



European  
Commission

European  
**eic** **INNOVATION**  
Council

**EMPOWERING EUROPEAN INNOVATORS**

# EU funding for innovation

**Jean-David Malo**

*Director European Innovation Council Task Force*

*DG RTD*

*European Commission*

*Research and  
Innovation*



## What's holding back European innovation

### Innovation performance

Lack of **breakthrough and disruptive innovations** that create new markets

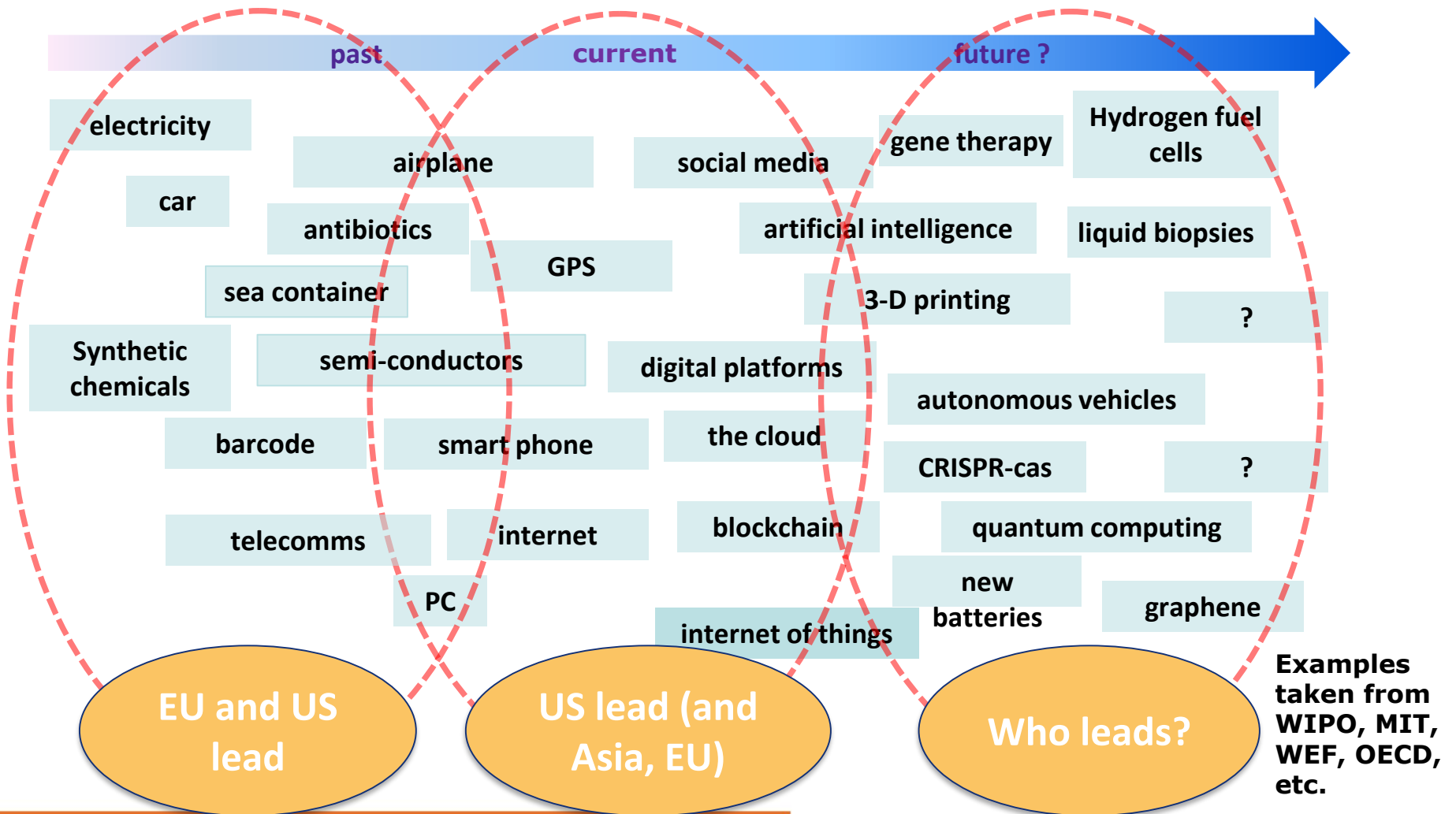
### Innovation funding

**Financing gap** between R&D grants and private investment **for scaling up** innovative start-ups

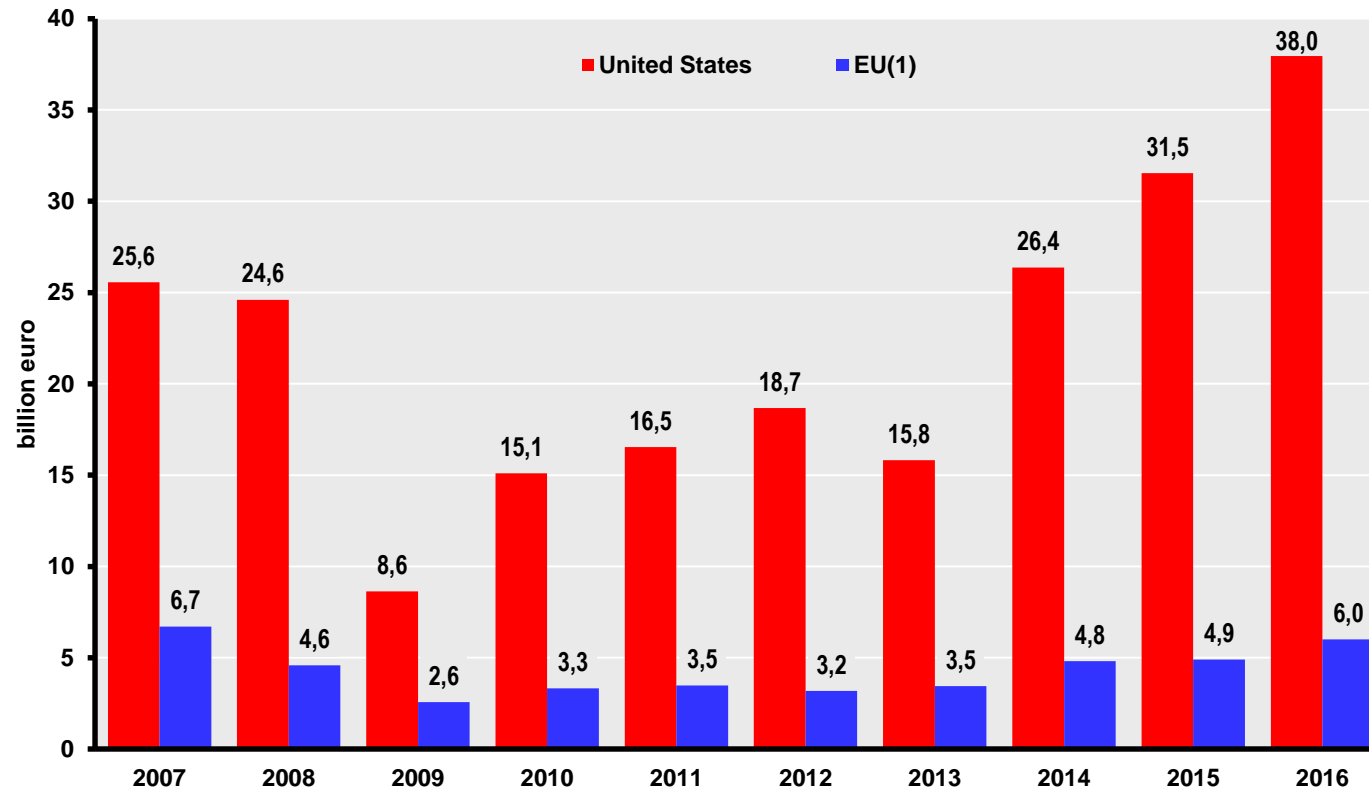
### Innovation ecosystem

Many national & local ecosystems, but **fragmented at European level**

# Who will lead the next wave of breakthrough and disruptive innovation?



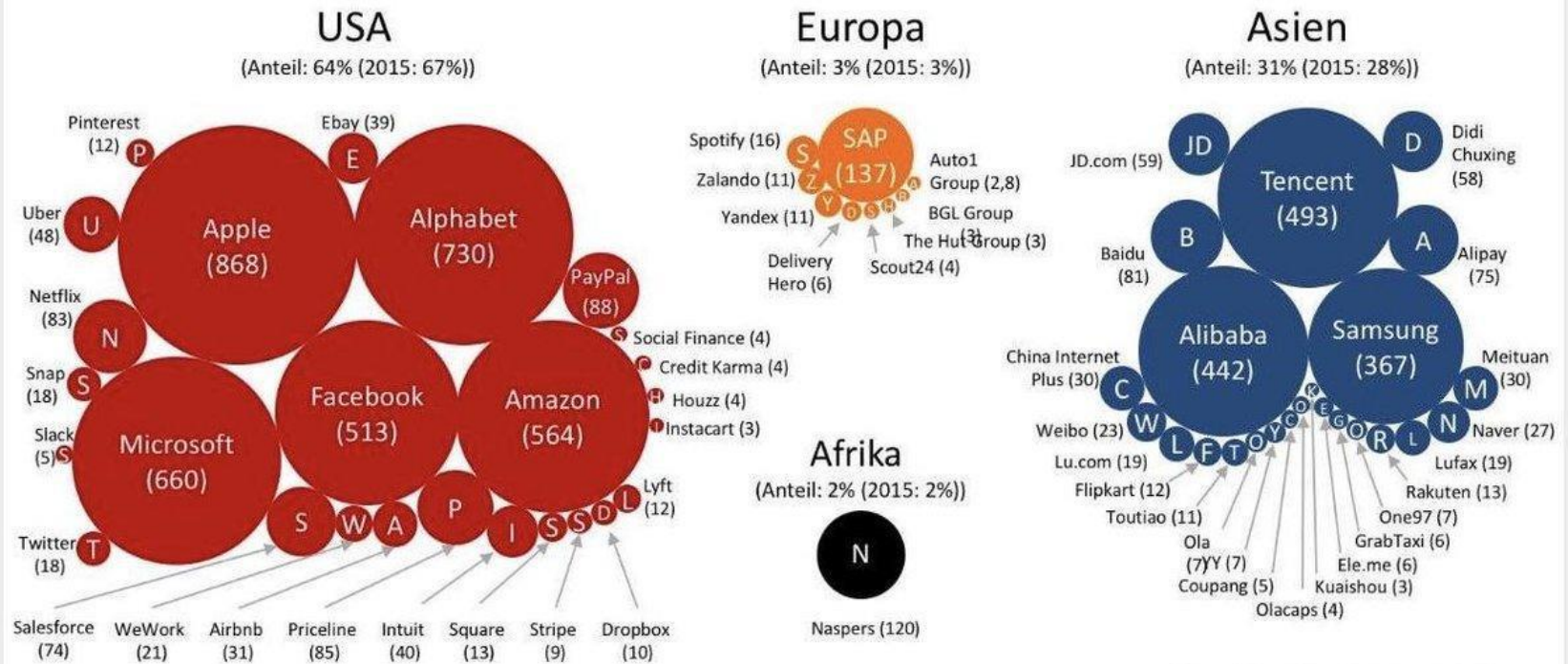
## Financing gap: venture capital US vs EU



Venture capital raised. Data: Invest Europe, NVCA / Pitchbook. (1) EU does not include HR, CY, MT, SI, SK.

# Global Fast-growing Innovative Companies

Die 60 wertvollsten Plattformen der Welt (Mrd. Dollar (Börsenwert; jüngste Finanzierung / Stand 31. Dezember 2017))

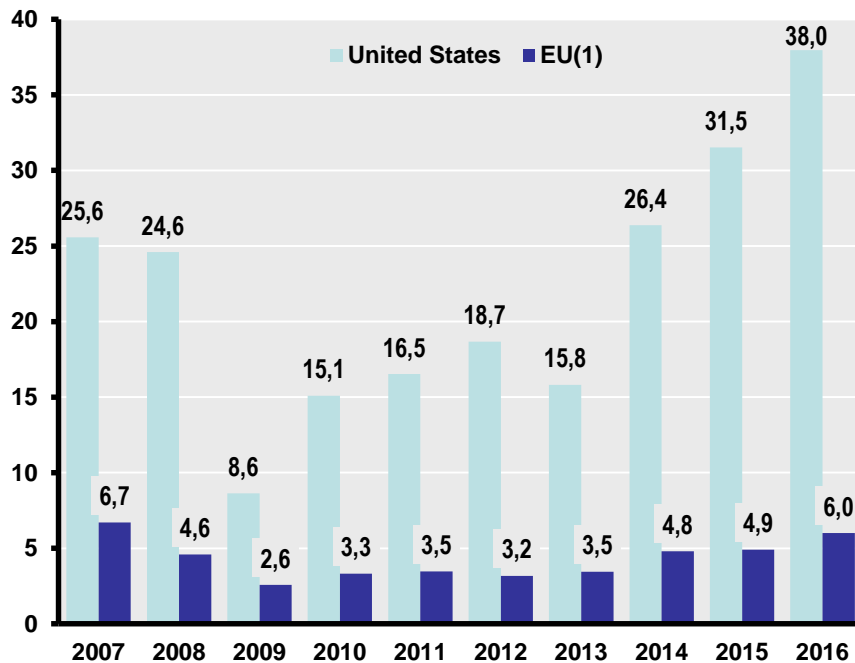


Quelle: Netzoekonom.de / Idee: Peter Evans

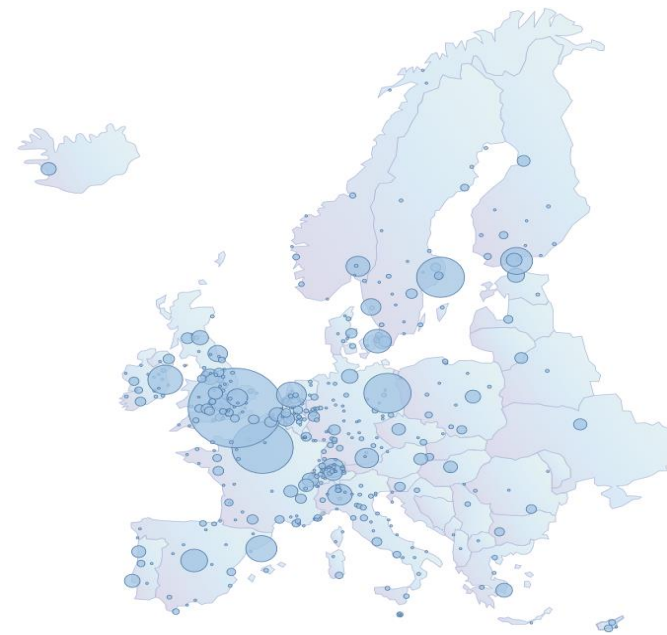
# The challenge in Europe: a financing gap coupled with a fragmented innovation ecosystem

EU start-ups have a harder time raising funding from VCs than their US counterparts...

... and a truly connected European innovation ecosystem is only starting to form now



Venture capital raised



European start-up city hubs

1 EU does not include HR, CY, MT, SI, SK

Source: Invest Europe, NVCA / Pitchbook; "Startup City Hubs in Europe" 2018 report



# eic **INNOVATION** Council

## EMPOWERING EUROPEAN INNOVATORS

### The EIC story

*"Europe does not yet have a world class scheme to support the very best innovations in the way that the European Research Council is the global reference for supporting excellent science. So I would like us to take stock of the various schemes to support innovation and SMEs under Horizon 2020, to look at best practice internationally, and to design a new European Innovation Council."*

**Carlos Moedas, European Commissioner for Science & Innovation, June 2015.**

Research and  
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# Designed together with leading innovators

*Accelerating breakthrough innovation report, January 2018*



Nicklas Bergman



Martin Bruncko



Paddy Cosgrave



Gráinne Dwyer



Hermann Hauser



Marjolein Helder



Taavet Hinrikus



Ingmar Hoerr



Bindi Karia



Jana Kolar



Carlos Oliveira



Jim Hagemann Snabe



Kinga Stanislawska



Constantijn  
van Oranje



Roxanne Varza



## Encouraged by EU leaders

*"We will only succeed if we are the ones creating, developing and producing new technologies. That is why we need: a strong EU commitment to disruptive innovation within the framework of the European Innovation Council (EIC). The goal is to support very high risk deep tech projects at the European level"*

**A Franco-German Manifesto for a European industrial policy fit for the 21<sup>st</sup> Century, February 2019**



# The European Innovation Council

**One stop shop** for breakthrough & disruptive innovators

**Open** to all innovators, in any field, at any time

**Highest potential** innovators selected on basis of ideas and team

**Agile funding** from idea to investment

**Pathfinder grants** for advanced research on emerging technologies

**Accelerator funding** for innovative start-ups (<€2.5 million grant, <€15 million equity)

**Crowding in private investment** (VC, Invest EU)

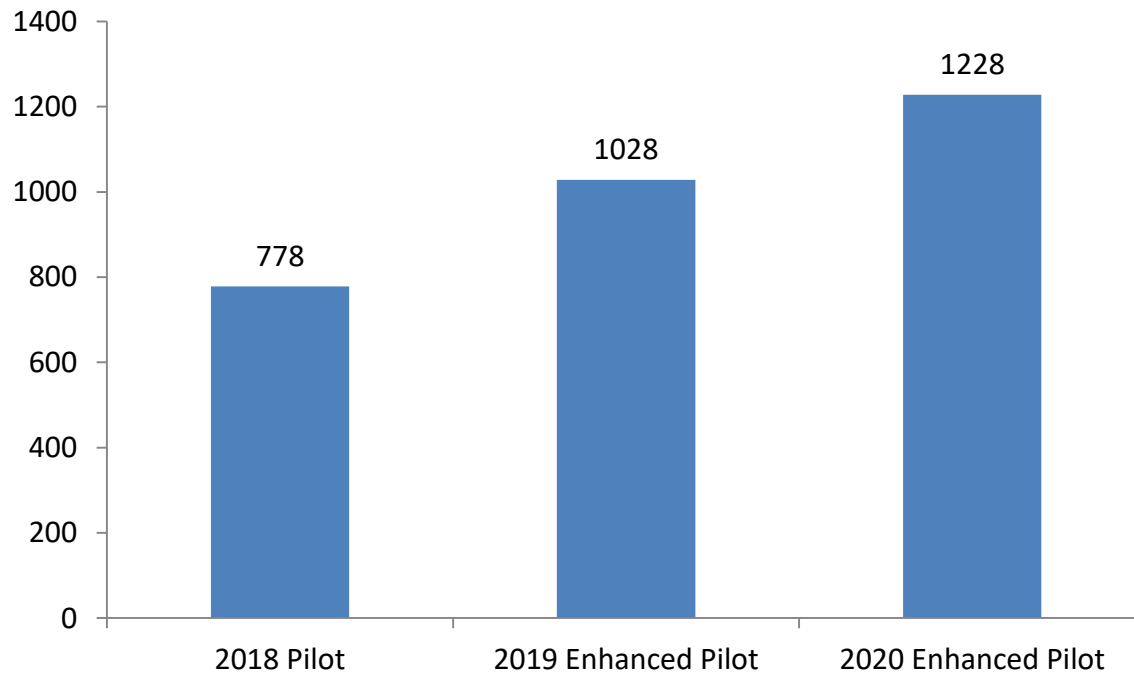
**Building ecosystems** and communities

**Access** to mentoring and advisory services and to knowledge partners (e.g EIT)

**Expert Programme Managers** to engage with projects and communities

**Prizes** for breakthrough technologies

# Tested under Horizon 2020, fully incorporated in Horizon Europe



Total estimated budget, M€

## First phase launched in 2018

- ✓ Bringing together relevant Horizon 2020 schemes in one place (*SME instrument, Fast Track to Innovation, FET Open, Prizes*)
  - ✓ Introduction of open support for Start-ups and SMEs (no predefined themes)
  - ✓ Introduction of interviews with experienced innovators to select SMEs for funding
  - ✓ Launch of major prizes for breakthrough innovations, e.g low cost space launcher (€10 million prize); artificial photosynthesis (€5 million prize)
- 
- ⇒ 6000 applications received by start-ups or SMEs (*for SME phase 2 grants*)
  - ⇒ Majority combining different fields: *digital, energy, manufacturing, health, etc.*
  - ⇒ 520 interviewed & 250 awarded funding (*budget €450 million*)
  - ⇒ Fast process (*grant awarded in under 4 months*)
  - ⇒ Total budget in 2018 of €778 million *for all EIC pilot actions*

## Second phase launched in 2019

- ✓ **Increased budget of €2.2 billion** (€1.0bn in 2019; €1.2bn in 2020)
- ✓ **Introduction of pilot pathfinder**, with 6 strategic emerging technologies targeted (human-centric AI, novel medical devices, zero-emission energy generation, etc)
- ✓ **Introduction of pilot accelerator** with option to apply for blended finance (combined grant and equity)
- ✓ **New EIC Advisory Board** to bring in leading innovators for ongoing design & implementation
- ✓ **First EIC programme managers** recruited to actively engage with pathfinder projects

## Full EIC under Horizon Europe (2021-27)

- ✓ **Proposed budget of €10 billion**
- ✓ **Dedicated governance with EIC President and Advisory board**
- ✓ **More flexible rules for funding** (ability to stop or reorient, links to Invest EU) with increased role for expert **programme managers**
- ✓ **Full accelerator** funding with both grant and blended finance
- ✓ **Full pathfinder scheme** for grants in advanced research and transition activities
- ✓ **Fast track access** for Horizon grant holders (incl. European Research Council) and certified national schemes
- ✓ **Creation of EIC Forum** with Member States innovation agencies





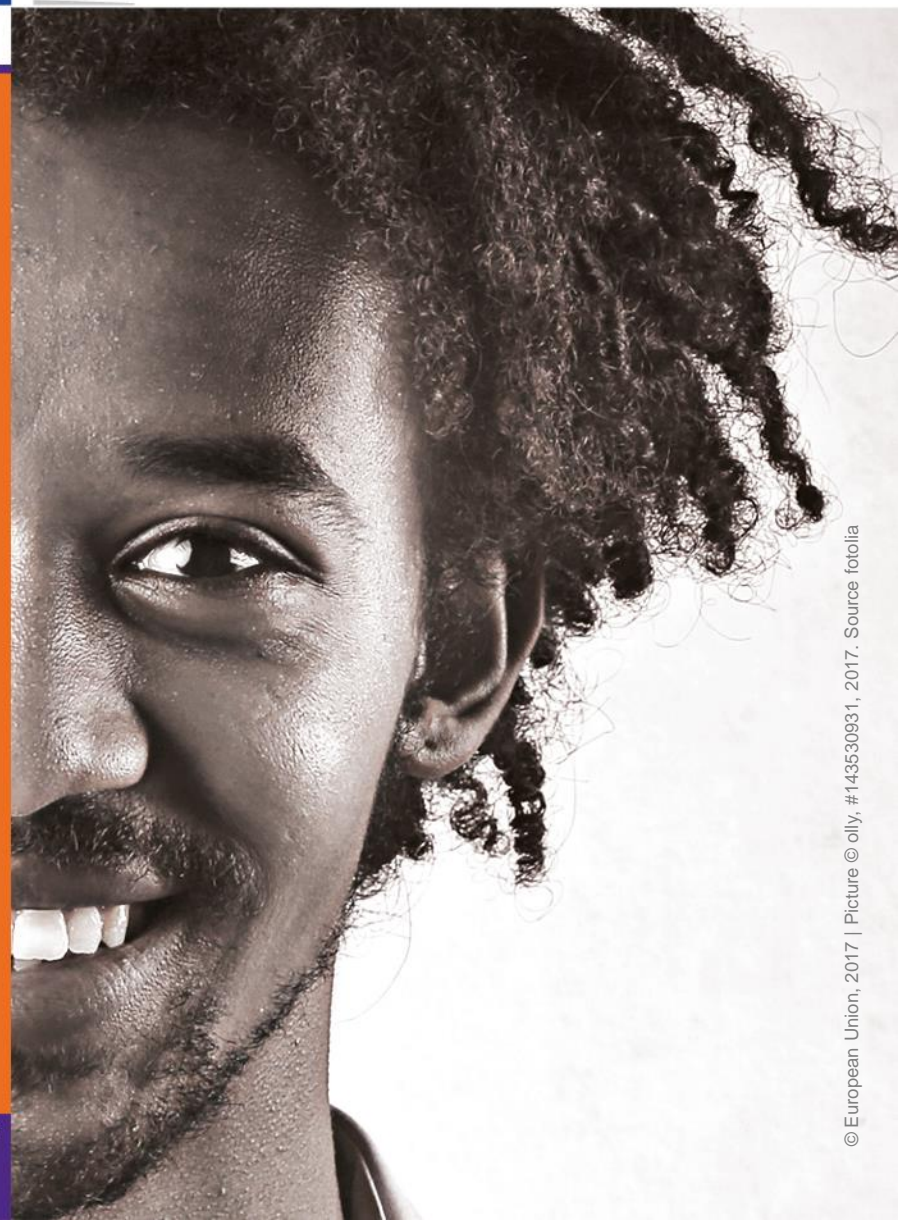
# Find out more

[ec.europa.eu/research/eic](https://ec.europa.eu/research/eic)

 #EU\_EIC

***"[The EIC alone will not create global champions. What it will do is create a European Champions' League]"***

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# European Innovation Council (EIC) In more details

***Martin LANGE & Stéphane OUKI***

*European Innovation Council Task Force*

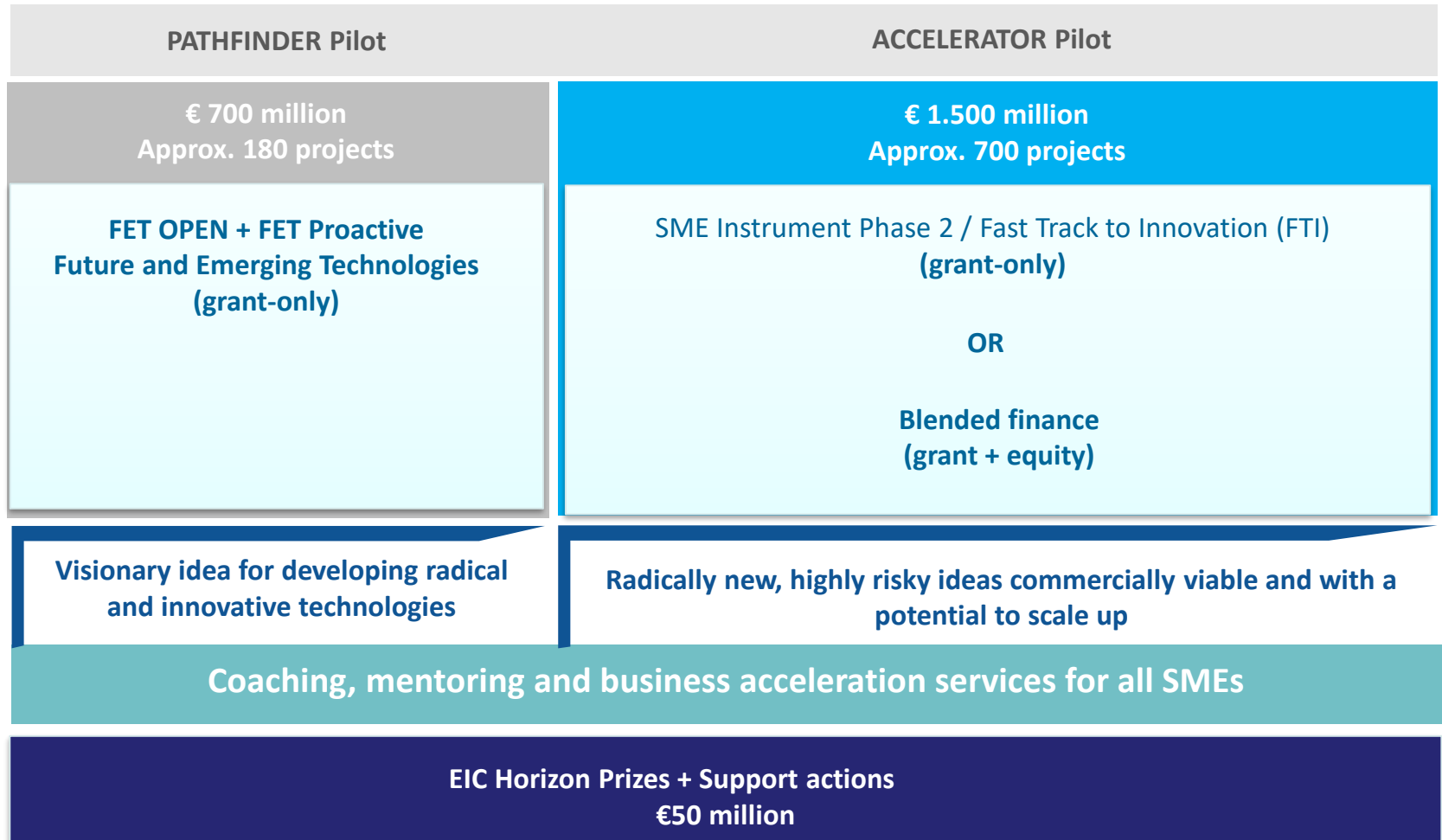
*DG RTD*

*European Commission*

*Research and  
Innovation*



# €3 billion-pilot package to support bottom-up ideas



# EIC Pilot Major novelties

## Accelerator blended finance

- **+€100 million in equity**
- Innovative SMEs with potential to **scale-up**
- Global **substantial support**: up to € 17.5 million (€2.5m in grant + €15m in equity)
- From early commercial to market deployment and scale-up (**TRL 6 or above**)

# Major novelties

## EIC Programme managers

- For more **flexible and pro-active** management and steering of tech or challenge-based **portfolios**
- **5** programme managers to follow projects in **EIC Pathfinder Pilot**
- **Professionals with visionary thinking**
- Hired as a **temporary Commission staff**

# Major novelties

## EIC Advisory Board

- To **advise** the Commission on the design of European Innovation Council (EIC) support for innovation
- **Group of 22** entrepreneurs, investors, individuals building start-up communities, innovative researchers and academics working on innovation policy
- Will support the Commission:
  - *Developing the pilot in 2019 and 2020*
  - *Enhancing innovation eco-systems and impact*
  - *With the overall strategy under Horizon Europe*

# The Pathfinder Pilot

## Pathfinder



> supports researchers, innovators and innovative companies with ideas relating to future and emerging breakthrough technologies with a **grant**

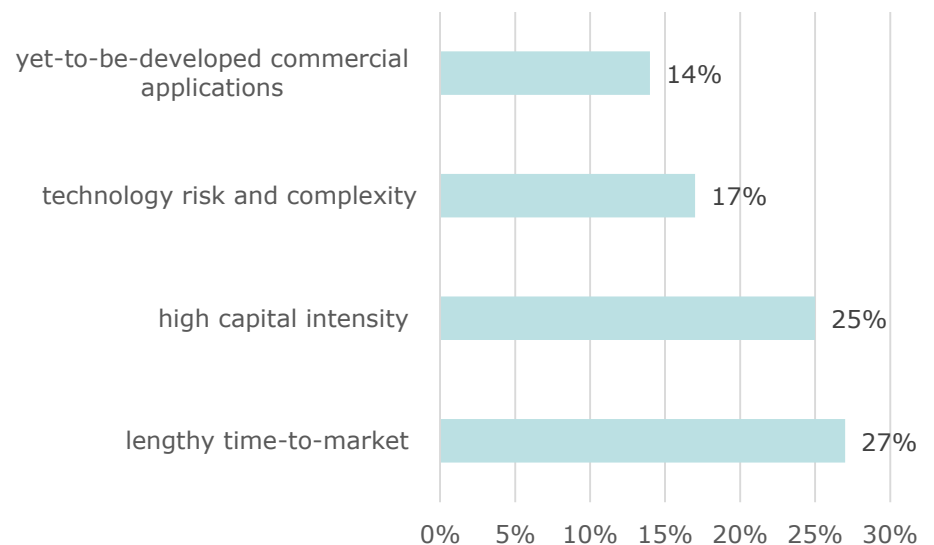


> Researcher, innovator or innovative company can apply for Accelerator funding **as it matures**

# EIC Pathfinder Pilot Deep-tech 'made in Europe'

- **Needs a strong research base.**
- Deep-tech companies are **constantly pushing the technological frontier.**
- **Collaborations** are especially important since it lies at the crossroads of disciplines, fundamental research and industrial application.

## Challenges for deep-tech startups



**Source:** BCG and Hello Tomorrow  
**Report:** "From tech to deep tech"

# EIC Pathfinder - FET Novelties

- From early stage proof-of-concept research, up to demonstration of commercial viability
- FET Proactive integrated in the Pathfinder Pilot
- Programme managers
- Business Acceleration Services
- FET Transition to Innovation Activities

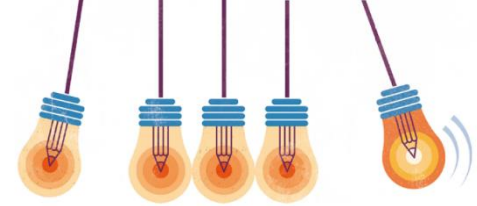






# EIC Pathfinder - FET Open Research and Innovation Actions

- Foundations for radically new future technologies, high-risk & high-impact interdisciplinary research:
  - *Radical vision*
  - *Breakthrough technological target*
  - *Ambitious interdisciplinary research*
- **Bottom-up and continuously open**
- **15-page proposal**, up to **€3 million** (indicative), consortium of minimum **3 partners** from 3 EU / associated countries



# EIC Pathfinder - FET Proactive

## Emerging paradigms and communities

- Stimulate the emergence of a **new technological paradigm**

- **Selected emerging paradigms**

2019  
€87,4M

- *Human-Centric AI*
- *Implantable autonomous devices and materials*
- *Breakthrough zero-emissions energy generation for full decarbonisation*

2020  
€50M

- *Future technologies for social experience*
- *Measuring the unmeasurable -- Sub-nanoscale science for Nanometrology*
- *Digital twins for the life-sciences*

- Up to **€4-5 million**, across up to **4 years**
- 30-page proposal, Minimum **3 partners** from 3 EU / AC

# EIC Pathfinder - FET Proactive Environmental Intelligence

- Stimulate the emergence in Europe around the emerging paradigm of **environmental intelligence**
- **Two complementary sub-topics:**
  - *new techniques for creating and using dynamic models of environmental evolution*
  - *radically novel approaches to resilient, reliable and environmentally responsible in-situ monitoring*
- Projects up to **€4 million**, up to **4 years**
- 30-pages proposal, Minimum **3 partners** from 3 EU / AC

2020  
€18M

## **EIC Pathfinder - FET Open Innovation Launchpad**

- **Turning results** from FET-funded projects **into genuine societal or economic innovations**
- Up to **€0.1 million** over 18 months
- Sole applicant or as part of a consortium
- Market analysis, business case, technology assessment, IPRs...

## EIC Pathfinder - FET Proactive Transition to Innovation Activities

- Turn promising results into **breakthrough and disruptive innovations**
- At the end of a typical FET-Open or FET Proactive project (i.e., starting from **early-stage technologies**)
- **Targeted technologies:** Micro- and Nano-technologies, Artificial Intelligence and advanced robotics, Technologies for the life sciences, health and treatment, Energy technologies, Interaction technologies
- 24 months, €1-2 million

# Pathfinder

## Next cut-offs

- FET Open
  - 18 September 2019
  - 13 May 2020
- FET Proactive Emerging paradigms and communities
  - 8 October 2019
  - 22 April 2020
- FET Proactive Environmental Intelligence
  - 22 April 2020
- FET Innovation Launchpad
  - 8 October 2019
  - 14 October 2020
- FET Proactive Transition to Innovation Activities
  - 8 October 2019

# EIC Pathfinder - FET Open and Proactive Evaluation Criteria

- **For FET Open and Proactive RIAs:**
  - *Three award criteria:*
    - 60% 'excellence'
    - 20% 'impact'
    - 20% 'quality and efficiency of implementation'
- **For Transition to innovation & ILP**
  - *Three award criteria:*
    - 40% 'excellence'
    - 40% 'impact'
    - 20% 'quality and efficiency of implementation'
- **Time-to-inform:** 5 months
- **Time-to-grant** 8 months

# The Accelerator Pilot

## Accelerator



> provides innovators and innovative companies with **blended finance** (grants / grants and equity) of up to € **17.5 million**



> **bridges the financing gap** between late-stage innovation activities and market take-up



# Accelerator Pilot

## Building on SME Instrument

- **Individual SMEs with high-risk, high-growth potential** aimed at shaping new markets or disrupt existing ones
- **Substantial funding** for the last stages of development
- **Bottom-up:** all sectors, products, services, new business models
- **Grant**
  - **€0.5 - 2.5 million** (funding rate 70% of total cost of project)
- **With equity option (blended finance)**
  - **+up to €15 million**

## From grant to blended finance

- **Grant:** Early-stage innovation for **development**
- **Equity:** Early-stage and mature innovation for **scale up**

### Note:

- *If the proposal includes mature innovation activities, and consent has been given by the applicant, it will be changed into blended finance*
- *There is flexibility to obtain equity even if not requested at the moment of submission*

# Accelerator Pilot

## Step-by-step

Submission of Proposals



# Accelerator Pilot Application

- **Continuous open call** with cut-offs
- **Electronic submission** (Funding & Tenders Portal)
- New single template for the **two options** with **additional financial elements**
- **Pitch deck** for the **interview**
- Applicants positively evaluated **for blended finance** may be asked for **additional information on their equity request**

# Accelerator Pilot

## Step-by-step

Submission of Proposals



Remote Evaluation



Ranking of Proposals



Interview



# Accelerator Pilot (grant and blended) Novelties

- Evaluation: **award criteria**
  - 33% 'impact'
  - 33% 'excellence'
  - 33% 'quality and efficiency of implementation'
- if the company have requested an **equity component** they will be subject to **due diligence**
- **Time-to-inform**: 4 months from date of application
- **Time-to-grant**
  - **Grant**: 6 months from date of application
  - **Equity**: +6 months from the start of the due diligence (typically one month after the evaluation decision)

# Accelerator Pilot Novelties (grant and blended)

- Evaluation
  - *By experts in technology, business and finance*
  - *Two **steps**:*
    - **Step 1 (remote evaluation)**
    - **Step 2 (face-to-face interview)**
  - *Three possible **outcomes**:*
    - **'Go' decision**
    - **'No Go' decision**
    - **'Change into blended finance' decision**

# Accelerator Pilot Step-by-step

Submission of Proposals



Remote Evaluation



Ranking of Proposals



Interview




Grant Agreement



**In case of blended finance option**

Due Diligence



 Blended finance only



# Due Diligence for blended finance

- For **projects requesting blended finance only**
- By the “**EIC Fund**” (Special Purpose vehicle, SPV)
- Goal: define a **tailor-made investment** that fits the needs of the company and of the project.
- Due diligence will **focus** mainly on evaluating compliance and risk level as well as:
  - *Confirming the **investment amount and structure***
  - *Estimation of the **total financial effort***
  - *Defining **equity “tranches” and key milestones***
- Additional information may be requested on a case-by-case basis


## Match-making co-investors to crowd-in

- Principle of **crowding-in** private investment.
- A **community of trusted VCs and investors** will be formed.
- The **company will be presented** with VCs that express the interest to invest.
- The company will have a final say.

# Accelerator Pilot Step-by-step

Submission of Proposals



 Blended finance only

Remote Evaluation



Ranking of Proposals



Interview



Grant Agreement



**In case of blended finance option**

Due Diligence



**In case of blended finance option**

Equity Investment



## Accelerator Pilot (blended finance) Equity investment

- Structured **via separate agreement** (next to grant agreement)
- The EC will be advised by experts but retains the last say in the investment decision
- EIC Fund will play a **passive role** in the daily management of the company (**preferred rights**).
- **Exit strategy:** different exit routes set case by case (ideally, company reaching growth/maturity attractive to investors)

# Accelerator Pilot

## Next cut-offs

- Accelerator **blended finance and grant only**
  - *09 October 2019*
  - *08 January 2020*
  - *18 March 2020*
  - *19 May 2020*
  - *07 October 2020*

## FTI

# Fast Track to Innovation

- Fast go-to-market of an industry-driven, innovative concept to grow and scale-up
- **Grant-only, Bottom-up**
- **Consortia of 3-5** from 3 EU / AC — \*mandatory industry involvement\*, Up to **€3 million**
- Next cut-offs
  - *22 October 2019, 19 February 2020, 09 June 2020, 27 October 2020*

# EIC Pilot

## Business Acceleration Services

- For **EIC beneficiaries** from Pathfinder and Accelerator
- **Coaching\***: up to 12 days available
- **Mentoring** for individual founders, CEOs and leaders
- EIC **Community** Platform
- EIC **Networking** events, such as Corporate Days (companies meet large corporations as potential investors)

\*only available to SMEs, including natural persons, or for the purpose of setting-up such a company



Jan Lichtenberg  
CEO and Co-Founder  
[InSphero](#)

# Pathfinder Pilot

## Success case

### *FET-Open 'Body-on-a-Chip' from research to commercialization*

"Young companies must be focused on generating market interest for their products. **The FET Open programme allowed us to get the balance right and to work on the next wave of innovation for the company.** We are proud to have made this project a success from start to commercial launch. This technology platform will change the way **new drugs** are developed in the future: **without animal testing.**"



# EIC Pilot – FTI

## Success case



Biodegradable water reservoir for landscape-scale ecosystem restoration



FASERGUSSWERK POLENZ



LAND LIFE COMPANY



VOLTERRA ECOSYSTEMS

**FTI February 2016: €1.1 m**

**Land Life: €5.9 m Series A in 2017-2018**

# EIC Horizon Prizes

## Principles

Address difficult societal or technological challenges through game-changing innovation

Accelerate the development of effective solutions and promote market uptake

Apply out-of-the-box, innovative thinking

Open participation across sectors and disciplines – innovators, start-ups and scale-ups, entrepreneurs, etc

# EIC Horizon Prizes 2019-2021

SIX CHALLENGE-DRIVEN PRIZES	VALUE	DEADLINE
AFFORDABLE HIGH-TECH FOR HUMANITARIAN AID	€5 million	2020
BLOCKCHAINS FOR SOCIAL GOOD	€5 million	2019
INNOVATIVE BATTERIES FOR EVEHICLES*	€10 million	2020
FUEL FROM THE SUN: ARTIFICIAL PHOTOSYNTHESIS	€5 million	2021
EARLY WARNING FOR EPIDEMICS	€5 million	2020
LOW-COST SPACE LAUNCH*	€10 million	2020

\*Open to legal entities from Member States and Associated Countries only

# EIC Pilot

## Need help?

- [EIC Wizard via EIC website](#)
- [EIC Pilot Guide for Applicants](#)
- [EIC Questions and Answers](#)
- [National Contact Points \(NCPs\)](#)
- [European Enterprise Network \(EEN\)](#)

## For further information

[EIC website](#)

[European Funding and Tender portal](#)

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# TRL

## Technology Readiness Level

- TRL 1 – basic principles observed
- TRL 2 – technology concept formulated
- TRL 3 – experimental proof of concept
- TRL 4 – technology validated in lab
- TRL 5 – technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 – technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 – system prototype demonstration in operational environment
- TRL 8 – system complete and qualified
- TRL 9 – actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)