

Milano 9 maggio 2025



## EU Startup and Scaleup Strategy

Present and future European tools for innovation and tech transfer

# EIC Work Programme: Sfide ed opportunità

Francesco Matteucci

European  
Innovation  
Council



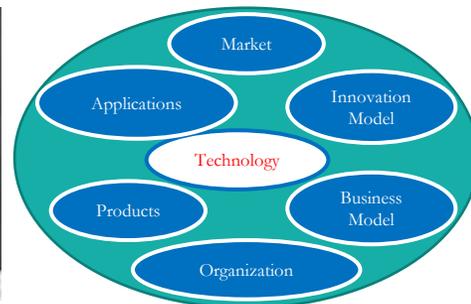
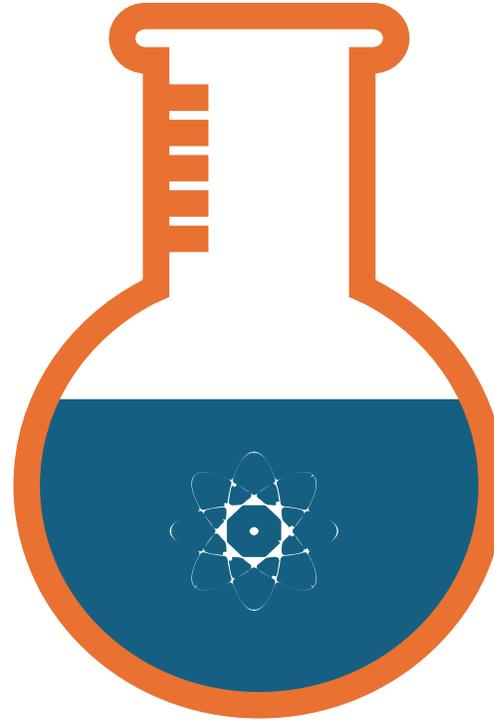
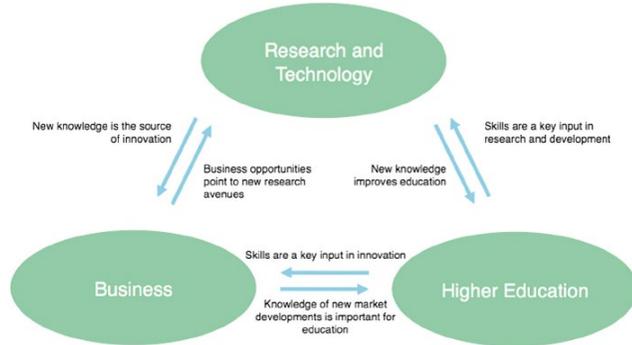


# Innovation

is the process that starting from an idea with a commercial aim, develops, commercializes and makes this idea adopted by the market.

# Success Formula

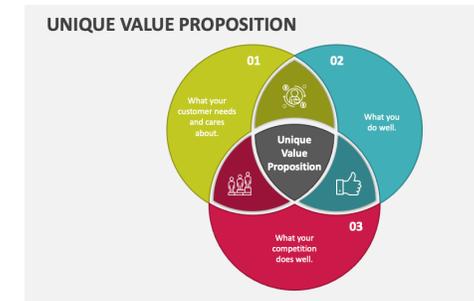
To improve is to change: to be perfect is to change often.  
Sir Winston Churchill

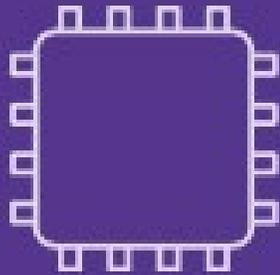


## Competition

List competitors

List competitive advantages





**TECHNOLOGIES**



**REGULATIONS**



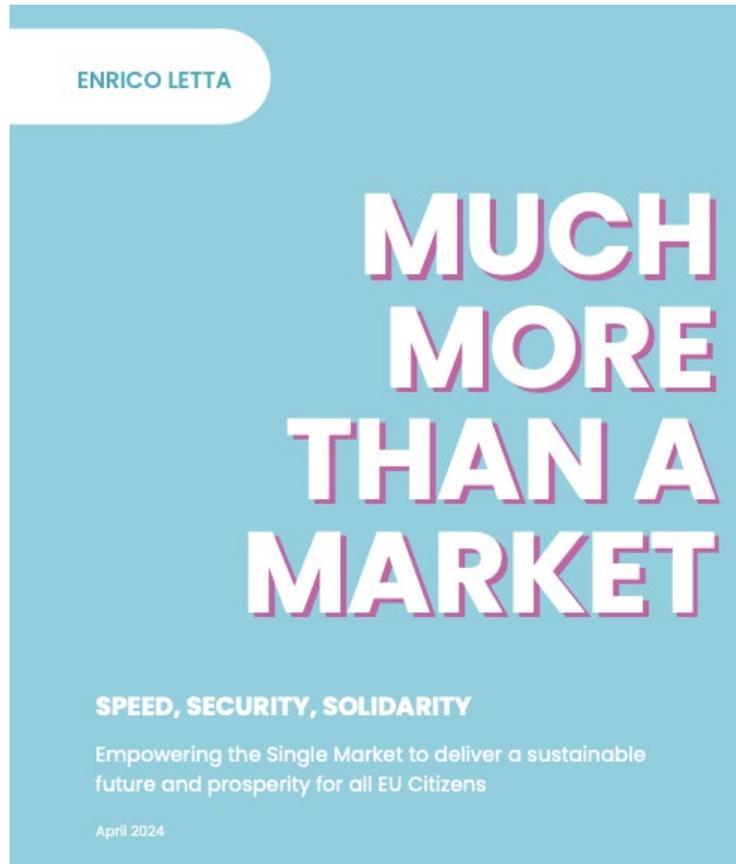
**INNOVATION JOURNEY**

*In the world of deep tech startups, success is as tied to capital as it is to the quicksands of regulation and politics.*

*by Scenarionist*

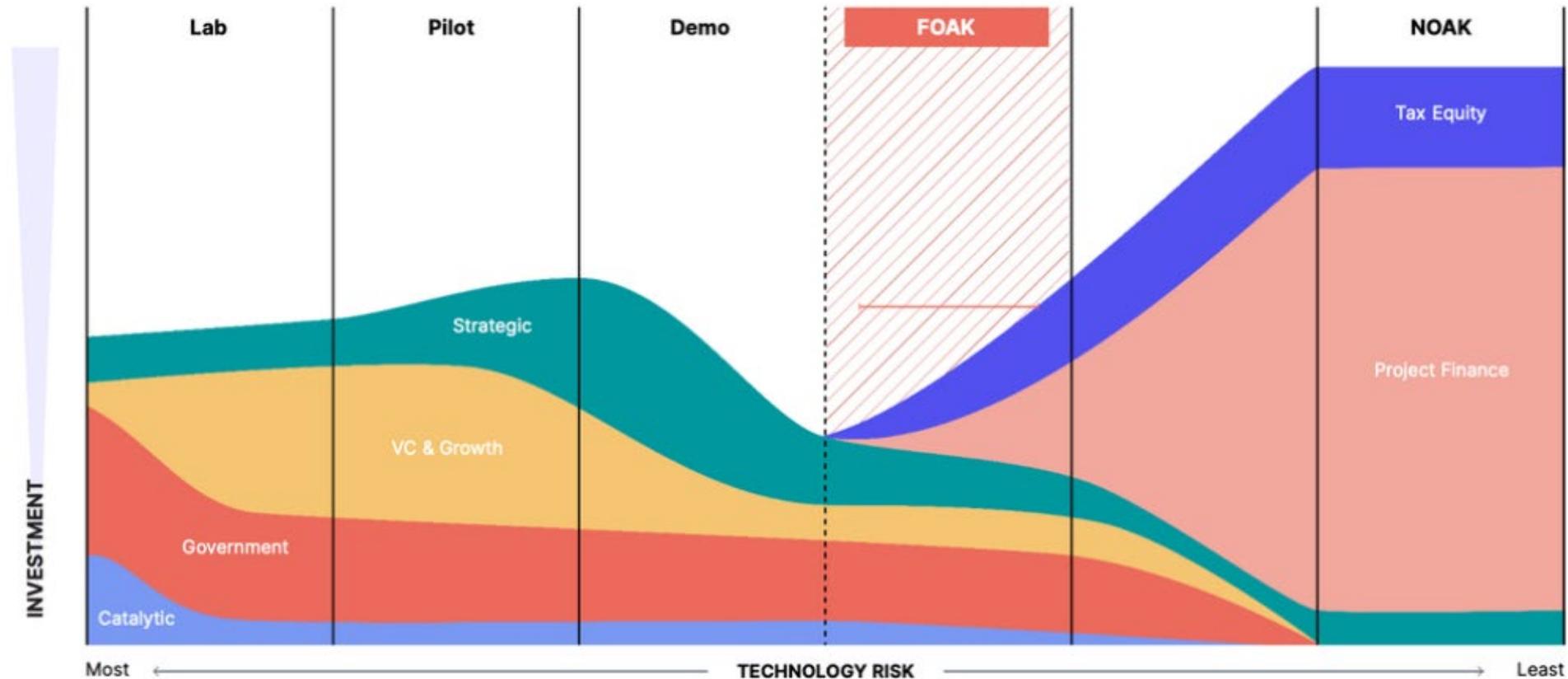


# European Innovation Policy Status



# Fundraising for the Innovation Journey

## The blended capital stack: from FOAK to NOAK



Capital availability against project stage (Source: [Sightline Climate](#))



# HEALTH

## Funding Instruments under Horizon Europe

European  
Innovation  
Council



Horizon Europe Pillar	Funding Program	Funding scheme purpose
<b>Pillar I: Excellent Science</b>	<ul style="list-style-type: none"><li>• <b>European Research Council (ERC)</b></li><li>• <b>Marie Curie Sklodowska</b></li><li>• <b>Research &amp; Infrastructures</b></li></ul>	<ul style="list-style-type: none"><li>• Funds pioneering health research projects led by individual researchers, potentially leading to significant breakthroughs in understanding, diagnosis, and treatment of diseases</li><li>• Supports training and mobility for researchers in health sciences, fostering international collaboration and career development in health research.</li><li>• Provides resources for health researchers, such as access to advanced biomedical facilities, data infrastructures, and technology platforms necessary for cutting-edge health research</li></ul>
<b>Pillar II: Global Challenges and European Industrial Competitiveness</b>	<ul style="list-style-type: none"><li>• <b>Health Cluster</b></li><li>• <b>European Partnerships</b></li><li>• <b>Missions</b></li></ul>	<p><i>Includes multiple focus areas under the health domain aimed at addressing key societal challenges.</i></p> <ul style="list-style-type: none"><li>- Health Throughout the Life Course</li><li>- Environmental and Social Health Determinants</li><li>- Non-Communicable and Rare Diseases</li><li>- Infectious Diseases</li><li>- Tools, Technologies, and Digital Solutions</li><li>- Health Care Systems</li></ul> <p><i>Large-scale efforts to address significant societal issues, such as cancer</i></p> <ul style="list-style-type: none"><li>- Cancer Mission</li></ul>



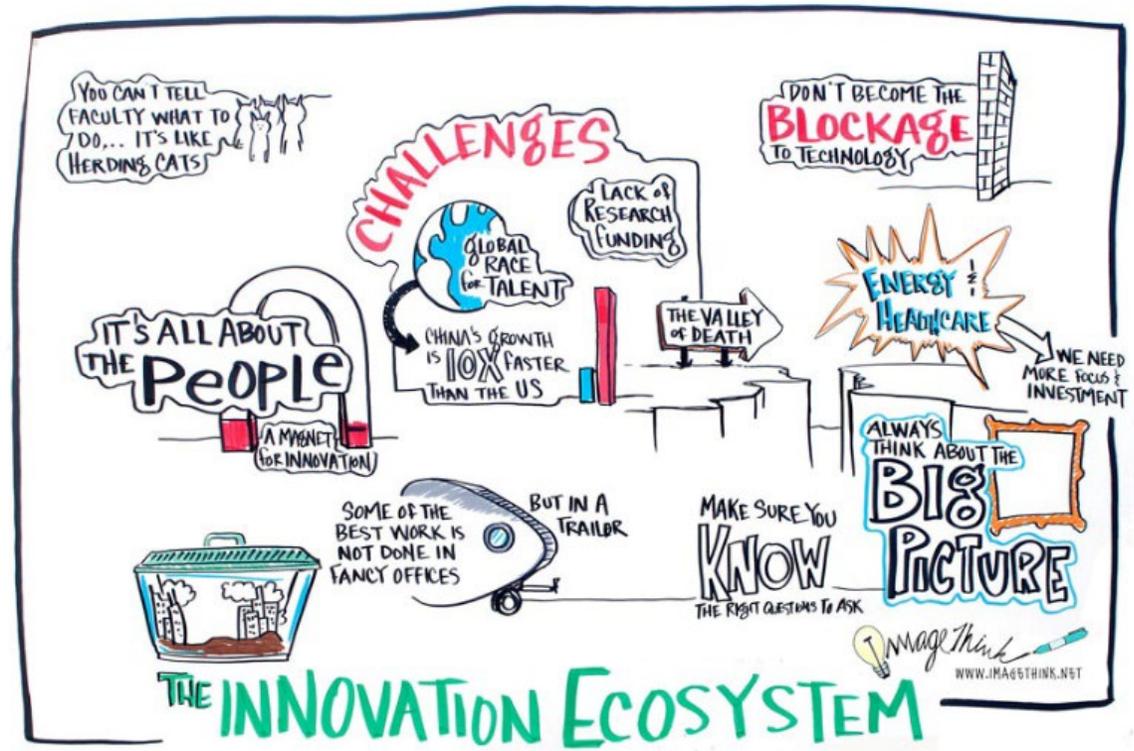
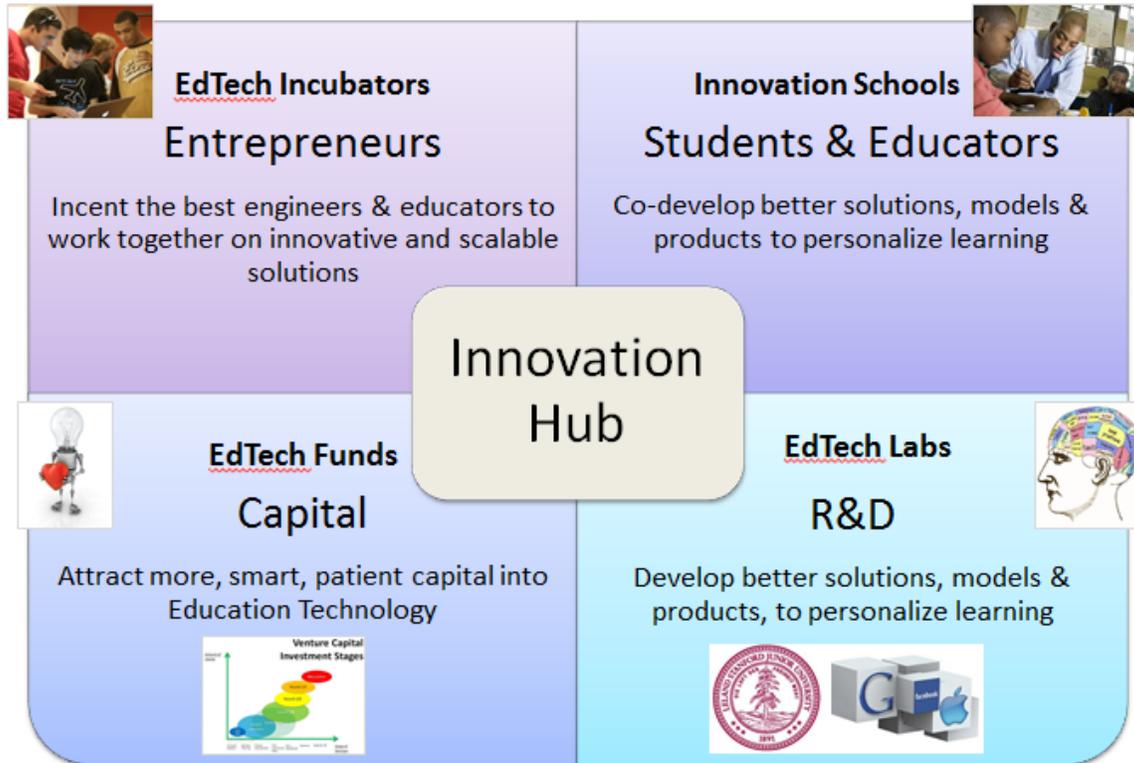
# HEALTH

## Funding Instruments under Horizon Europe

Horizon Europe Pillar	Funding Program	Funding scheme purpose
Pillar III: Innovative Europe	<ul style="list-style-type: none"> <li>• <b>European Innovation Council</b></li> </ul>	<p><i>Supports innovative health technologies and startups</i></p> <ul style="list-style-type: none"> <li>- EIC Pathfinder</li> <li>- EIC Transitions</li> <li>- EIC Accelerator</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>European Institute of Innovation and Technology (EIT)</b></li> </ul>	<p><i>Funds health-related initiatives via Knowledge and Innovation Communities (KICs), such as EIT Health, which promotes entrepreneurship and innovation in health and aging</i></p>
	<ul style="list-style-type: none"> <li>• <b>European Partnerships</b></li> </ul>	<p><i>Joint initiatives to tackle specific health-related challenges through collaboration</i></p> <ul style="list-style-type: none"> <li>- IHI JU</li> <li>- European Partnership on Pandemic Preparedness</li> </ul>



# Transition “places”: from Research to Innovation



# Innovation mindset training



**"I particularly welcome efforts in taking entrepreneurship education further in Europe and offering as many students as possible a real-life experience of what it means to be entrepreneurial in today's world."<sup>1</sup>**

**Ursula von der Leyen,  
President of the European Commission**

## Key actions to foster entrepreneurship education in Europe

Europe needs more people who tackle pressing societal challenges: above all the twin transition to a digital and green society as well as pandemic recovery. Entrepreneurship education (EE) can unleash the potential of Europeans to master climate change and digitisation and to build a more resilient society. In order to enhance European cooperation and strategy building in EE, the European Commission implemented the project "Peer-Learning Activities in Entrepreneurship Education and in Women's Entrepreneurship" (2018–2021). This Guide is a final output of the project. The target group is decision makers in governments, schools and higher education, civil society, and business – on local, regional, national, and European level.

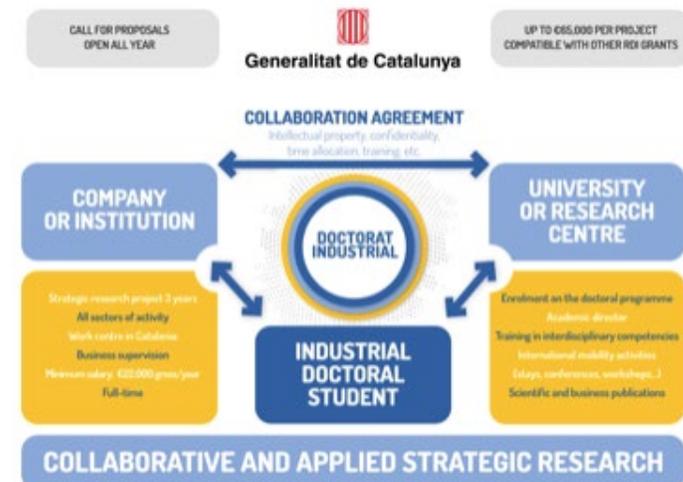
The project identified **five main areas** where decision makers could become active: training educators, ensuring stakeholders' cooperation, sharing knowledge, raising awareness of EE benefits as well as conducting research and analysis about EE. These areas are interlinked and mutually reinforce each other:



## A Guide to Fostering Entrepreneurship Education

Five key actions towards a digital, green and resilient Europe

October 2021









# Why do we need scientific entrepreneurs ?

## What's holding back European innovation?

Innovation <b>performance</b>	<ul style="list-style-type: none"><li>• <b>Strong research performance not translated</b> into innovation</li><li>• <b>Lack of breakthrough/ disruptive innovations</b> that create new markets</li></ul>
Innovation <b>funding</b>	Financing gaps (2 "valleys of death") in <ul style="list-style-type: none"><li>• <b>Transition</b> from lab to enterprise</li><li>• <b>Scaling up</b> for high-risk innovative start-ups</li></ul>
Innovation <b>ecosystem</b>	<ul style="list-style-type: none"><li>• Many national &amp; local ecosystems, but <b>fragmented at European level</b></li><li>• Need to <b>include all regions and all talent</b> (especially female)</li></ul>

**We need to overcome European Paradox – perceived failure of EU countries to translate scientific advances into marketable innovations.**

# Deeptech

Problem and Hardware oriented

Multidisciplinary

High risk, high fund needed

Open innovation approach (ecosystem of innovation)

Powerful technologies are emerging faster...

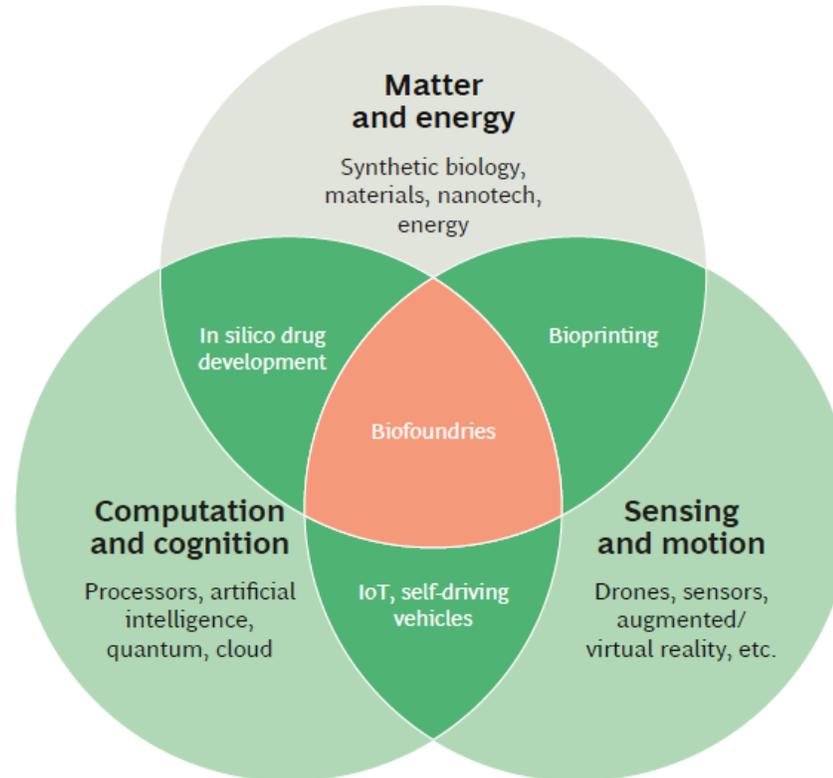
- Artificial intelligence
- Quantum computing
- Synthetic biology
- Nanotechnology
- NextGen UX (augmented/virtual reality)
- Blockchain
- Robotics
- Universal printing

...and they converge to solve major business issues

- Process automation for materials
- New chemical development via AI or quantum computing
- Neuron-machine interface

Deep tech brings together powerful capabilities

- Data volume
- Moore's law
- DNA sequencing cost
- DNA synthesis cost (in progress)
- Quantum (in progress)



● ● ● Digital transformation as prerequisite

# Europe's most ambitious innovation initiative

**Budget**

€ 10 billion

European  
Innovation  
Council



**Bridging the gap**

from frontier research to breakthrough innovation & accelerator for SMEs, startups, scaleups

**Largest deep-tech investor in Europe**

Over €3 billion

**Enhances the European Innovation Ecosystems**

Partnerships with ERC, EIT regions...

**Annual Work Programmes (separate from Horizon Europe main WP)**

- First WP 2021: €1.5 billion
- Second WP 2022: €1.7 billion
- Third Work Programme 2023: € 1.7 billion

**€6 bn** of support to:



**700+**  
startups



**~600+**  
research and  
tech transfer  
projects

## INVESTING IN STRATEGIC TECHNOLOGIES



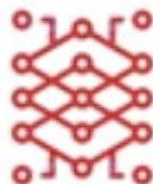
**€850 m**

quantum and  
semiconductors  
[ supporting the  
Chips Act ]



**€725 m**

AI  
development  
and  
applications



**€500 m**

advanced  
materials



**€700 m**

energy generation  
and storage  
solutions



**€625 m**

biotechnology  
and  
biomanufacturing

## EMPOWERING WOMEN INNOVATORS



**women-led  
companies**

supported in 2024  
(CEO/CTO/CSO)



**female  
research project**

coordinators and  
participants in 2024



**30+**

**women scientists and  
entrepreneurs**

awarded under  
Women Innovators Prize

# EIC Funding Schemes

- For **consortia & single** researchers /companies
- Limited call
- Proof of concept to validation (TRL 3-6)
- Grants up to € 2.5 million
- Bottom-up Open & top-down 2 Challenges: single benefic. (SMEs or research inst.) or 2-5 benefic.

## Pathfinder

- For **Consortia**
- **Early stage** research on breakthrough technologies (TRL 1-4)
- Grants up to € 3 to 4 million
- **Bottom-up Open:** 3 min benefic.
- **Top-down Challenge:** 2 min or single benefic. (SMEs or research inst.)

## Transition

## Accelerator

- For **individual companies**
- Development & scale up (TRL 6-9)
- **Blended** finance
  - grants up to € 2.5 million
  - equity up to €15 million

# 1 What are the EIC Pathfinder Funding schemes



- **EIC Pathfinder OPEN**  
Deadline: **21/05/2025**



to support projects in **any field of science, technology or application** priorities ('bottom-up')

- **EIC Pathfinder CHALLENGES**



to support **coherent portfolios of projects within predefined thematic areas** with the aim to achieve specific objectives for each Challenge ("top-down")

### 2025 Work Programme

1. Biotech for Climate Resilient Crops and Plant-Based Biomanufacturing
2. Generative-AI based Agents to Revolutionize Medical Diagnosis and Treatment of Cancer
3. Towards autonomous robot collectives delivering collaborative tasks in dynamic unstructured construction environments
4. Waste-to-value devices: Circular production of renewable fuels, chemicals and materials

Deadline: **29/10/2025**



# Pathfinder calls 2025 – Summary table

European  
Innovation  
Council



	Pathfinder Open	Pathfinder Challenges
<b>Total budget</b>	€142 million	€120 million
<b>Proposals (indicative)</b>	Up to €3 million	Up to €4 million
<b>Funding rate</b>	100% of eligible costs	100% of eligible costs
<b>Opening</b>	10 January 2023	20 June 2023
<b>Deadline</b>	21 May 2025 at 17.00 CET	29 October 2025 at 17.00 CET
<b>Length of proposal</b>	17-page proposal (part B)	25-page proposal (part B)
<b>Applicants</b>	Consortia: min. 3 partners from 3 different MS/AC (of which at least 1 partner in a MS)	1. Single legal entities in a MS/AC (conditions apply) 2. Consortia: - If 2 partners: from different MS/AC, otherwise - Min. 3 partners from 3 different MS/AC (of which at least 1 partner in a MS)

2

## EIC Transitions

Transition

- For **consortia & single** researchers /companies
- Limited call
- Proof of concept to validation (TRL 3-6)
- Grants up to € 2.5 million
- Single benefic. (SMEs or research inst.) or 2-5 benefic.
- Eligible:

- ✓ EIC Pathfinder projects (including projects funded under the Horizon 2020 EIC pilot Pathfinder, FET-Open, FET-Proactive, CSA and CSA Lump-sum FET Innovation Launchpad, and FET Flagships calls)

- ✓ ERC Proof-of-Concept (H2020 and HE)

- ✓ Research and Innovation funded under Horizon 2020 Societal challenges and Leadership in Industrial Technologies and under Horizon Europe pillar II, with an eligible TRL.

Deadline: **17/09/2025**

### 3 What are the EIC Accelerator Funding schemes



#### • EIC Accelerator OPEN



to support start-ups in **any field of science, technology or application** priorities ('bottom-up')

#### • EIC Accelerator CHALLENGES



Challenges have been identified in areas where **breakthrough technologies or game-changing innovations developed by start-ups or SMEs** can have a major impact on EU objectives.

In 2025: **AI Act, Net Zero Industry Act, the Communications on Biotechnology and Biomanufacturing, and on Advanced Materials**

#### 2025 Work Programme

1. Acceleration of advanced materials development and upscaling along the value chain
2. Biotechnology driven low emission food and feed production systems
3. GenAI4EU: Creating European Champions in Generative AI
4. Innovative in-space servicing, operations, robotics and technologies for resilient EU space infrastructure

Deadline: **apply at any time**





- ❖ Does your company have a **game-changing innovative technology** focused on the development and commercialisation of a strategic technology for Europe in digital and deep tech, cleantech or biotech?
- ❖ Has your company **already secured an initial investment**, and is now looking to **raise a major funding round to scale** up rapidly and become a global leader?
- ❖ Does the successful **commercialisation** and **scaling of your technology**/ innovation represent **significant risks** which mean that it cannot be sufficiently financed from the market investors?

How much: **10-30 million Euro**

**Health: Biotechnologies**, including **medicinal products** on the Union list of critical medicines and their components. Including DNA/RNA; proteins and other molecules; cell and tissue culture and engineering; process biotechnology techniques; Gene and RNA vectors; bioinformatics; and nanobiotechnology.

# Take home messages

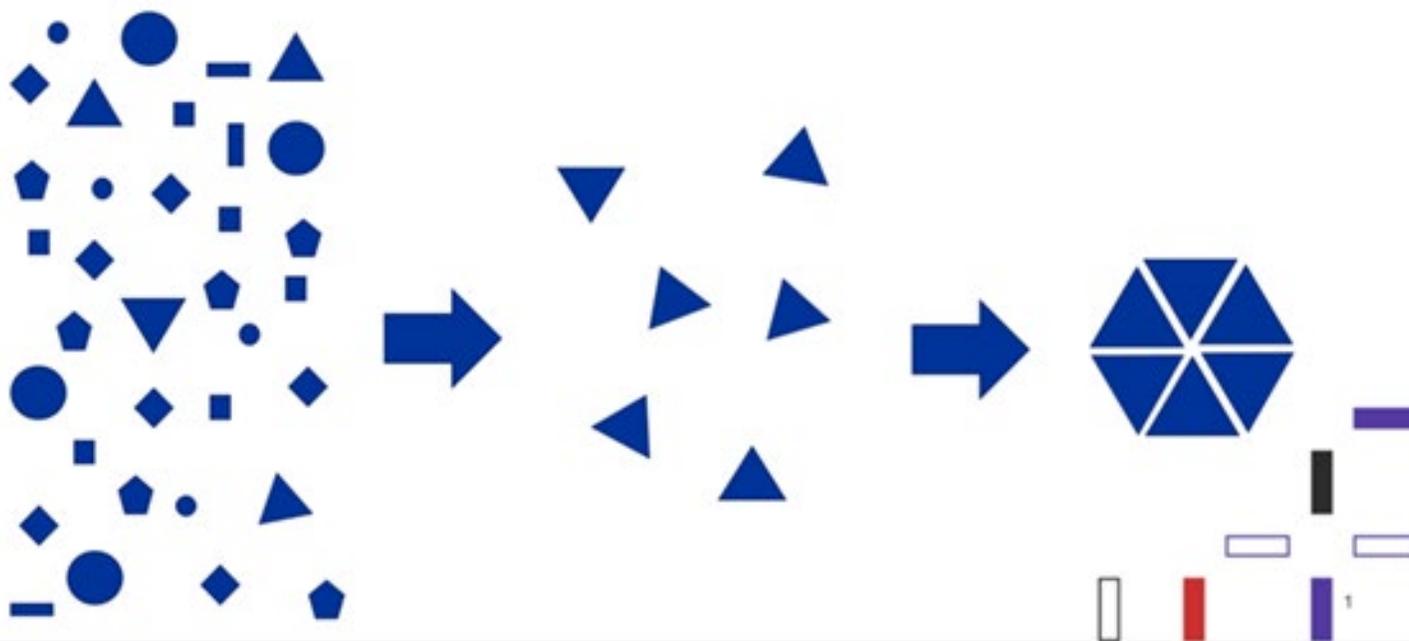
Innovation means not I but we (coopetition).

R&D&I is “not reinventing the wheel”, but training for curiosity.

R&D&I needs an ambidextral strategy that has to be horizontally integrated within the organization.

**Enjoy, whatever it takes you will be a different person.**

# Take home messages



In the global, digitalized world, where the only certainty is the change, we need to cooperate to maximize R&D&I impact.

# Thank you for the attention

Francesco Matteucci

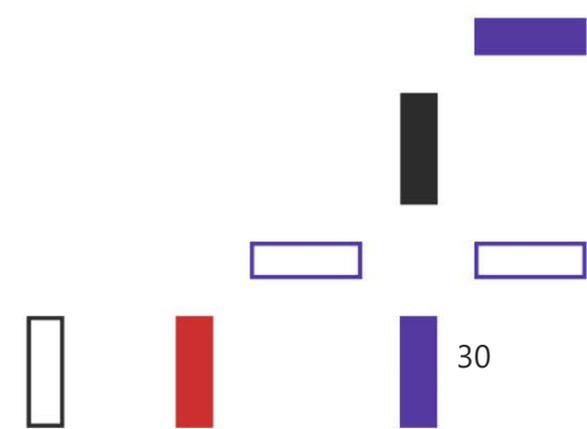
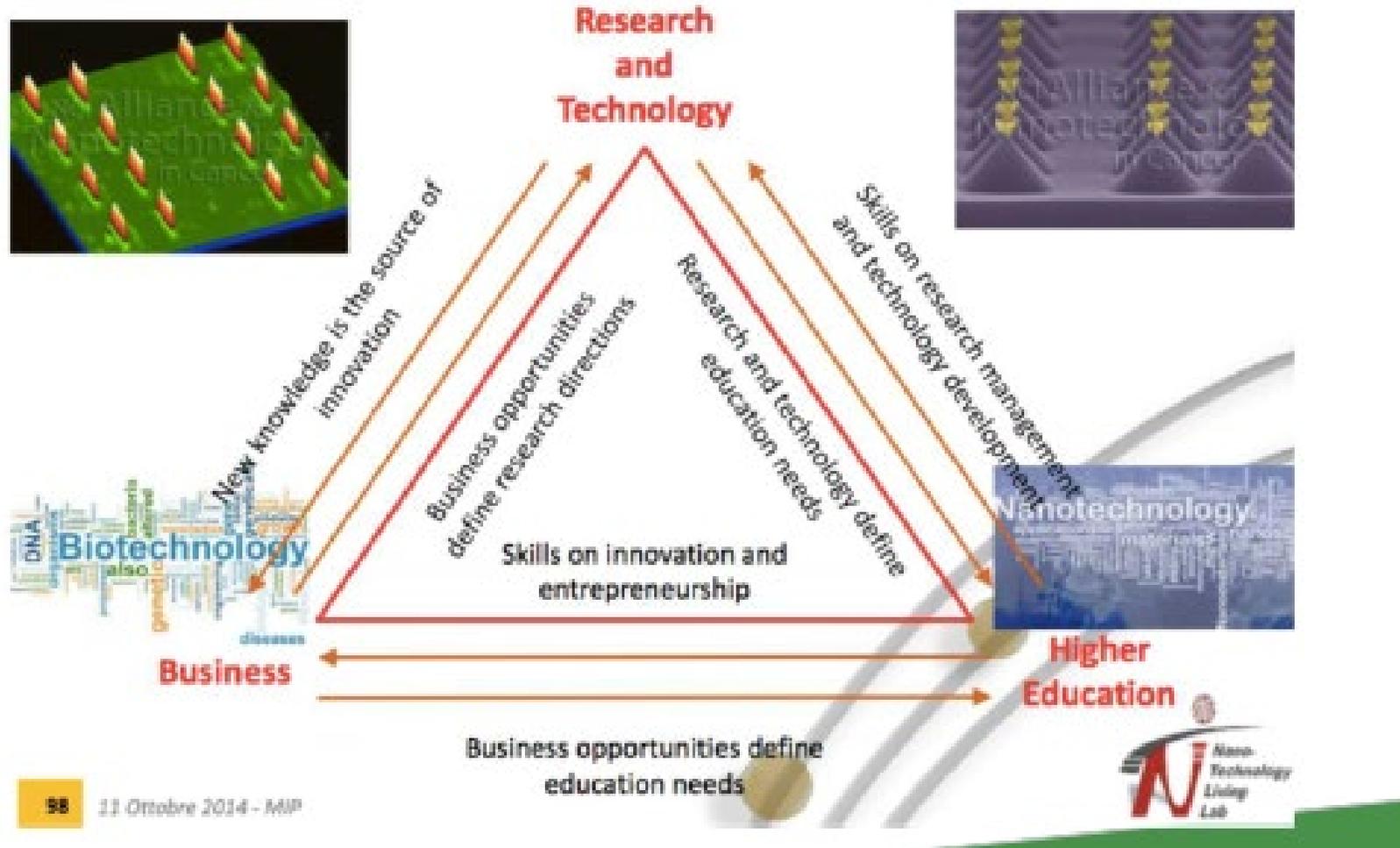
[fmatteucci@libero.it](mailto:fmatteucci@libero.it)

0039 3805322705



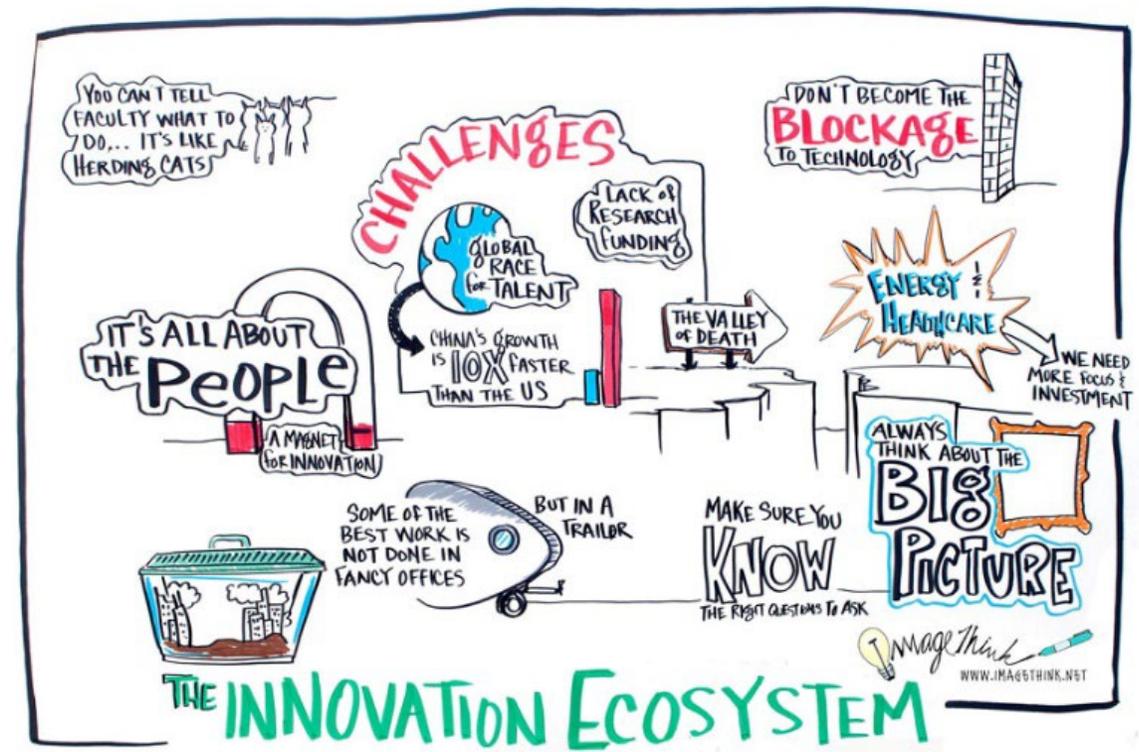
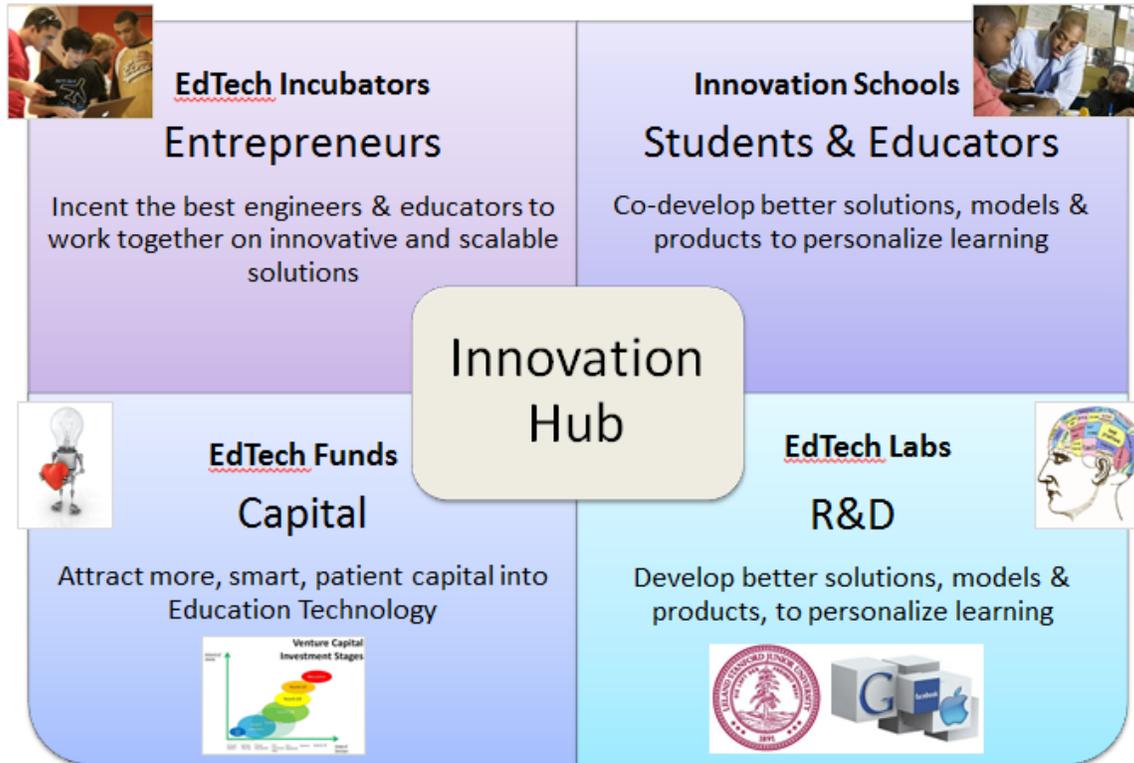
**Back up slides**

# Where deeptech happens





# Transition “places”: from Research to Innovation



# Industrial PhDs



**"I particularly welcome efforts in taking entrepreneurship education further in Europe and offering as many students as possible a real-life experience of what it means to be entrepreneurial in today's world."**<sup>1</sup>

**Ursula von der Leyen,  
President of the European Commission**

## Key actions to foster entrepreneurship education in Europe

Europe needs more people who tackle pressing societal challenges: above all the twin transition to a digital and green society as well as pandemic recovery. Entrepreneurship education (EE) can unleash the potential of Europeans to master climate change and digitisation and to build a more resilient society. In order to enhance European cooperation and strategy building in EE, the European Commission implemented the project "Peer-Learning Activities in Entrepreneurship Education and in Women's Entrepreneurship" (2018–2021). This Guide is a final output of the project. The target group is decision makers in governments, schools and higher education, civil society, and business – on local, regional, national, and European level.

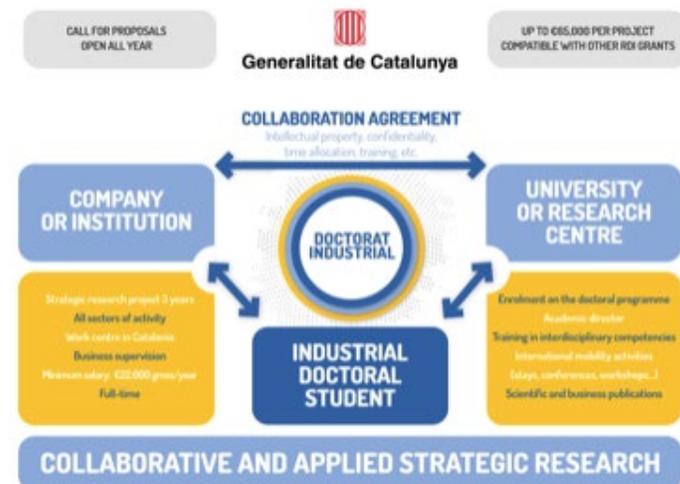
The project identified **five main areas** where decision makers could become active: training educators, ensuring stakeholders' cooperation, sharing knowledge, raising awareness of EE benefits as well as conducting research and analysis about EE. These areas are interlinked and mutually reinforce each other:



## A Guide to Fostering Entrepreneurship Education

Five key actions towards a digital, green and resilient Europe

October 2021



## Next Generation Innovation Talents' Initiative

INNO-  
-NEXT | The Next  
Generation  
Innovation  
Talents' Initiative

European  
Innovation  
Council



## Corporate Days Events

# EIC Corporate Partnership Programme

The European Innovation Council is open for new collaborations with the largest and most innovative Corporations in Europe.

There are three different activity formats for the European Corporate Partnership Programme:

- [EIC Corporate Days](#): Exclusive curated business acceleration service bridging the gap between EIC-funded innovators and large firms.
- EIC Multi Corporate Days: Corporate Day that involves several corporations focusing on sector-specific challenges and opportunities.
- Corporate Clients Capitalization: Business acceleration service where the corporations act as intermediaries, facilitating the access for EIC beneficiaries to their commercial networks.

### Implementing partners



**We are looking for large corporations with open innovation spirit, interested in integrating innovations coming from startups and scaleups directly into their business offering.**

# EIT – Knowledge Innovation Communities

Europe's largest innovation community



## EIT KNOWLEDGE & INNOVATION COMMUNITIES

<b>EIT CLIMATE-KIC</b> Accelerating the transition to a zero-carbon economy	<b>EIT DIGITAL</b> Drive Europe's digital transformation	<b>EIT INNOENERGY</b> Achieve a sustainable energy future for Europe	<b>EIT HEALTH</b> Healthier lives for EU Citizens
<b>EIT RAWMATERIALS</b> Develop raw materials into a major strength for Europe	<b>EIT MANUFACTURING</b> Increase Europe's manufacturing competitiveness	<b>EIT FOOD</b> Lead a global revolution in food production & innovation	<b>EIT URBAN MOBILITY</b> Smart, green & integrated transport
<b>EIT CULTURE &amp; CREATIVITY</b> Unite Europe's creatives	<b>EIT WATER</b> COMING SOON!		

Operative in 2026

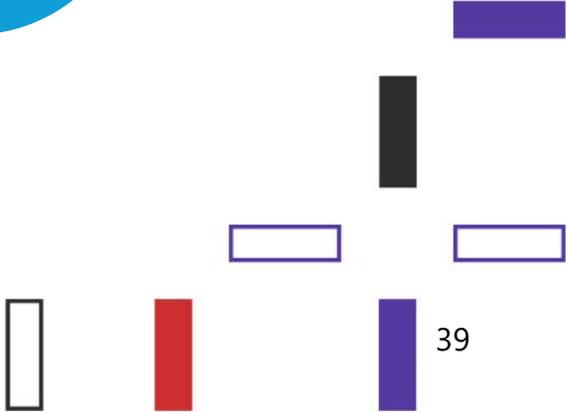
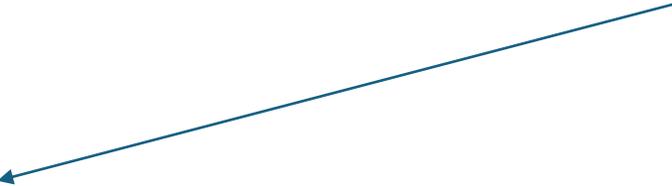


# Technological Infrastructures

Type of technology infrastructures	Key services
Testbeds – physical or virtual environments.	Supporting the development, testing and introduction of new products, services, processes or organisational solutions and evaluate the performance of the new technologies. The environments in which testbeds operate are generally divided into three levels: laboratory environment, simulated environment, real environment or closer to real-life conditions.
Pilot lines / plants and demonstration facilities	Pilot lines/plants and demonstration facilities: Facilities that are designed to replicate operational systems at small-scale or and simulate key aspects of a larger industrial process. Their primary purpose is to gather valuable data, assess the feasibility and efficiency of a process, and identify potential challenges before committing to large-scale implementation. Pilot lines develop new technology building blocks, new technology-based products, or employs new production technology, as a step towards the commercialisation of the new technology. Some pilot lines can offer small volume test production.
Cleanrooms	A cleanroom provides an engineered space which maintains a very low concentration of airborne particulates. It is designed to keep everything from dust to airborne organisms or vaporised

# Stakeholders

DG RTD  
DG CNECT  
DG ENER  
DG CLIMA  
DG AGRI  
DG GROW  
Clean H2 Partnership  
...



# Examples of portfolio activities on materials for energy

## Hydrogen portfolio



- Materials science: use of computational materials to accelerate CRM-free catalyst, in-operando characterization techniques, ...
- Matching between projects and industrial stakeholders
- Training courses "How to make a business out of it"
- Young scientists group meetings
- Collaboration with Clean H2 partnership (drafting JU AWP 2024 – call on H2 from Seawater)
- Interaction with H2 valleys

## EIC PATHFINDER PORTFOLIO

### NOVEL ROUTES TO GREEN HYDROGEN PRODUCTION

#### Strategic Plan

BRUSSELS, NOVEMBER 2023

Programme Managers: Francesco Matteucci & Antonio Marco Pantaleo

Project Officers: Darina Botsova & Antonios Fysekidis

