as possible and therefore 2) have sufficient time to elaborate on the ‘regional proposals’ (see below).*
- 30th October 2024 (23:59 CET): Closing of the submission of proposals to regional funding agencies (i.e. ‘regional’ proposals)
- 18th of December 2024: Communication results to applicants
- December 2024/February 2025: Signing of consortium agreement and funding negotiations, according to the respective regional/national rules, if necessary.
- Early 2025: Projects selected for funding are expected to start their activities no later than 3 months after the funding decision was communicated to them.

4. Application Procedure and Funding

The figure below provides a description of the main application steps. Prior to these steps, VI Pilots activities will facilitate the generation of project ideas. All relevant steps are then being described more in details.

Submission process



4.1. Step 1 – Being supported in designing a project idea and consortium

Potential applicants (especially SMEs) can receive support towards elaborating possible proposals. Three complementary channels can be activated:

1. **Projects generation-activities will be organised by VI Pilots.** More information about each pilot can be found in the Annex and [here](#). In every of the 8-pilots dedicated webpages, possible applicants will find the contact details of the pilot lead: applicants are invited to contact targeted pilots leads in order to 1) receive more information about upcoming projects generation activities and 2) eventually ask further information about the thematic focus of a given pilot, to guarantee alignment between a project idea and a pilot's scope.
2. Beyond such activities, potential applicants can consult the **Vanguard Initiative online 'partners search' tool available [here](#)**. Any organisation active in one of the 8 pilots' scope can create a profile, express interest in the VInnovate Call 2024 (incl. detailing type of partners they are looking for) and/or contact organisations already having expressed interest on the page.
3. Finally, applicants can **contact the VInnovate Secretariat** (vinnovate@s3vanguardinitiative.eu), acting as helpdesk. Applicants can also directly consult the FAQ page [here](#).

4.2. Step 2 – Submission of VInnovate 'Project Fit Form' (between 08.05.2024 and 16.09.2024)

The 'Project Fit Form' template is available [here](#). This short form must be filled-out (1 form per consortium), signed by the consortium partners, and sent as an attachment to the following email address vinnovate@s3vanguardinitiative.eu, by the interregional project coordinator⁵ of the project. Any project fit form (dully completed and signed) will have to be submitted before 16.09.2024 (23:59 CET). We encourage applicants to submit their 'Project Fit Form' as soon as possible: this will give them more time to prepare the actual proposals (see step 4 below).

This is a compulsory step aimed at facilitating the generation of potentially eligible project ideas. In particular, the form will guide applicants in fulfilling the VInnovate Call 2024 eligibility criteria (through 'self-declaration statements') and in establishing the international consortium (and their corresponding regional instruments).

4.3. Step 3 – Assessment Project Fit Form, in no more than 10 working days

During the period 08.05.2024-16.09.2024, any submitted Project Fit Form will be assessed by the VInnovate secretariat, in no more than 10 working days. This assessment will focus on the VInnovate eligibility criteria and on ensuring that there is no major inadequacy identified between the partners, their activities and the targeted regional funding instruments. Such assessment does not encompass an evaluation of the quality of the proposed project nor a proper and binding regional eligibility check, which will be performed in step 4.

Following the assessment, the applicants will receive an email from the VInnovate secretariat informing them about the outcome:

- In case of positive assessment, 'regional' proposals (see step 4) can be submitted (of course, these proposals can be prepared before that). A positive assessment should not be considered as an indication of selection for funding (see steps 4 and 5).
- In case of a negative assessment, modifications to and resubmission of project fit forms are possible (before 16.09.2024 (23:59 CET)).

4.4. Step 4 - Submission of proposals to the respective regional funding agencies

Once the 'project fit form' was positively assessed, applicants can proceed with the submission of 'regional proposals' (i.e. proposals to be submitted by every partner to their corresponding regional/national agencies).

⁵ The interregional project coordinator will be the main contact point between the VInnovate Secretariat and the interregional consortium. The coordinator must submit the signed 'project fit form' to the VInnovate secretariat. Each VInnovate Call 20254 consortium is requested to select one coordinator.

Each applicant will provide the information requested by the corresponding regional instrument, following the requests and procedures at regional/national level (which must be consulted [here](#)).

This implies that the various 'regional proposals' (submitted by partners of a Vinnovate candidate project) will be based on a similar/shared 'interregional' content: e.g. the description of the project's scope and main activities, the set of partners, the overall impacts, etc. In addition to this, partners might be requested to provide (to their funding agency) additional specific information, taking into account possible specific regional requirements.

Regional proposals will have to be submitted by 30.10.2024 (23:59 CET) at the latest.

Each applicant must attach to the regional proposal, a draft consortium agreement (unsigned). A template of consortium agreement is available [here](#) and must be adapted.

4.5. Step 5 – Evaluation, decision and communication

Following the implementation of the evaluation processes in place at regional level, a project is selected for funding when all regions involved in the project had selected the project for funding.

Information about the list of projects selected for funding will be communicated in the second half of December 2024.

4.6. Step 6 – Agreements, Contracts, Funding and Monitoring

Selected consortia will have to **sign the consortium agreement**. The consortium agreement will regulate aspect such as the 1) identity of the partners, 2) contract period, 3) IPR ownership, IPR use and exploitation of the project results, 4) subcontracting to third parties, 5) contributions of each partner to the project, 6) confidentiality notes and freedom of publications rights. The consortium agreement is to be signed after the project has been selected for funding, and before applicants sign their actual contracts with the respective funding agencies. The complete set of signatures on the consortium agreement is a prerequisite for funding.

Funding will be provided to each partner/beneficiary by their corresponding national/regional funding agency according to its respective rules. Matters related to funding will be handled according to the respective national/regional agencies 'rules. Projects will be monitored according to the rules of the respective country/region. Hence, technical as well as financial reporting will be required according to national/regional rules as well. Arrangements will be made during the funding negotiation process.

Projects selected for funding are expected to **start their activities no later than 3 months** after the funding decision was confirmed.

5. Annex- Glossary and concepts, incl. the description of the VI Pilots scope

- **The Vinnovate Project Fit Form.** The template of the project fit form is annexed to the present document. As detailed in the chapter 5, applicants have to submit, first, a filled-in and signed project fit form (1 per consortium, to be submitted by the interregional project coordinator⁶), before submitting the proper ‘regional proposals’ describing in details the project. The aim of this step is to 1) guide applicants in the elaboration of the project, and in particular in the elaboration of a potentially eligible project; 2) offer a pre-assessment on the alignment between proposals characteristics and the associated regional instruments (*in particular, checking the alignment between the regional instrument’s scope and the actors and activities from the project*) and 3) facilitate the organisation and anticipation, by regions, in terms of upcoming proposals submission. Overall, this step guarantees a more efficient submission process, avoiding time being spent on ineligible ideas.
- **The ‘regional’ proposals.** When referring to ‘regional proposals’, the present text refers to the whole set of information and documents requested by regions/regional funding agencies when applicants apply to the regional instrument that is activated for /used for Vinnovate. Such regional proposals are the core content of the proper evaluation process.
- **Thematic coverage of the 8 Vanguard Initiative Pilots (see next pages).** The boxes on the next pages provide a description of the scope of the Vanguard Initiative Pilots. Such description aims at helping potential applicants in assessing whether their project idea is indeed “linked thematically to at least one of the 8 Vanguard Initiative Pilots”.

⁶ The interregional project coordinator will be the main contact point between the project consortium and the Vinnovate secretariat. The interregional project coordinator is expected to send the filled in and signed project fit form.

1. Bioeconomy Pilot - Interregional cooperation on innovative use of non-food biomass

Thematic coverage of the pilot

The bioeconomy pilot project aims to create transregional value chains through the innovative and sustainable use of renewable resources to produce high-value-added organic products and food, feed, and fibre. The second-generation biorefineries, involving a mix of cutting-edge technologies with a high potential for innovation and added value, constitute one of the strategic pillars of the Pilot demo cases. The long-term bioeconomy pilot project aims to stimulate innovation in the Vanguard Initiative regions, leverage their bioeconomy industrial ecosystem, trigger new business opportunities, attract private investment, and improve adoption by part of the market for sustainable business models.

The **thematic priorities** of the Pilot concern the following areas:

1. CIRCULAR BIOECONOMY AND BIOECONOMY MANAGEMENT. Promote the market diffusion of organic products and regional implementation policy tools, and develop value chains capable of overcoming regulatory barriers and technologies to increase the value and presence of bioproducts in the market.
2. GREEN CHEMISTRY. Products and processes for the replacement and/or reduction of the use of rare, toxic and polluting substances and reducing energy consumption.
3. BIOREFINERY AND ADVANCED BIOFUELS. Creation of biorefineries for the integrated production of value-added products from no-food crops and waste biomass

Current focal points

1. lignin-based aromatic molecules aimed at creating interregional value chains to produce innovative materials
2. lignocellulose bulk and fine chemicals based on the biorefinery concept
3. liquified natural gas for sustainable mobility
4. biopolymers/bioplastics materials based on a market pull approach

Possible VInnovate projects beyond the 'current focal points'?

Yes, any VInnovate 2024 projects linked to the Bioeconomy Pilot may be, thematically, outside the scope of the "current focal points", but must therefore be aligned with the overall "thematic coverage"

2. VI 3DP Pilot - HIGH PERFORMANCE PRODUCTION THROUGH 3D-PRINTING

Thematic coverage of the pilot

The pilot focuses on the development and deployment of 3D printing (or Additive Manufacturing)-related solutions. The pilot covers all available printing technologies (powder bed fusion, etc.) and materials. The pilot covers all segments of the value chain: modelling and design, materials, machinery & equipment, process, post-processing, etc.

Overall, the pilot covers, thematically and potentially, any project directly contributing to improving (productivity, sustainability, quality, etc.) industrial printing processes/solutions/parts.

Current focal points

Currently (April 2024), the following structural areas of cooperation are being addressed. While it will be easier to find collaboration partners within our community on these areas of cooperation, do note however that, in the context of VInnovate 2024, the pilot is open to any project possibly not fitting with the areas below, but aligned with the description under section 'thematic coverage of the pilot':

Specific Industrial challenges structurally addressed (for all application areas):

- Increasing life of parts (repairing, maintenance)
- Lighter components (hybrid components)
- Smart AM for sustainable production
- Improving finishing (Automated removal and smoothing parts)
- Automatization of AM factories

Specific application areas structurally addressed:

- Materials: Ceramics; Bio-based; Multi-materials
- Sectors: Healthcare, Robotics
- Parts: Large parts, Parts with integrated electronics

Possible VInnovate projects beyond the 'current focal points'?

Yes, possible 3DP-related VInnovate 2024 projects can be, thematically, outside the scope of the “current focal points”, but need then to be aligned with the general “thematic coverage”.

3. ADMA Energy - Advanced Manufacturing for Energy-Related Applications in Harsh Environments

Thematic coverage of the pilot

The Pilot focuses on promoting the development and creation of new value chains in the growing renewable offshore energy and subsea industry. The pilot covers all advanced manufacturing technologies across traditional and emerging sectors and technologies – as well as disruptive innovations related to design, functionality, integration, automation, material, data transmission, in the renewable offshore energy and subsea industry. Overall, the pilot covers, thematically and potentially, any project directly contributing to improving manufacturing of components, application, product and services in the renewable offshore energy.

Current focal points

Currently (April 2024), the following structural areas of cooperation are being addressed:

Power transfer in the Sea.

- Integration of power sources – Linking offshore oil and gas operations to offshore renewable energy sources. Specifically, general powering of platforms, local powering of small sub-sea units and local power and process modules for sub-sea operation.
- Use of offshore energy to produce alternative energy vectors (eg hydrogen, ammonia, etc) – Offshore production and storage. Specifically Offshore Green Hydrogen & e-fuels.

Critical technologies to improve the lifetime, operation and maintenance, efficient decommissioning and increase the circularity of offshore energy system:

- Improving and optimisation of anchors and moorings (eg. anchor mutualisation, mooring redundancy)
- Joining of large component in harsh environment (bolted connections, composite/steel joint, adhesive joining)
- Development of improved and more damage-tolerant materials (eg composites, bio-based fibres and resins)

Integrated digital tools for extended lifetime and profitability of offshore wind farms

Possible VInnovate projects beyond the ‘current focal points’?

Yes, the pilot covers, thematically and potentially, any project directly contributing to improving manufacturing of components, application, product and services in the renewable offshore energy.

4. VI Artificial Intelligence Pilot - Advanced Manufacturing for Energy-Related Applications in Harsh Environments

Thematic coverage of the pilot

The Pilot focuses on the development of joint solutions in the broader field of Artificial Intelligence, and the deployment of solutions, services and products across the different industrial ecosystems of the Pilot’s participating regions.

While focusing on industrial application of AI, the AI Pilot is open to demo cases and projects covering the whole (industrial) AI value chain, including data, resource and processes optimization, HMI etc.

Current focal points

Currently, the AI Pilot has three on going Demo Cases.

1. AI DEMO LAB GRID

The Demo case focuses on the establishment of an interregional Grid of laboratories providing last-mile services to industry and SMEs in the field of AI.

2. AI for Resource Efficiency

The objective of this demo case is an AI-bases process optimization with regard to energy and resource efficiency. The main goals are: (1) optimisation of process ramp-up (technical development) of new products and after changes in production stream and (2) monitoring and optimization of the running production processes.

3. AI Reference Use Cases Across EU Regions

An inter-regional catalog of AI assets, solutions and use cases is proposed to highlight existing European AI initiatives in the regions involved. It is proposed that the use cases that integrate it are classified in relation to their functional approach (Optimization, Prediction, Quality, Assistance, Generative AI) and provide relevant information on the objectives, Business Case, Use Case, infrastructure, technologies used, data, resources, challenges, business KPIs, funding and collaborations. The ambition is to include use cases of high TRL and oriented to industrial agents in sectors prioritized by the European initiative National and Regional Strategies for Smart Specialization (RIS3), advanced manufacturing, energy and health.

Note however that, in the context of VInnovate 2024, the pilot is open to any project possibly not fitting with the areas below, but aligned with the description under section ‘thematic coverage of the pilot’ and – given the transversal nature of the technology - also aligned with other Pilots such as 3DP, HMI, Smart Health etc.

Possible VInnovate projects beyond the ‘current focal points’?

Yes, possible AI-related VInnovate 2024 projects can be, thematically, outside the scope of the “current focal points”, but need then to be aligned with the general “thematic coverage”.

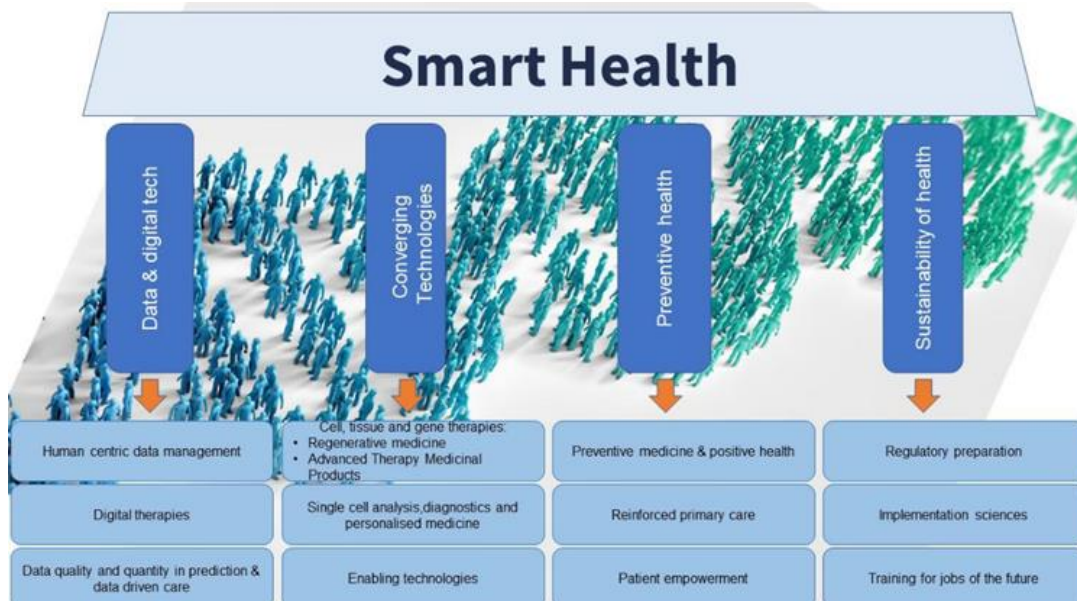
5. VI SMART HEALTH PILOT

Thematic coverage of the pilot

The development of personalised medicine (PM), stratified or precision medicine is an evolution that cannot be stopped anymore. PM is strongly technological driven and will induce a transformation of how health and wellbeing are approached, and medicine is being implemented. The convergence of knowledge on what determines health and disease or how the process of ageing is determined, with digital technologies and access to data opens a huge potential to develop new applications to improve general health, wellbeing, and will make preventive medicine reality.

Current focal points

The figure below outlines the priority areas of the Smart Health pilot and the topics of interest where new project ideas are welcome. The pillars highlight the broad topics of interest for the Smart Health pilot while the boxes below indicate more concrete ideas for new demo case projects.



The first pillar – data and digital technologies – is largely about observation, measurement, data collection, data capture, analysis and most importantly synthesis leading towards decisions. These decisions have to be precise and effective.

The second pillar – convergence of technologies – is about adding and combining state-of-the-art technologies, using them to create more insights as well as new therapies or diagnostics.

The third pillar – preventive health – is stemming from the understanding that it's better to keep people healthy than to restore health. Health is not solely an aspect of the body, but also of the mind.

All of these factors need to converge in order to maintain health. The patient needs to be empowered, aware of the importance of prevention, have easy access to primary care, and have tools that will support his own desire to stay healthy, which leads to the fourth pillar – sustainability of health.

Possible VInnovate projects beyond the 'current focal points'?

Yes, possible Smart Health/PM-related VInnovate 2024 projects can be, thematically, outside the scope of the “current focal points”, but need then to be aligned one of the four pillars of the pilot.

6. VI Hydrogen Pilot (H2)

Thematic coverage of the pilot

The pilot’s ambition is to strengthen all segments of the European hydrogen value chain by fostering interregional collaboration between industrial actors, academia, research and technology organisations (RTOs) and establishing new business relationships, with a specific focus on SMEs.

Current focal points

The following structural areas of cooperation are being addressed. In the context of VInnovate 2024, the Hydrogen Pilot is open to any project possibly not fitting with the areas below, but aligned with the description under section ‘thematic coverage of the pilot’:

- H2 for decarbonize carbon-intensive industries (Innovative H2 applications in different sectors such as cement, glass, coal, metal, etc)
- Improve the logistics & H2 transportation (new composite materials for H2 tanks, high-pressure pipes, fittings, and composite vessels for the storage and transport of gases, Compression of H2 tech, etc)
- Boost the interregional collaboration for H2 development (one-stop-shop platform, Matchmaking activities, boost the business in the less developed regions, investment activities, Online web platform, etc)
- H2 in shipping (using the clean H2 for the ecosystems of the maritime sectors: Maritime H2 refueling, bunkering, Retrofitting – upgrade of carbon-based technologies, Storage – cryogenic and compressed storage, Certification, etc)
- Improve the technologies for clean h2 production (eg. cost reduction, efficiency and flexibility increase in production - electrolysis and other production technologies from renewables)

Possible VInnovate projects beyond the 'current focal points'?

VInnovate 2024 projects can be, thematically, outside the scope of the “current focal points”, but need then to be aligned with the general “thematic coverage” as:

- H2 production
- Less expensive Fuel cells
- Transport, Blending & Storage
- H2 for mobility application
- Energy steel cement refinery chemicals CCU/CCS
- Fuel HRS
- H2 for aviation

7. EFFICIENT AND SUSTAINABLE MANUFACTURING

Thematic coverage of the pilot

The pilot focuses to integrate a multidisciplinary set of advanced and innovative enabling technologies and digital innovations (TRL7/8) and to exploit the regional Smart Specialization synergic way to offer services to European end-users, mainly manufacturing companies, to solve specific industrial challenges related to their products.

Current focal points

Currently (April 2024), the following demo cases are running:

- De- and Remanufacturing: Technologies and business models for circular economy to re-use, remanufacture and recycle products and materials in all sectors.
- Polymer-based functional products: Advanced sustainable surface treatments and material technologies for functional polymer components in various applications.
- Digital Transformation: “Industry 4.0” technologies applied to manufacturing environments to realise highly performing and human-centred digital/virtual factories.
- Energy-flexible and resource-efficient factory operation: Technologies and methods to optimize energy/materials consumption in manufacturing processes and to realize emission-neutral factories.

Possible VInnovate projects beyond the ‘current focal points’?

Yes, possible ESM-related VInnovate 2024 projects can be, thematically, outside the scope of the “current focal points”, but need then to be aligned with the general “thematic coverage”.

8. Nano-/Microsystems and High-Tech Materials for Industrial Transformation

Thematic coverage of the pilot

The pilot wants to connect and support stakeholders of the key enabling technologies (KETs) in the area of nanotechnology, microsystems and high-tech materials.

The pilot wants to take on a wholistic approach and covers all aspects of these technology fields.

Equipment and enabling technology for nanoscale technology as well as for microsystems. Also materials enabled and/or enhanced by usage of micro- and nanotechnology are covered.

The pilot links these KETs to the sustainable transformation of technology to boost the innovativeness and long term competitiveness of its regions.

Current focal points

Currently, the pilot has three active demo cases that cover the following thematic areas:

- NeMs4BIO (Nano-enabled Microsystems for Bioanalysis) wants to support bio-medical applications by providing cost-efficient and standardised micro- and nanosystems for lab on a chip and further use cases of MEMS devices
- SHM Structural Health Monitoring. This demo case brings flexible printed microelectronics into application. The technology is scalable and promising for industrial scale application on modern composite systems. The demo case is also open for further collaborations on printed electronic sensing devices
- MEMS for nano-analytiX. The demo case utilizes many nanotechnology competencies to advance chemical sensing to mobile and/or miniaturized applications

Possible VInnovate projects beyond the ‘current focal points’?

Yes, the Nano-pilot is open to new projects that match the general thematic coverage.

As the pilot is undertaking a restructuring process new projects and stakeholders are most welcome!