



European  
**eic INNOVATION**  
Council

## EMPOWERING EUROPEAN INNOVATORS

***Viorel Peca***

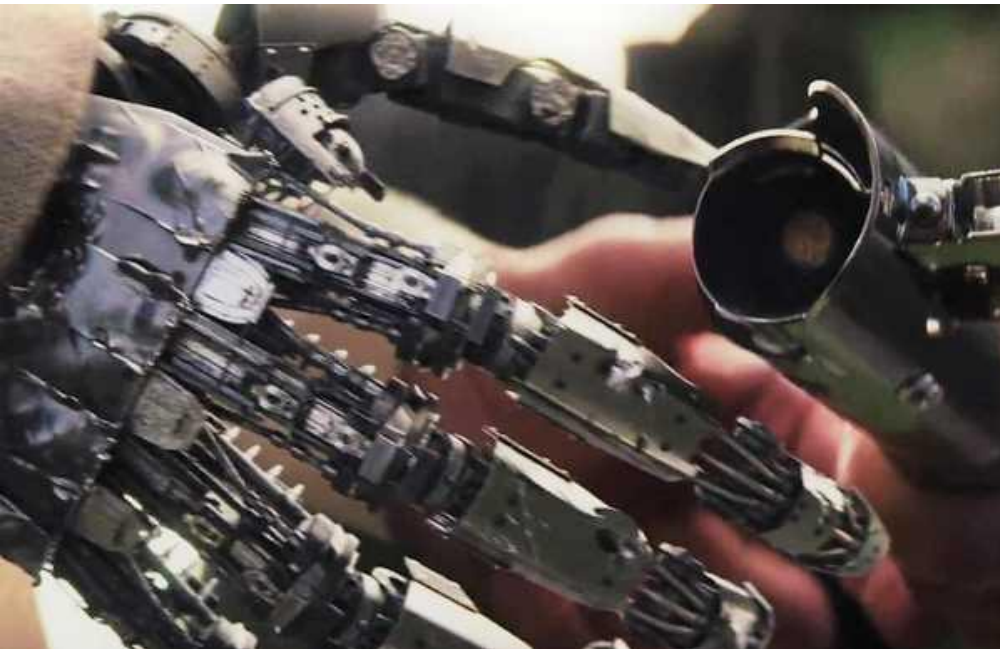
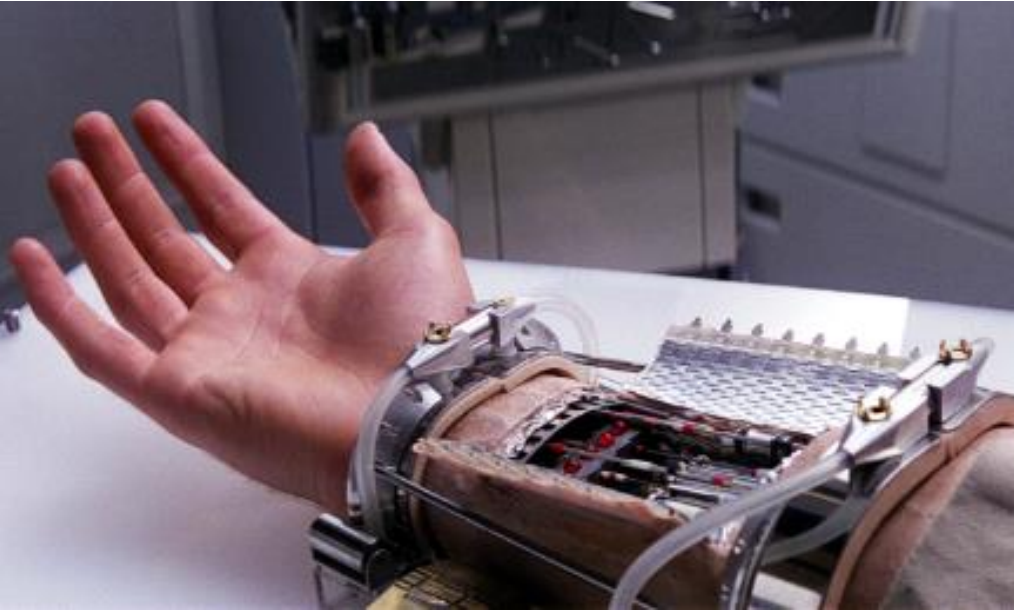
*Head of Unit Future Emerging  
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DG CNECT  
European Commission*

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DG Research and Innovation  
European Commission*

Research and  
Innovation







**CYBERHAND:** FP5 FET project, 2.5M€, 2002-2005

Goal: increase the basic knowledge of neural regeneration, and sensory-motor control of the hand in humans and to exploit this knowledge to develop a new kind of hand prosthesis



**NEUROROBOTICS:** FP6 FET proj 6.7M€, 2004-2008

Goal: systematically explore the area of Hybrid Bionic Systems (HBSs) and deeply investigate the theme of human augmentation. Three robotic platforms featuring different levels of hybridness one of which was an arm-hand sub-systems tightly physically coupled with the human body.

**NEBIAS:** FP7 FET project, 4.5M€, 2013-2017

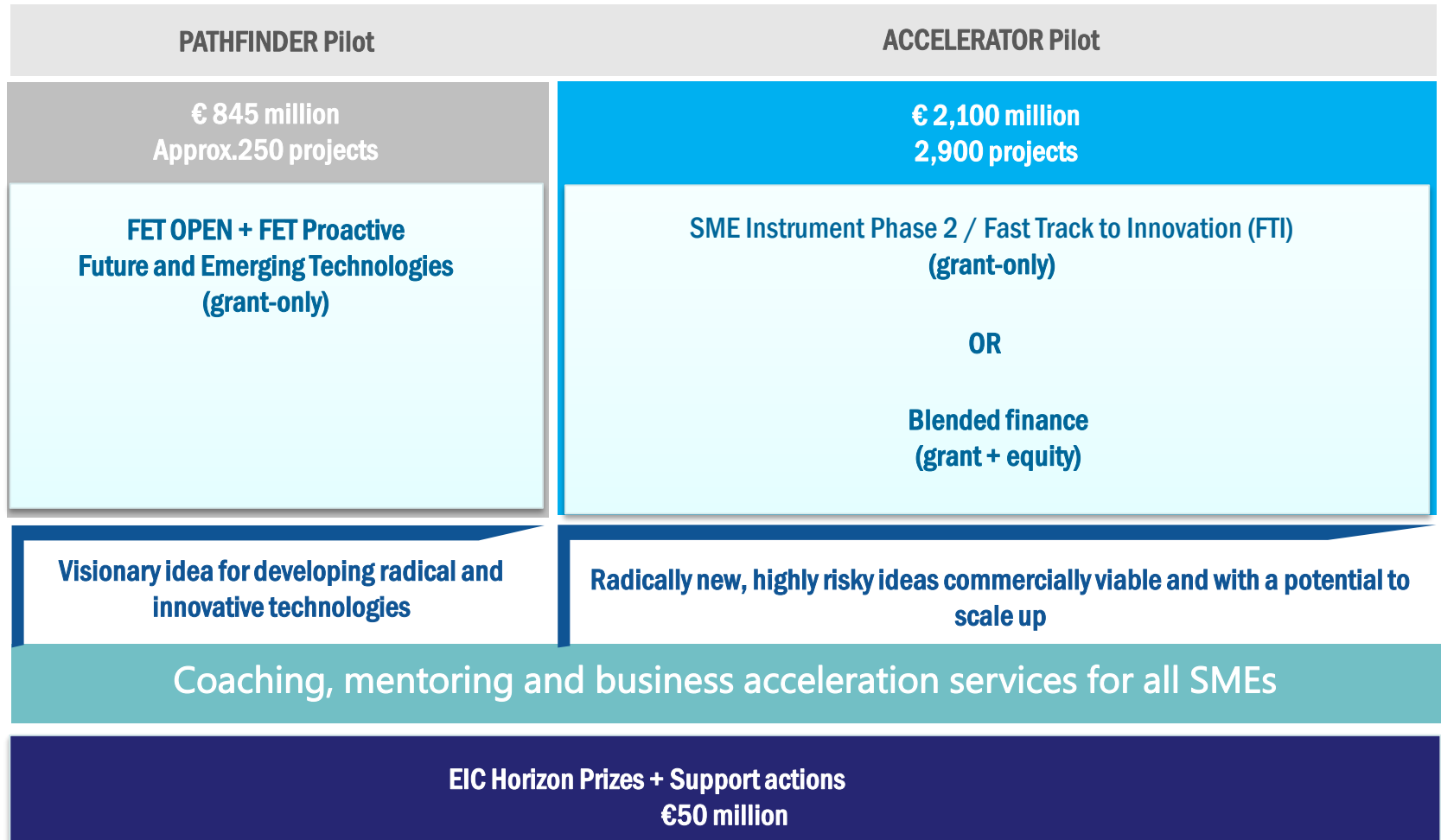
Goal: developing and clinically evaluating (in selected amputees) a neuro-controlled upper limb prosthesis intuitively controlled and felt by the amputee as the natural one.



[Detop](#): H2020 ICT project, 5.1M€, 2016-2020

Goal: push the boundaries of this technology –made in Europe– to the next TRL and to make it clinically available to the largest population of upper limb amputees, namely transradial amputees.

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



# 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**
- **3 to 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 15 to 20** 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 of up to € 4m**



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





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

# Pathfinder Pilot

## Success case

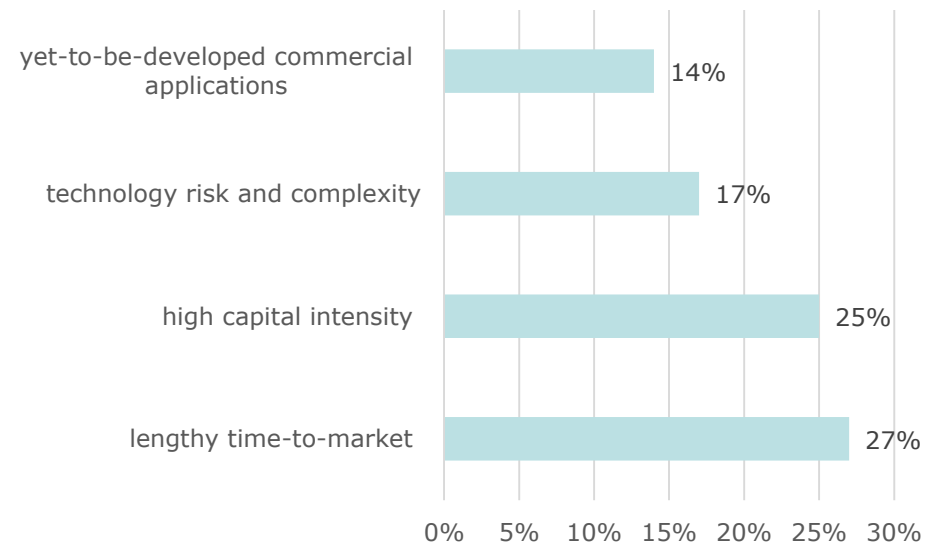
### *FET-Open 'Body-on-a-Chip' from research to commercialization*

"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 Pathfinder Pilot Deep-tech 'made in Europe'

- **Strong research base.**
- Advancing the **technological frontier.**
- Crossroads of fundamental research and industrial application.
- **Collaborations**  
Universities, public sector, BAs, VCs and corporates.

## 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 Open Research and Innovation projects

## A typical Research and Innovation Action project



Average funding  
per project:

**3.4 million €**



Average number of  
partners per project:

**6**

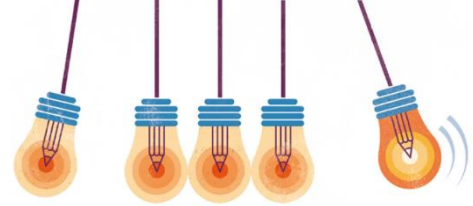


Average project  
duration:

**41 months**

## **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

## Emerging paradigms and communities

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

- **Selected emerging paradigms**

- 2019  
€52M {
  - *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 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

# 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

# Pathfinder

## Next cut-offs

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

# Romanian Pathfinder FET beneficiary: **IMT**

Project	Title	Budget
CHIRON	Spin Wave Computing for Ultimately-Scaled Hybrid Low-Power Electronics	220k€
NANOPOLY	Artificial permittivity and permeability engineering for future generation sub wavelength analogue integrated circuits and systems	259k€
IQubits	Integrated Qubits Towards Future High-Temperature Silicon Quantum Computing Hardware Technologies	498k€

# The Accelerator Pilot

## Accelerator



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



> **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 creating new markets
- **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)**
  - Plus **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 (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**: 3 months from date of application
- **Time-to-grant**
  - **Grant**: 6 months from date of application
  - **Equity**: +6 months from date of application




# 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 Novelties (grant and blended)

- Application
  - *Single template for the **two options***
  - *Applicants positively evaluated **for blended finance** may be asked for **additional information on their equity request***
  - ***New application forms** with **additional financial elements***
  - ***Pitch deck** for the **interview***

# 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**

# Due Diligence for blended finance

- For **projects requesting blended finance only**
- By a “**Special Purpose Vehicle**” (SPV)
- 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***

# Accelerator Pilot (blended finance) Equity investment

- Principle of **crowding-in** private investment
- Structured **via separate agreement** (next to grant agreement)
- **Passive role** in the daily management of the company
- **Exit strategy:** if consent of the company is received, the SPV will actively seek private investors to buy the EC shares

# Accelerator Pilot

## Next cut-offs

- Accelerator grant-only
  - *5 June 2019*
- 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
  - *23 May 2019, 22 October 2019, 19 February 2020, 09 June 2020, 27 October 2020*

# EIC Pilot

## Business Acceleration Services

- For SMEs **EIC clients** (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)



# EIC Pilot – SME Instrument Phase 2

## Success case

Virtual reality in human eye resolution



Varjo Technologies Oy (FI)

<https://varjo.com/>

Phase 2 in January 2018

€2.4 m

€27.3 m Series B in October 2018

Collaborating with Airbus, Audi, Volkswagen, and Volvo Cars



# 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**

Collaborating with Airbus, Audi, Volkswagen, and Volvo Cars

# 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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European  
Commission

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Research and  
Innovation

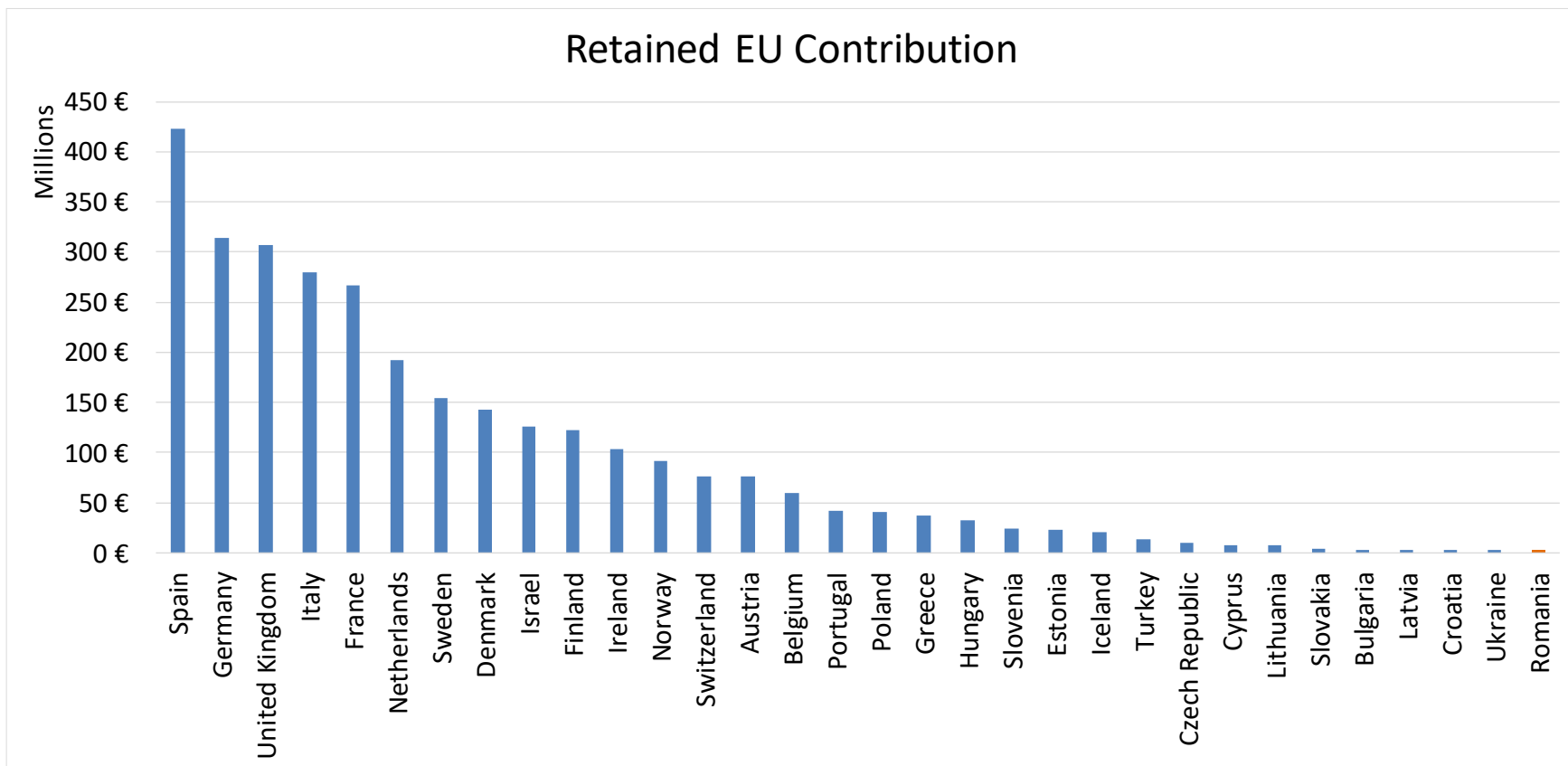


# Romania: retained EU contribution (€ million)

	Retained EU Contribution		Success rate
FET OPEN	220,438	7.4%	0.5%
FET PROACTIVE	744,825	24.9%	25.8%
FTI	966,770	32.3%	3.3%
SME INSTRUMENT 1	250,000	8.4%	1.9%
SME INSTRUMENT 2	0	0.0%	0.0%
EIC FET OPEN	757,250	25.3%	12.7%
EIC FTI	0	0.0%	0.0%
EIC SME INSTRUMENT 1	50,000	1.7%	1.1%
EIC SME INSTRUMENT 2	0	0.0%	0.0%
<b>TOTAL</b>	<b>2,989,282</b>	<b>100.0%</b>	<b>1.5%</b>

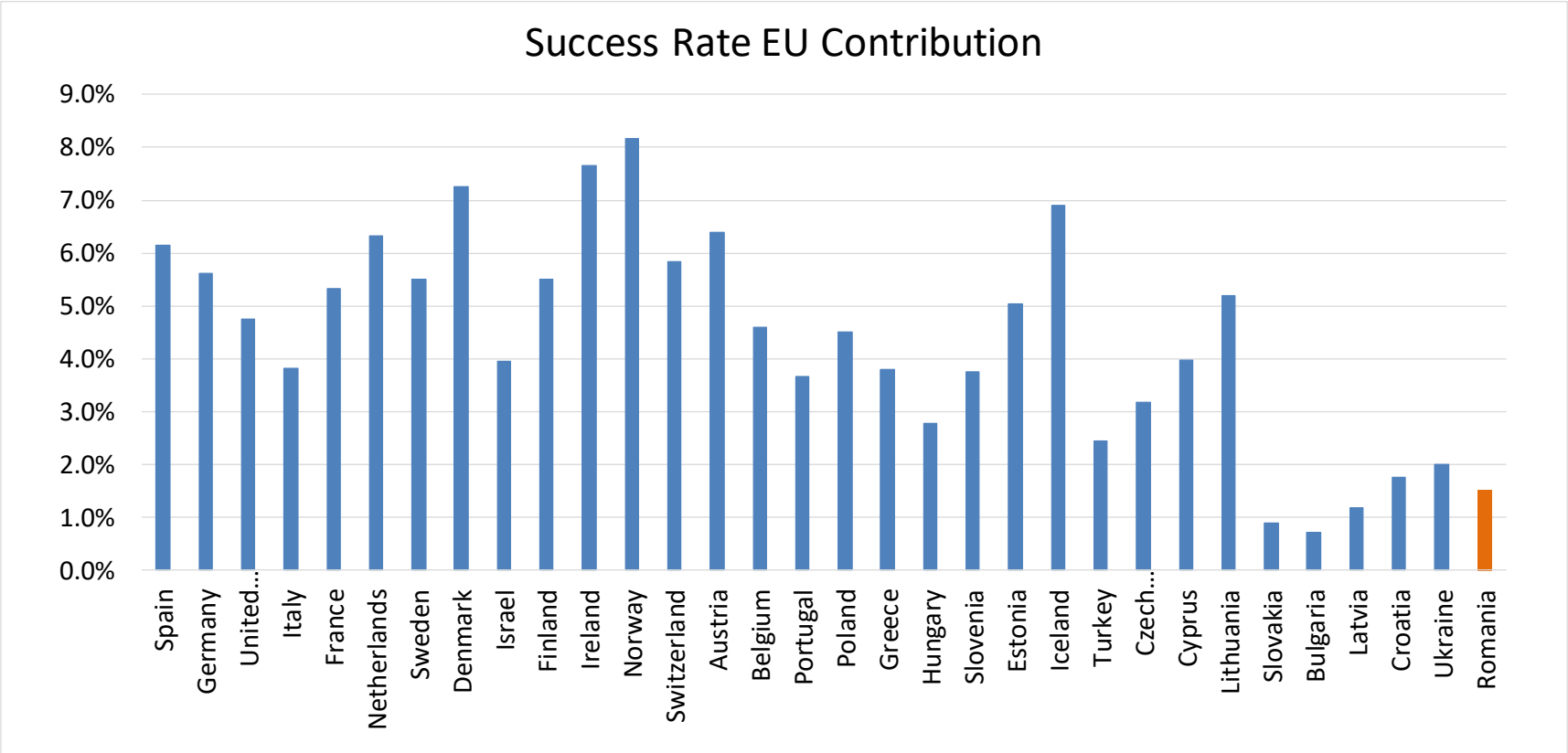
# Horizon 2020 countries

## Retained EU contribution (FET, FTI, SME Instrument)



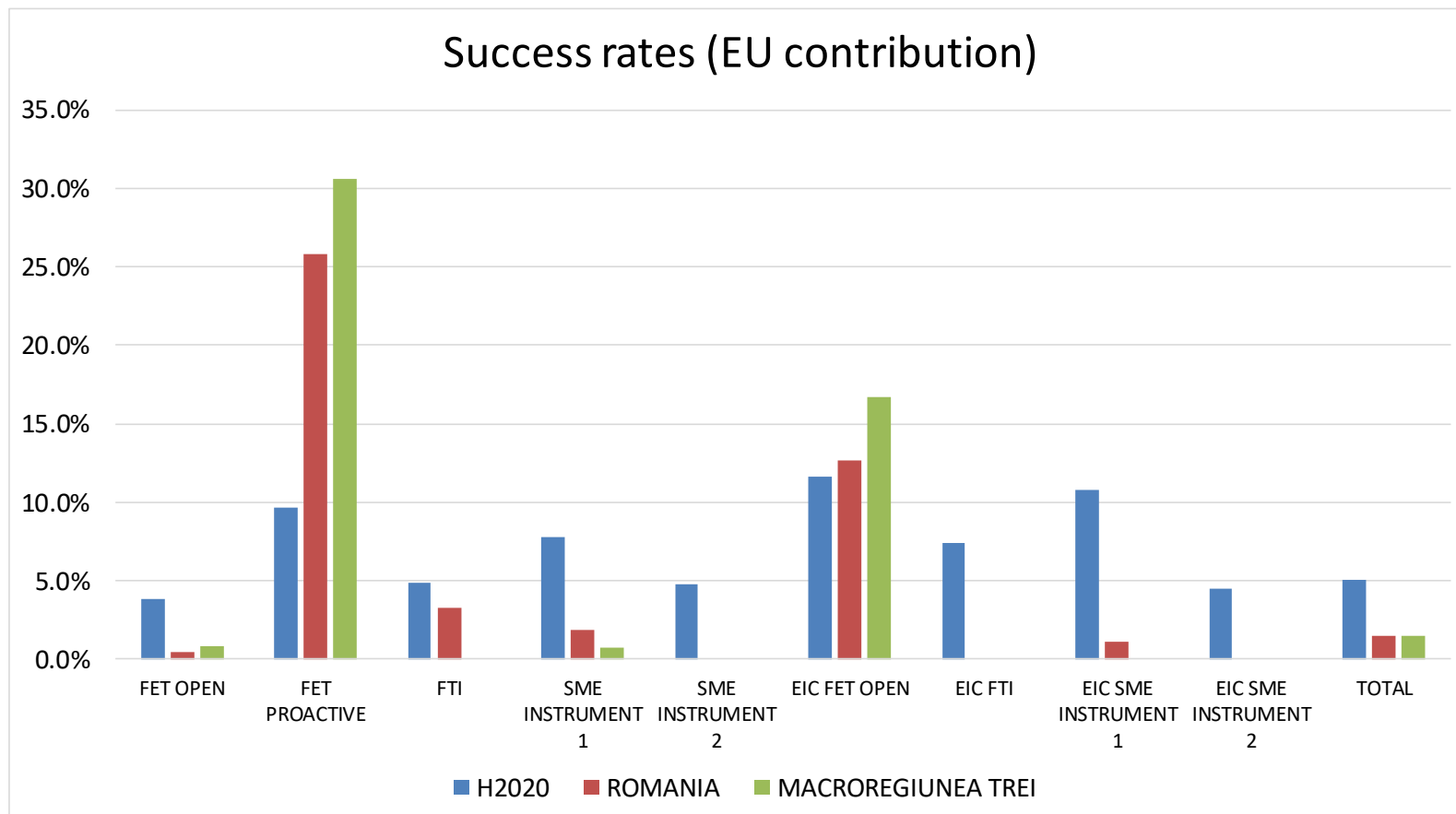
# Horizon 2020 countries

## Overall success rates (FET, FTI, SME Instrument)



# Horizon 2020 countries, Romania

## Success rates by instrument (before and after EIC)



\* MACROREGIUNEA TREI - Sud-Muntenia si Bucuresti-Ilfov



## Romanian regions

NUTS 2 Name	Retained EU Contribution		Success Rate EU Contribution
MACROREGIUNEA TREI	€ 1,772,512	59.3%	1.4%
MACROREGIUNEA UNU	€ 226,825	7.6%	0.6%
MACROREGIUNEA DOI	€ 661,986	22.1%	2.7%
MACROREGIUNEA PATRU	€ 327,959	11.0%	4.5%
<b>TOTAL</b>	<b>€ 2,989,282</b>	<b>100.0%</b>	<b>1.5%</b>

MACROREGIUNEA UNU - Nord-Vest si Centru

MACROREGIUNEA DOI - Nord-Est si Sud-Est

MACROREGIUNEA TREI - Sud-Muntenia si Bucuresti-Ilfov

MACROREGIUNEA PATRU - Sud-Vest Oltenia si Vest