

Healthcare Innovation Ecosystems Overview & HE Funding Opportunities

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19 SEPTEMBER 2024

External Resources & Open
innovation initiatives in the
Romanian healthcare innovation
ecosystem

Romania's healthcare innovation

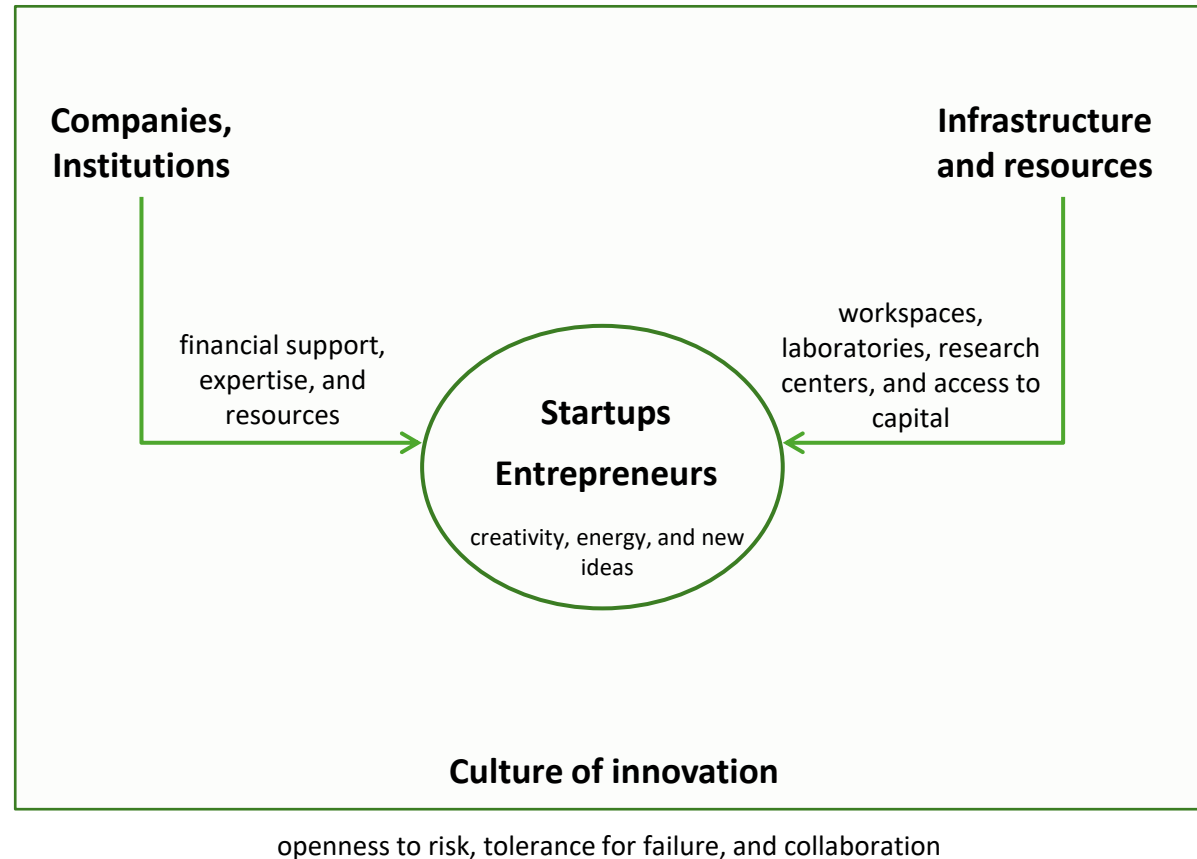
Open innovation **initiatives** within Romania's healthcare **sector**

- 
- European Union funded programs
 - EIT Health
 - Innovation Labs Romania
 - ROHEALTH – Romanian Health Cluster
 - MedTech Accelerator Initiatives
 - Public-Private Partnerships (PPP)
 - Academic and research collaborations
 - Government-led digital health initiatives
 - Health innovation programs in universities

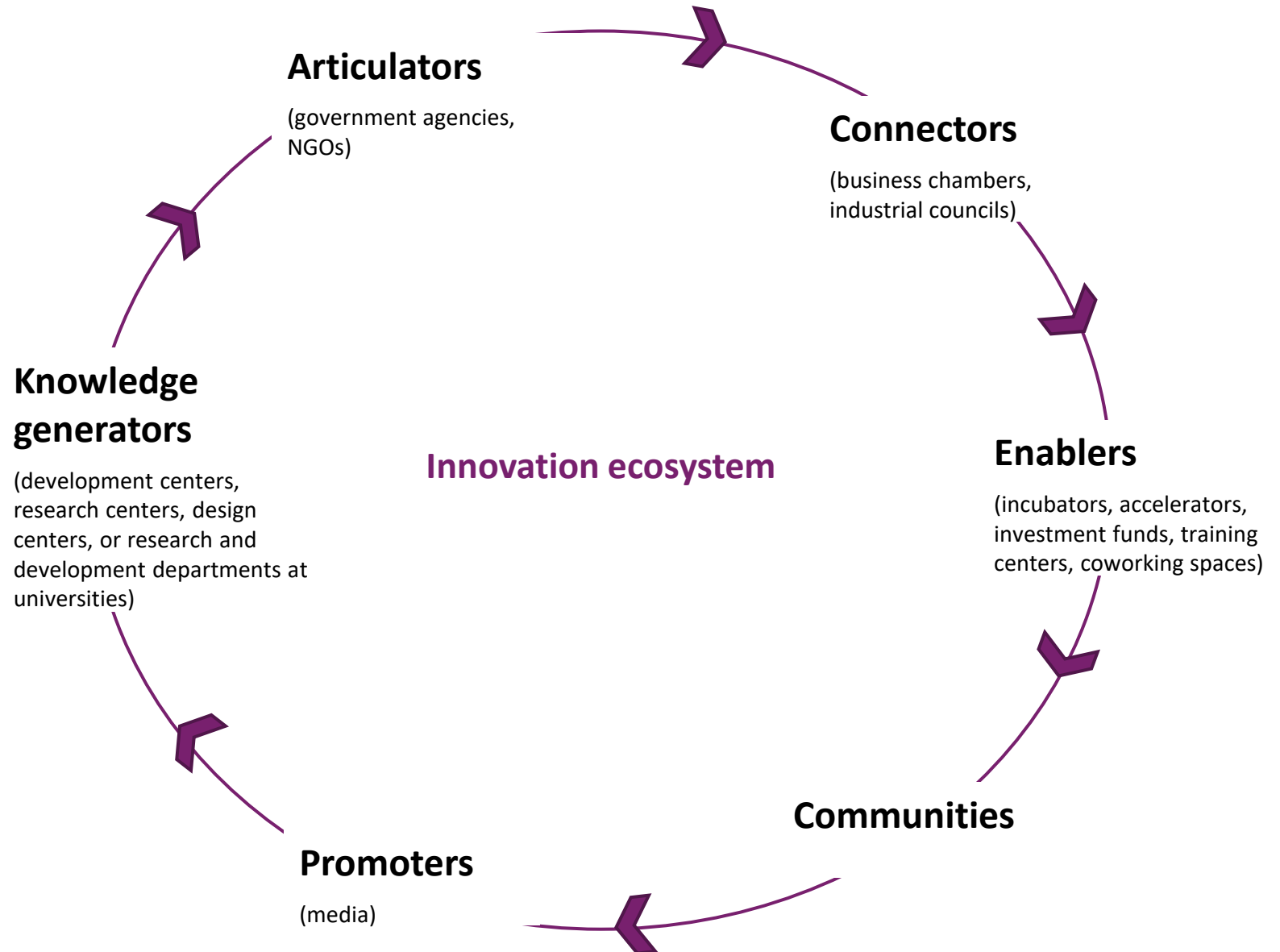
Innovation ecosystem

Research institutions, entrepreneurs, corporations, investors, and governments

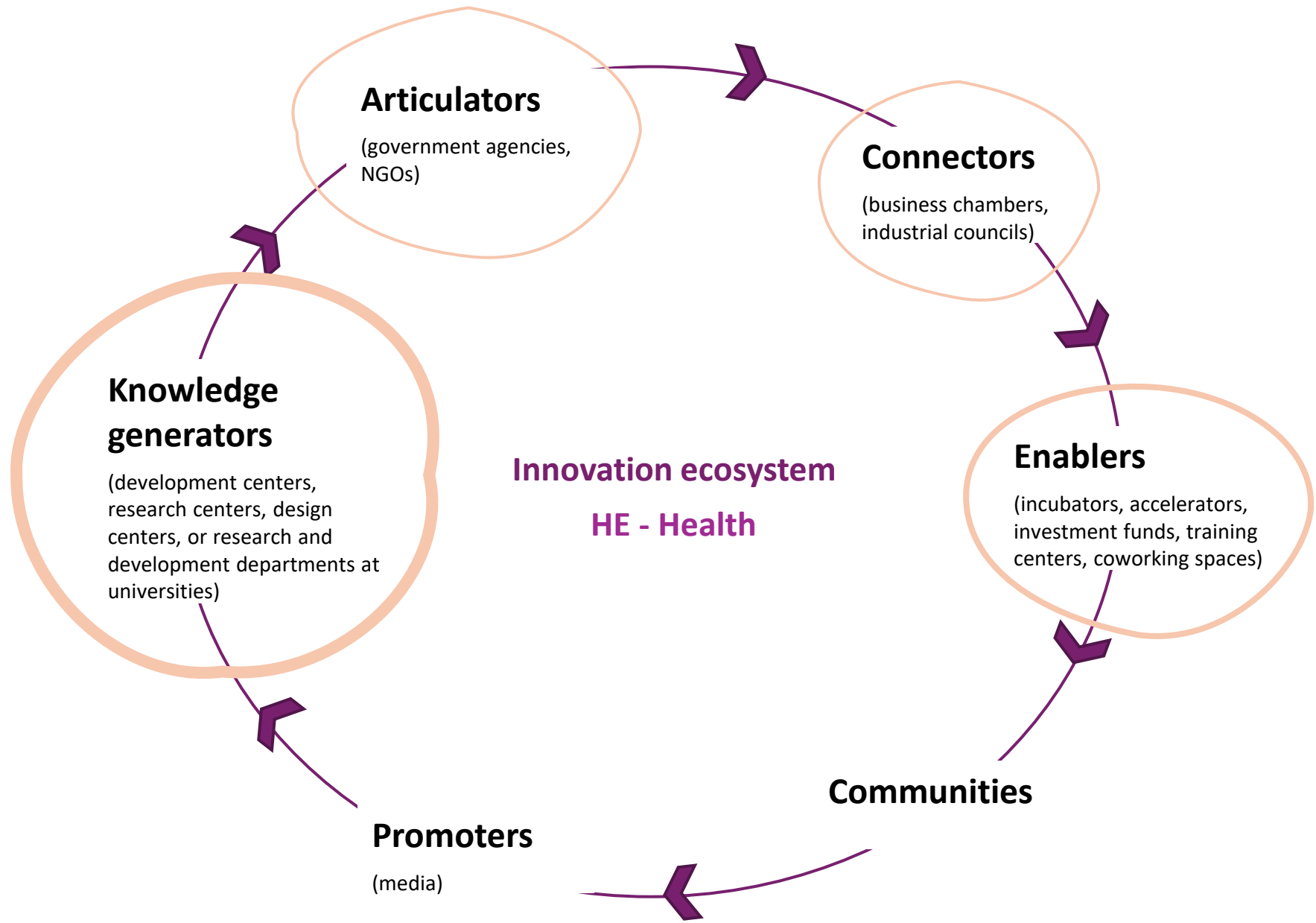
Innovation ecosystem



<https://innovamorir.com/en/innovation-ecosystems-definition-types-examples/#:~:text=%E2%80%99An%20innovation%20ecosystem%20includes%20a,are%20important%20for%20the%20innovative>



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External Resources & Open innovation initiatives in the Romanian healthcare innovation ecosystem

Knowledge & research institutions

- Academic institutions & research centers
- Clinical trial networks
- Research grants

Healthcare providers & clinical resources

- Hospitals and clinics
- Integrated health systems

Technology & data infrastructure

- Health information technology platforms
- AI & Big Data tools
- Biotechnology & digital health platforms

Funding & Investment

- Venture capital (VC)
- Government / EU funding
- Corporate partnerships

Entrepreneurial support

- Incubators & accelerators
- Innovation hubs

Policy & regulatory support

- Regulatory agencies, and other bodies that regulate and approve healthcare innovations
- Health policy think tanks & advocacy groups

Human capital & workforce

- Medical professionals
- Engineers & data scientists
- Healthcare entrepreneurs

Collaborative networks & partnerships

- Public-Private Partnerships (PPP)
- International health organizations

Legal & intellectual property support

- Patent support & IP firms
- Licensing & commercialization offices

Patient & community engagement

- Patient advocacy groups
- Consumer health platforms

European R&I landscape - Health

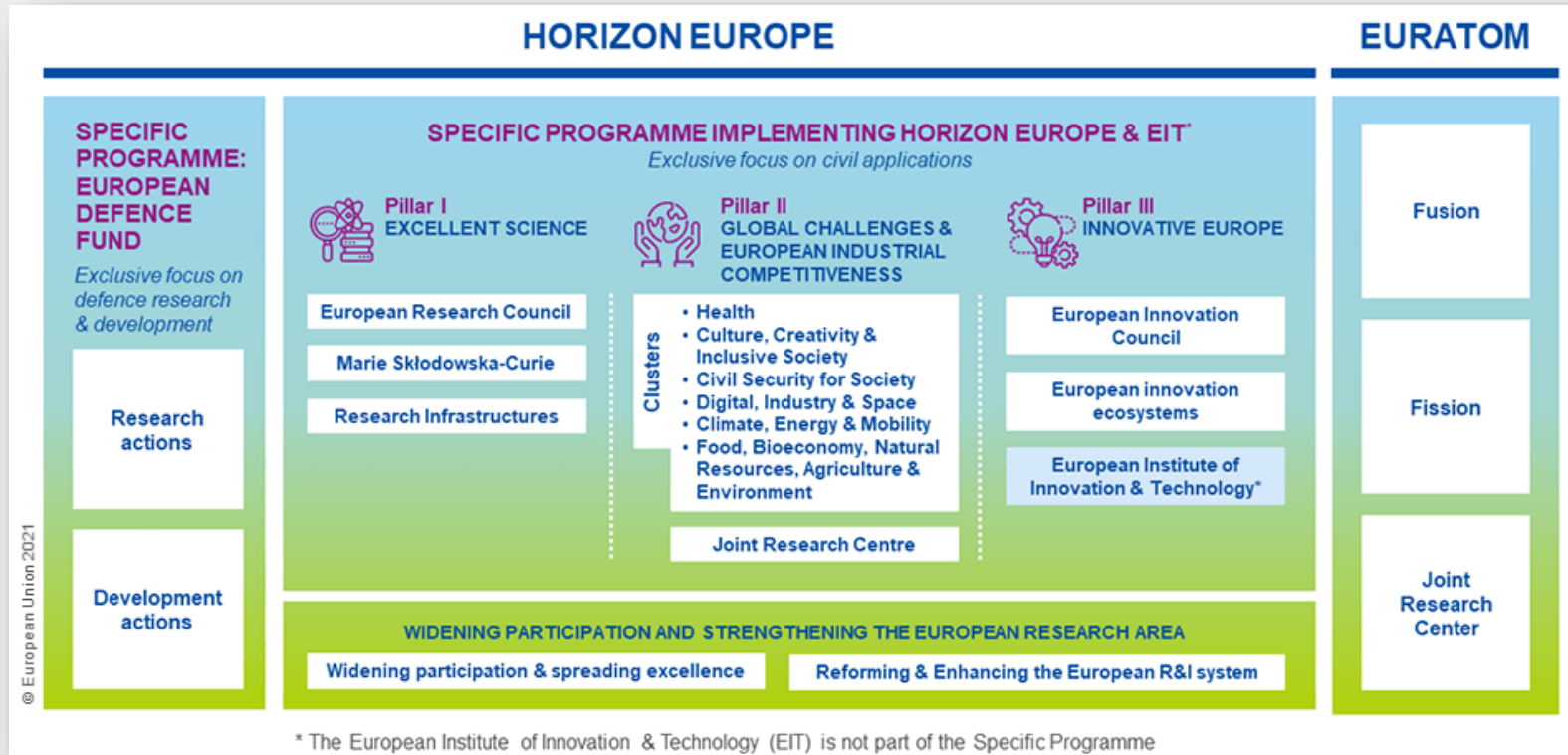
Organisations, networks, infrastructure, platforms



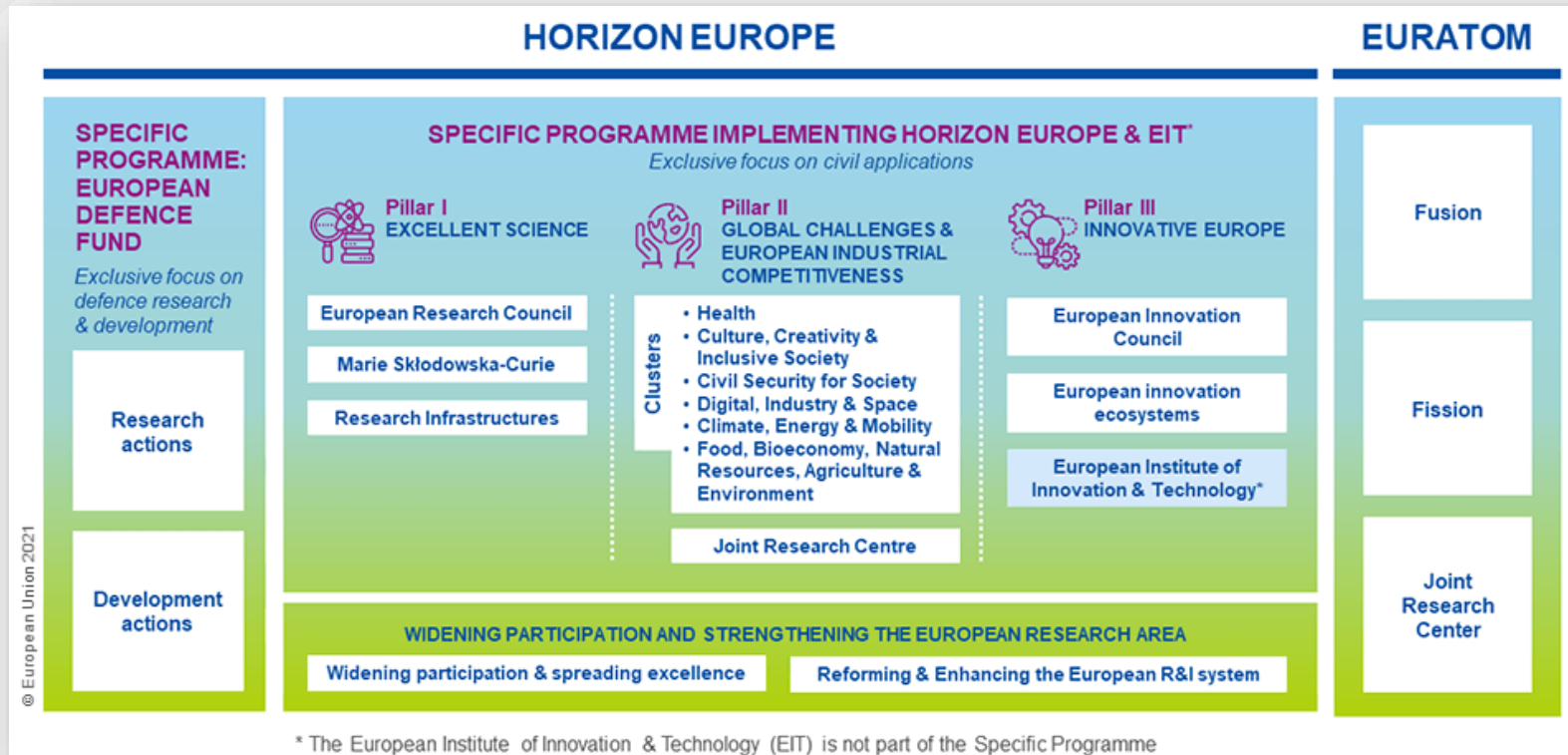
Potential partners
Funding opportunities



Innovation ecosystem



https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/how-horizon-europe-was-developed_en



CALLS FOR R&I PROPOSALS

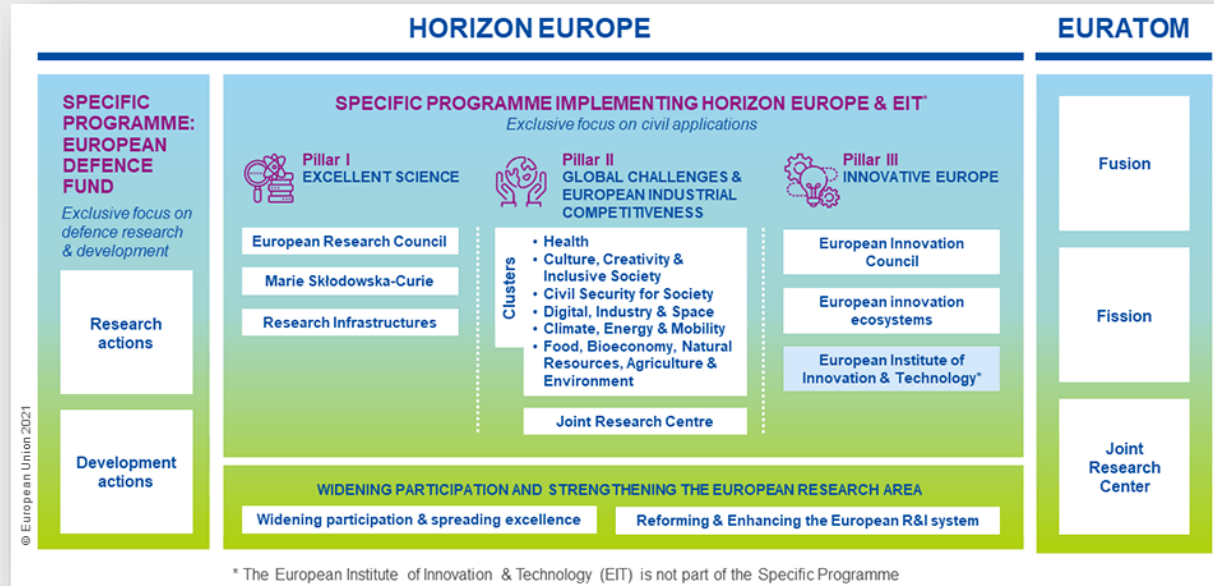
All types of organisations (public, private)

(knowledge actors, articulators, connectors, enablers, communities, promoters)

https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/how-horizon-europe-was-developed_en



CALLS FOR R&I PROPOSALS



CALLS FOR R&I PROPOSALS

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<https://errin.eu/RI-Policy/Missions/Cancer>



JOINT CALLS FOR R&I PROPOSALS

Active EU Partnerships - Health

Co-funded Partnership	Institutionalised Partnerships	ERA-NET Cofund	Article 185	JPI	EIT - KICS	Other
EP PerMed	EIT Health-KIC	AquaticPollutants	AAL 2	JPI AMR	EIT Health	ERIC
ERA4Health	GH EDCTP3 JU	ICRAD	EDCTP2	JPI HDHL		ETP
PARC	Innovative Health Initiative	JPCOFUND2	EMPIR	JPI MYBL		EUREKA
THCS	Metrology Partnership	JPIAMR-ACTION	PRIMA	JPI Urban Europe		
		M-ERA.NET 3		JPND		
		NEURON Cofund2				
		TRANSCAN-3				

<https://www.era-learn.eu/network-information/thematic-clustering/?category=health&view=table>

CO-FUNDED EP

- [European Partnership for Personalized Medicine – EP PerMed](#) (54 organisations; RO-UEFISCDI)
- [European Research Area for Health Research – ERA4Health](#) (45 organisations; RO-UEFISCDI)
- [Partnership for the Assessment of Risks from Chemicals – PARC](#) (199 organisations; RO -)
- [European partnership on transforming health and care systems – THCS](#) (66 organisations; RO-UEFISCDI; UBB)

INSTITUTIONALIZED EP

- [Global Health EDCTP3 Joint Undertaking - GH EDCTP3 JU](#)
- [European Partnership for Innovative Health - Innovative Health Initiative](#)
- [\(European Partnership on Metrology - Metrology Partnership\)](#)

ERA-NET COFUND EP

- [Risks posed to human health and the environment by pollutants and pathogens present in water resources – AquaticPollutants](#) (34 organisations; RO-UEFISCDI)
- [International coordination of research on infectious animal diseases – ICRAD](#) (34 organisations; RO-)
- [ERA-NET to support the Joint Programming in Neurodegenerative Diseases strategic plan \(JPND\) - JPCOFUND2](#) (33 organisations; RO-)
- [JPIAMR- Antimicrobial transmission interventions - JPIAMR-ACTION](#) (26 organisations; RO-)
- [\(ERA-NET for research and innovation on materials and battery technologies, supporting the European Green Deal -M-ERA.NET 3\)](#) (54 organisations; RO-UEFISCDI)
- [Network of European funding for neuroscience research - NEURON Cofund2](#) (27 organisations; RO-UEFISCDI)
- [ERA-NET: Sustained collaboration of national and regional programmes in cancer research - TRANSCAN-3](#) (32 organisations; RO-UEFISCDI)

ARTICLE 185 EP

- [Active and Assisted Living - AAL 2](#) (23 organisations; RO-?)
- [European & Developing Countries Clinical Trials Partnership - EDCTP2](#) (29 organisations; RO-)
- [\(European Metrology Programme for Innovation and Research – EMPIR\)](#) (28 organisations; RO-?)
- [\(Partnership for Research and Innovation in the Mediterranean Area – PRIMA\)](#) (19 organisations; RO-)

JPI EP

- [Antimicrobial Resistance – JPI AMR](#) (28 organisations; RO- ?)
- [A Healthy Diet for a Healthy Life - JPI HDHL](#) (26 organisations; RO- ?)
- [More Years, Better Lives - The Potential and Challenges of Demographic Change - JPI MYBL](#) (15 organisations; RO-)
- [\(Joint Programming Initiative - Urban Europe - JPI Urban Europe\)](#) (22 organisations; RO- ?)
- [EU Joint Programme - Neurodegenerative Disease Research – JPND](#) (27 organisations; RO-)

- [EIT Health KIC](#)

European Research Infrastructures (ERIC) - Health

BBMRI, the pan-European Biobanking and Biomolecular Resources Research Infrastructure, improves the accessibility and interoperability of existing comprehensive collections of biological samples from different (sub)populations of Europe.

CERIC - exploits the full scientific potential of the Central European area in the synchrotron light and other microscopic probes for analytical and modification techniques for a broad range of applications in the fields of life sciences, nanoscience and nanotechnology, cultural heritage, environment and materials sciences.

EATRIS, the European Advanced Translational Research Infrastructure in medicine, will accelerate the development process for drugs and diagnostics with an unmet medical need and raise the quality of life for Europeans.

ECRIN provides services to multinational clinical research, in any medical field and for any category of clinical research in order to strengthen the capacity of the European Union to explore the determinants of diseases and optimise the use of diagnostics, prevention and treatment strategies.

https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/european-research-infrastructures/eric/eric-landscape_en

European Research Infrastructures (ERIC) - Health

[Euro-BioImaging](#), landmark research infrastructure for biological and biomedical imaging, provides access imaging instruments, expertise, training opportunities and data management services that they might not find at their home institutions or among their collaboration partners.

[INFRAFRONTIER](#) provides the biomedical research community with the tools needed to unravel the role of gene function in human health and disease. It enhances medical research and promotes studies that lead to breakthrough discoveries in cancer, metabolic and cardiovascular diseases, lung diseases, infectious diseases and the group of rare diseases, global threats to our socio-economic well-being.

[MIRRI](#) is a single infrastructure to alleviate the bottlenecks that impede faster microbiological-related developments in Europe. MIRRI-ERIC increases the capacity of its Partner mBRCs (Microbial domain Biological Resource Centres) to preserve microbial materials, in a cost-effective and coordinated way.

[SHARE](#) - The Survey of Health, Ageing and Retirement in Europe (SHARE) is a multidisciplinary and cross-national panel database of micro data on health, socio-economic status and social and family networks of about 140,000 individuals aged 50 or older (around 380,000 interviews). SHARE covers 28 European countries and Israel.

https://research-and-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/european-research-infrastructures/eric/eric-landscape_en

CAPACITY 2023	CONSORTIUM FOR DEVELOPING REGULATORY CAPACITY FOR CLINICAL TRIALS USING GENE THERAPY PRODUCTS AND STRENGTHENING PHARMACOVIGILANCE IN THE CONDUCT OF CLINICAL TRIALS IN EAST AFRICA
4.UNCAN.eu	A Coordination and Support Action to prepare UNCAN.eu platform
LIVERAIM	A Biomarker-Based Platform for Early Diagnosis of Chronic Liver Disease to Enable Personalized Therapy
B-Path	Breath Pathogen Detection (B-Path): Establishing Exhaled Breath Aerosol (XBA) sampling for diagnosis and screening of respiratory infections
VICI-DISEASE	PROTECTION FROM VIRUSES WITH EPIDEMIC AND PANDEMIC DISEASE OUTBREAK POTENTIAL THROUGH DEVELOPMENT AND CLINICAL TESTING OF A NOVEL CAPSID VIRUS LIKE PARTICLE (CVLP) VACCINE
NEXGEN-PD	Next Generation Vaccine Platform Leveraging Skin Immunity to Provide Disease-Modifying Treatment of Parkinson's Disease
THRIVE	TUMOUR-HOST INTERACTIONS IN LIVER CANCER OF CHILDHOOD AND ADULTS
INVENTS	Innovative designs, extrapolation, simulation methods and evidence-tools for rare diseases addressing regulatory needs
ORTHO-ALLO-UNION	ORTHOpaedic treatment with ALLOgenic combined ATMP in long bone fracture delayed UNION and non-union (ORTHO-ALLO-UNION)
Microb-AI-ome	Federated artificial intelligence for privacy-preserving international stratification of colorectal cancer patients
DECIPHER	Decentralized microfluidic in vitro diagnostic patch for pandemic control
MERLON	Merging scientific Evidence with Regulatory practices and Leveraging identification Of endocrine disruptors using New approach methodologies
HYPIEND	Understanding and preventing the impact of endocrine disruptors on the hypothalamus-pituitary axis in sensitive populations
CERTAINTY	A CELLulaR immunoTherapy virtuAl twin for personallised cancer treatment
STRATUM	3D Decision Support Tool for Brain Tumor Surgery
dAlbetes	Federated virtual twins for privacy-preserving personalised outcome prediction of type 2 diabetes treatment
NextGen	NEXT GENERATION TOOLS FOR GENOME-CENTRIC MULTIMODAL DATA INTEGRATION IN PERSONALISED CARDIOVASCULAR MEDICINE

European R&I projects - Health

Cluster 1 - Health

<https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20frameworkProgramme%3D%27HORIZON%27%20AND%20applicationDomain%2Fcode%3D%27health%27&p=1&num=50&srt=Relevance:decreasing>

UltraSense ULTRA-SOUND COMBINED WITH BIA AND GRAPHENE FET-ENHANCED
WEARABLE SENSING FOR DECENTRAL HEALTH-MONITORING

European R&I projects - Health

Cluster 4 – Digital, Industry and Space

<https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20frameworkProgramme%3D%27HORIZON%27%20AND%20applicationDomain%2Fcode%3D%27health%27&p=1&num=50&srt=Relevance:decreasing>

P	SMELLODI	Smart Electronic Olfaction for Body Odor Diagnostics
T	ACU-SERS	AUTOMATED CLINICAL PLATFORM FOR PERSONALIZED ANTIBIOTHERAPY IN CRITICAL UNITS BASED ON SURFACE ENHANCEMENT RAMAN SPECTROSCOPY
P	I-SCREEN	I(eye)-SCREEN: A real-world AI-based infrastructure for screening and prediction of progression in age-related macular degeneration (AMD) providing accessible shared care
ACC	S-trodes	Reliable Medical Grade Home-Based Test for Self-Use for people with Sleep Disorders
ACC	NIMBLE System	The NIMBLE System: A novel non-invasive and non-ionizing medical device for the continuous monitoring of patients with implanted cardiovascular stents
ACC	PREVENTDIABETES	The world's first needle-free continuous glucose monitor to prevent and manage diabetes at scale
ACC	ProSCAN	Prostate cancer diagnostics using a non-invasive test based on innovative glycan-based scanning
T	FASS	Fast and Accurate Solubility for Sustainability
ACC	FLUAR	FLUAR - A novel solution for fluorescence-guided surgery based on augmented reality
ACC	LILY	LILY: A Breakthrough Technology to Prevent Chemotherapy-Induced Hair Loss
ACC	QlandQD	The first IVDR-approved commercial software solutions for AI-powered RNA-based companion and precision cancer diagnostics of acute myeloid leukaemia and bladder cancer
T	RESPONSE	Early detection of treatment response in breast cancer
P	Move2Treat	Mapping the brain-spinal cord interaction towards understanding and treatment of movement disorders
P	Bio-HhOST	Next Generation 3D Tissue Models: Bio-Hybrid Hierarchical Organoid-Synthetic Tissues (Bio-HhOST) Comprised of Live and Artificial Cells

European R&I projects - Health

European Innovation Council (EIC)

<https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20frameworkProgramme%3D%27HORIZON%27%20AND%20applicationDomain%2Fcode%3D%27health%27&p=1&num=50&srt=Relevance:decreasing>

SPAC MRI	Spacious and accurate MRI machines of the future
Doctomatic	Development of advanced AI algorithms for remote patient monitoring
SeaBeEYE	A BREAKTHROUGH TECHNOLOGY DESIGNED TO PRESERVE SIGHT AND HALTING VISION LOSS ASSOCIATED WITH A RANGE OF RETINAL DISEASE BY PREVENTING THE DEATH OF KEY RETINAL CELLS
ONTBO	Connected headset adapting music to emotions
NEXTNANO	NEXT GENERATION NANOPARTICLE-BASED ANTIBACTERIAL TREATMENT FOR INFECTED WOUNDS
CanceRusolution	A NEW DRUG TO TREAT TRIPLE NEGATIVE BREAST CANCER
SYNBEE	SYNBEE: EXPANDING SYNTHETIC BIOLOGY ENTREPRENEURIAL ECOSYSTEMS

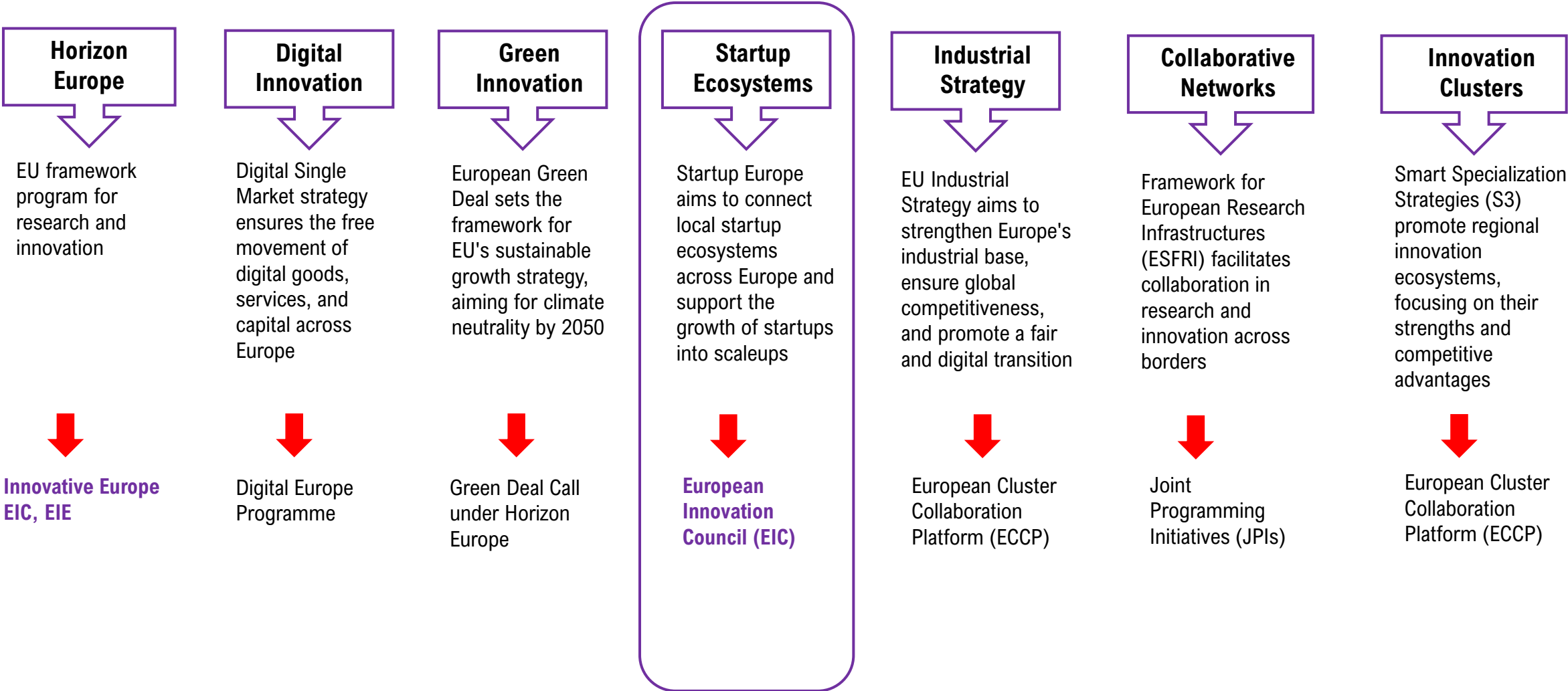
European R&I projects - Health

European Innovation Ecosystems (EIE)

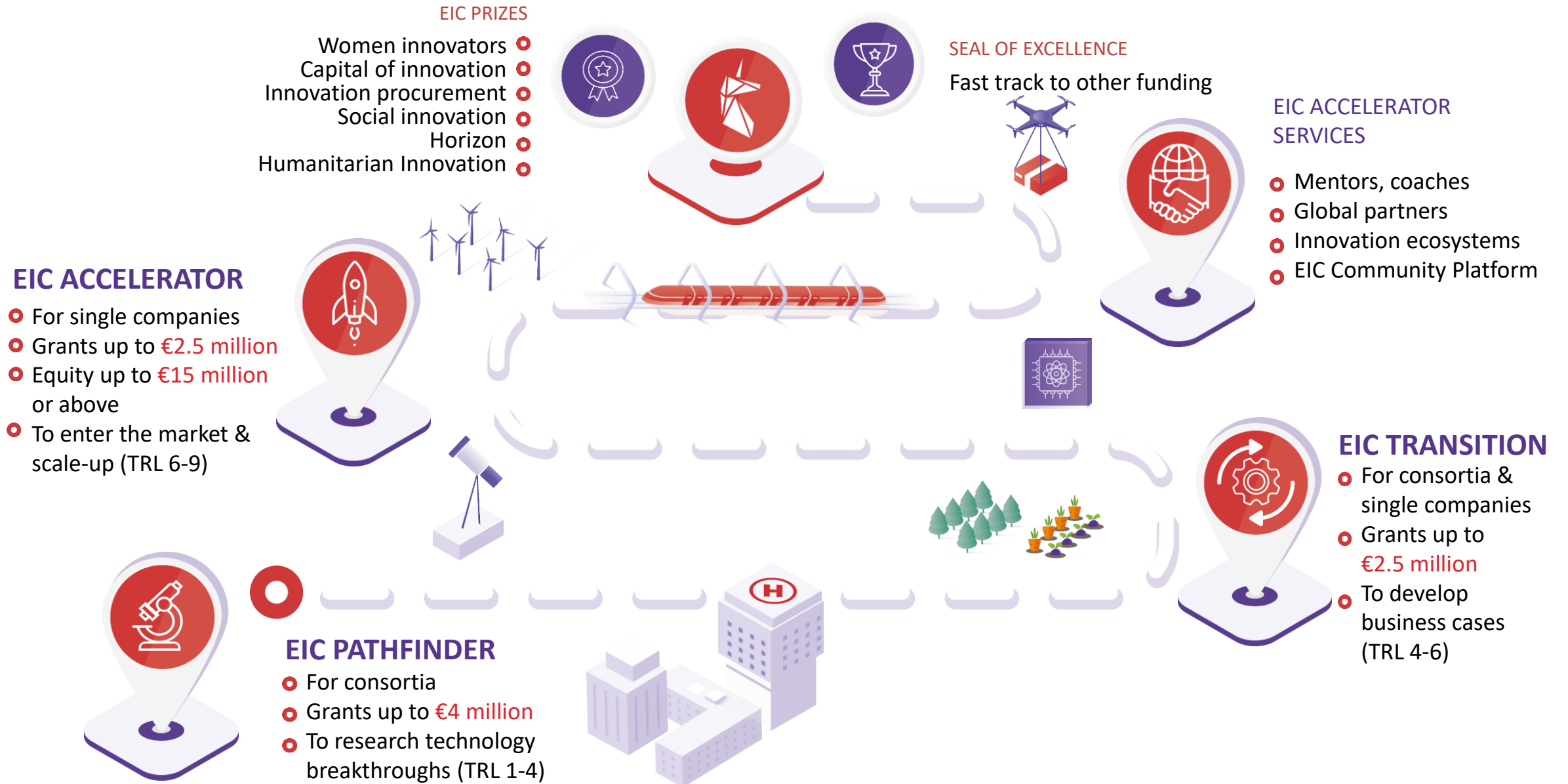
<https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20frameworkProgramme%3D%27HORIZON%27%20AND%20applicationDomain%2Fcode%3D%27health%27&p=1&num=50&srt=Relevance:decreasing>

EIC Funding Opportunities

European Innovation



Funding Instruments in the European Innovation Council – EIC



Funding Instruments in the European Innovation Council – EIC

https://eic.ec.europa.eu/index_en

Pathfinder

(TRL1-4)

- visionary research and the development of early-stage technologies
- high-risk, high-gain projects exploring novel ideas and interdisciplinary approaches
- **grants for exploratory research to validate the scientific basis of potentially groundbreaking innovations**

Transition

(TRL4-6)

- bridges the gap between research and market
- supports the maturation and validation of promising technologies and their business models
- helps to transform research results into innovation opportunities
- **funding for activities such as prototyping, business plans, and market analysis**

Accelerator

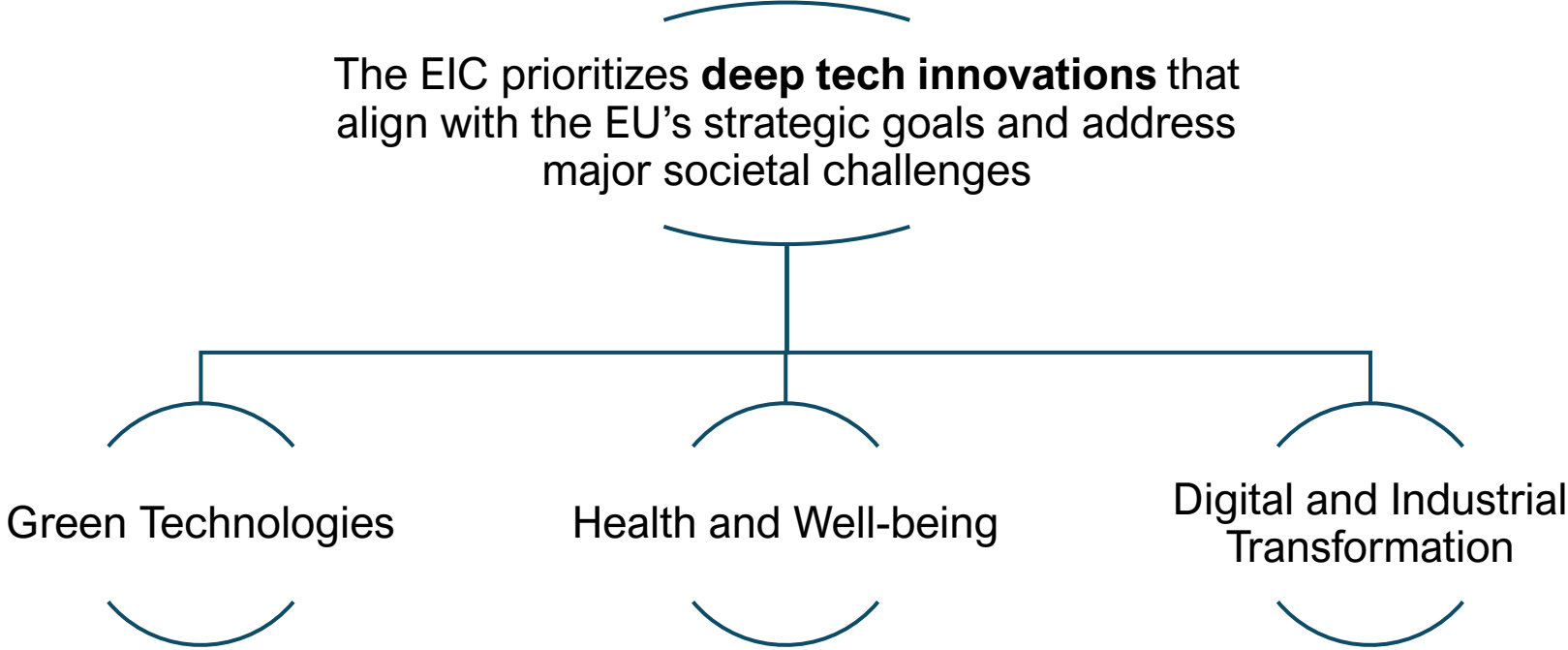
(TRL6-9)

- **substantial funding and support to scale up deep tech innovations**
- blended finance, combining grants and equity investments, to help companies bring their technologies to market and grow rapidly

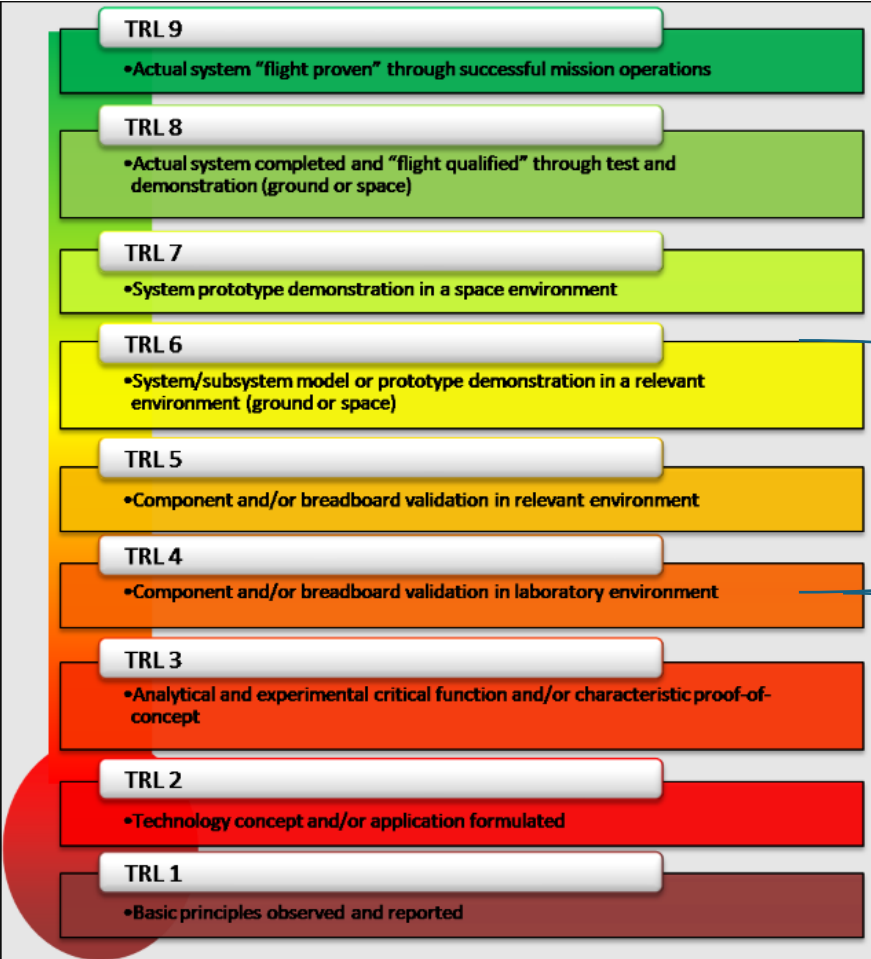
Deep Tech in the European Innovation Council – EIC

https://eic.ec.europa.eu/index_en

Identify, develop, and scale up high-risk, high-impact innovations across Europe



TRL in the European Innovation Council – EIC



EIC ACCELERATOR

- TRL9 - actual system proven in operational environment
- TRL8 - system complete and qualified
- TRL7 - system prototype demonstration in operational environment



EIC TRANSITION

- TRL6 - technology demonstrated in relevant environment
- TRL5 - technology validated in relevant environment
- TRL4 - technology validated in lab



EIC PATHFINDER

- TRL3 - experimental proof of concept
- TRL2 - technology concept formulated
- TRL1 - basic principles observed

Sursa: [NASA](#), Sep 27, 2023

[Overview TRL-MRL-SRL \(NCP@UEFISCDI\)](#)

EIC OPEN & CHALLENGES OVERVIEW



EIC PATHFINDER

EIC TRANSITION

EIC ACCELERATOR

OPEN

DEADLINES

- 7 March 2024
- 18 September 2024
- Short Applications: Continuous
- Full Applications 2024: 13 March and 3 October

INDICATIVE BUDGET

- € 136 MILLION
- € 94 MILLION
- € 375 MILLION

CHALLENGES

DEADLINES/CUT-OFFS

- 16 October 2024
- Short Applications: Continuous
- Full Applications 2024: 13 March 2024 and 3 October 2024

INDICATIVE BUDGET

- € 120 MILLION
- € 300 MILLION

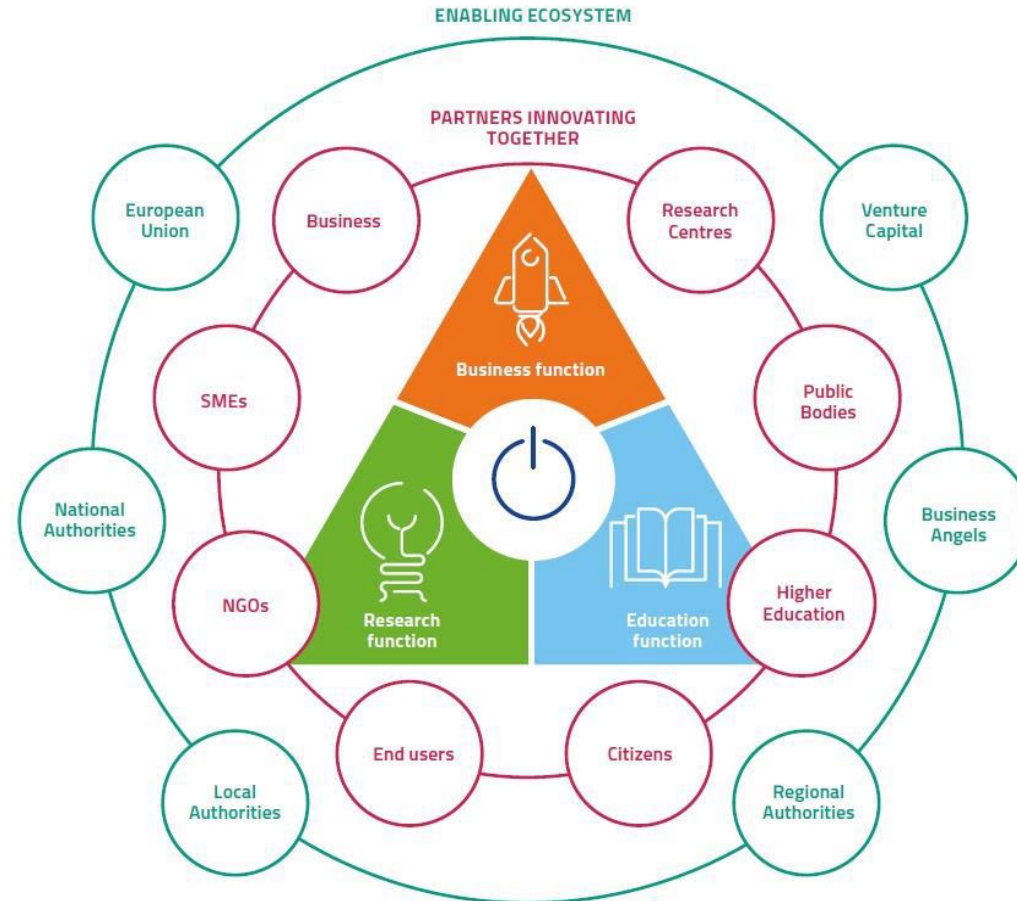
CHALLENGES

- Solar-to-X” devices Towards cement and concrete as a carbon sink
- Nature inspired alternatives for food packaging and films
- Nanoelectronics for energy-efficient smart edge devices
- Protecting EU space infrastructure
- Human Centric Generative AI
- Virtual worlds and augmented interaction, including support to Industry 5.0
- Enabling the smart edge & quantum technology components
- Food from precision fermentation and algae
- Monoclonal antibody-based therapeutics for emerging viruses
- Renewable energy sources and their whole value chain

EIT Funding Opportunities

Knowledge Triangle

EIT brings together organizations active in **education, research and innovation** to form dynamic cross-border partnerships and create environments that stimulate innovation.



Source: [EIT | European Commission \(europa.eu\)](http://EIT | European Commission (europa.eu))

EIT Knowledge and Innovation

Communities (KICs) are Europe-wide networks centred around addressing a specific societal challenge

They are communities of:

- Higher education institutions,
- Research centres,
- Businesses and investors,
- Public and non-profit organisations.



Source: [EIT | European Commission \(europa.eu\)](https://european-commission.europa.eu)

EIT Regional Innovation Scheme

(EIT RIS) Introduced in 2014, the EIT Regional Innovation Scheme enhances innovation in countries with moderate or modest innovation scores.

Managed by EIT and implemented via its KICs, the scheme has expanded EIT community activities across Europe fostering a pan-European network of opportunities.





EIT *‘successful in unifying and integrating the Knowledge Triangle and in supporting the development of long-term pan-European innovation ecosystems’*

- the ‘themes of the KICs themselves are also at the core of the green and digital transition, and as such, the activities of the EIT KICs generate added societal value.’
- the EIT has developed a framework that assists its beneficiaries, simplifies participation, and leads to efficiency gains
- EIT Health's 2020 COVID-19 Rapid Response
- EIT’s expanded support for Ukraine's innovation sector in response to the Russian invasion
- EIT educational activities - The Deep Tech Talent Initiative & The European Battery Alliance (EBA) Academy
- EIT builds ‘inclusive and resilient innovation ecosystems’

EIT Next calls (for action 😊)

Almost every day....

Each KIC opens continuously 'calls for action': innovation grants, EIT labelled educational programmes, executive courses, deephacks, placements hosts, deep demonstration, boosters, challenge labs, etc.

Never miss any of EIT's updates!

[News](#)

[Events](#)

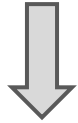
[Opportunities](#)

[Call for proposals](#)

[Vacancies](#)

[Knowledge Centre](#)

EIT Health Flagship Call 2025



Flagship one:
The Re-industrialisation of Europe

Call deadline: 15.10.2024
[Call document](#)



Flagship two:
Digital Transformation of Healthcare

Call deadline: 05.11.2024
[Call document](#)



Flagship three:
New Models to Deliver Healthcare

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