



AGÊNCIA NACIONAL
DE INOVAÇÃO

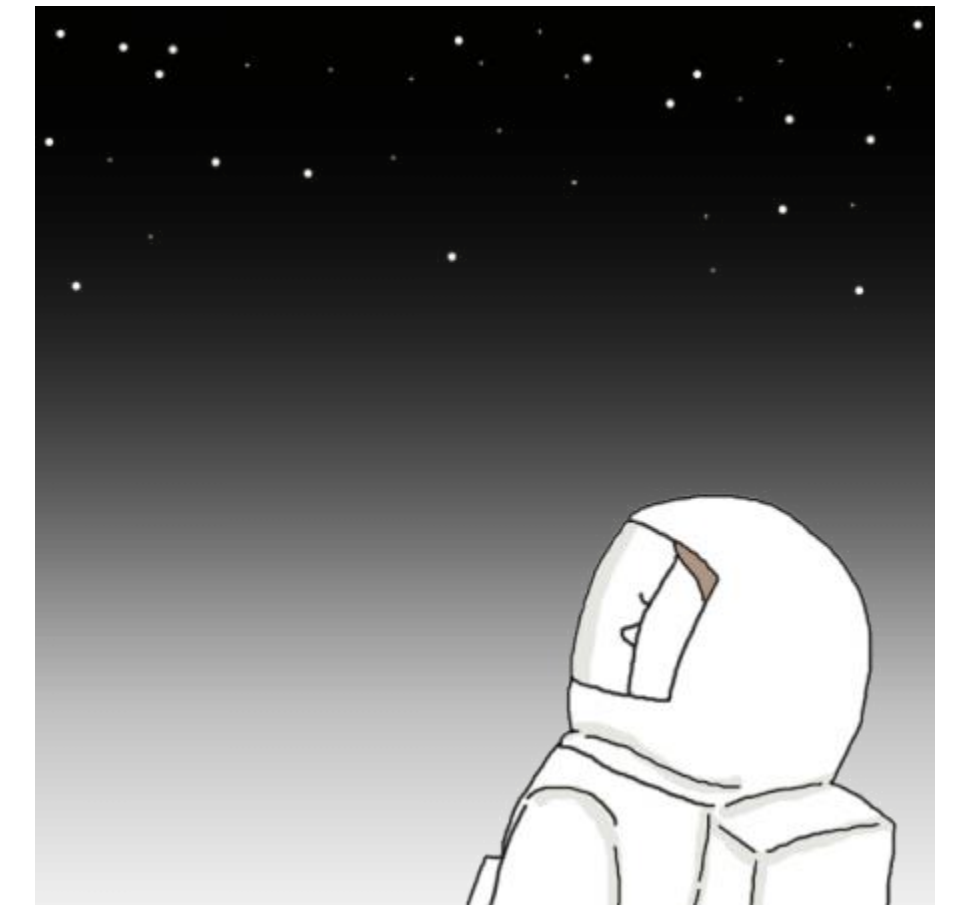


A look into Space: Overlaps with ICT



WHY SPACE?

- ▶ Captures the imagination
- ▶ Drives creativity
- ▶ But not just about the stars and planets:
 - ▶ Looks up (stars and Mars)
 - ▶ Looks down (to Earth)
 - ▶ Space component – satellites, communication, materials, etc.
- ▶ Strategic asset and enormous opportunity for our society and economy.
- ▶ Space technologies, infrastructure, services and data provide the EU with the tools needed to address societal challenges and big global concerns





SPACE IN BRIEF - COPERNICUS

- ▶ **Copernicus: the EU Earth Observation programme**
 - ▶ Served by Sentinel family of satellites and contributing missions
 - ▶ Generates huge amounts of data daily
 - ▶ Has 6 thematic services
 - ▶ Has a newly implemented Data and Information Access Services (DIAS)

- ▶ **Why ICT?**
 - ▶ Generate added-value from the data
 - ▶ Need for proper data exploitation





DT-SPACE-01-EO-2018-2020:

COPERNICUS MARKET UPTAKE

- ▶ **Objective:** Foster the development of innovative commercial applications based on Copernicus
- ▶ **Idea:**
 - Develop and bring to market new or improved products and services
 - Adopt state-of-the-art ICT technologies (big data processing and linking technologies, machine learning and AI) to address large volumes of diverse data from distributed sources, at the scale required to address European and global challenges
- ▶ **Budget:** 9 M€, IA (1-3 M€ per project)

Crossover



Space - Draft WP 2020

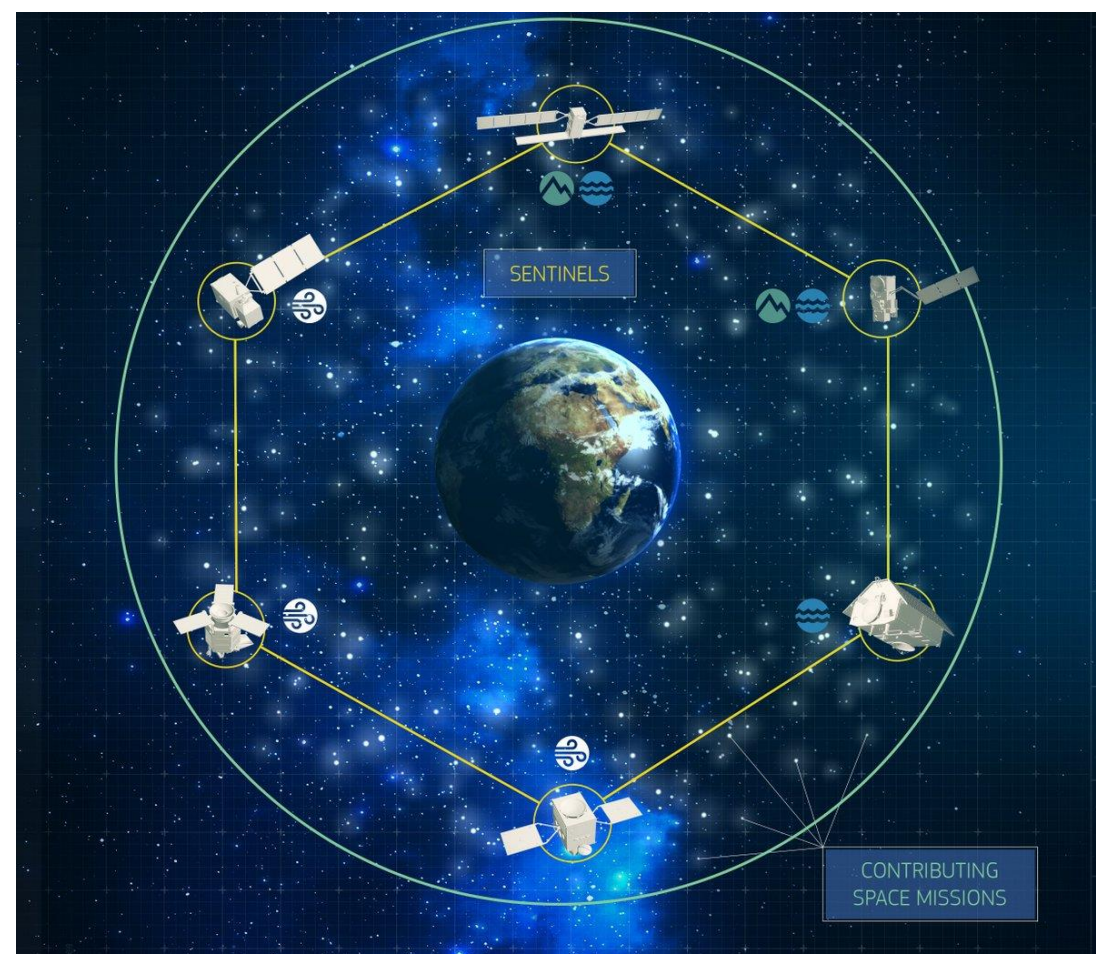


LC-SPACE-18-EO-2020:

COPERNICUS EVOLUTION

- **Objective:** Research activities in support of the evolution of the Copernicus services
- **Idea:**
 - Provide a proof-of-concept or a prototype (e.g. system element) demonstrating the feasibility of the integration in the existing core service
 - Adopt state-of-the-art ICT technologies (big data processing and linking technologies, machine learning and AI) to address large volumes of diverse data from distributed sources, at the scale required to address European and global challenges
- **Budget:** 10 M€, RIA (1-1,5 M€ per project)

Crossover



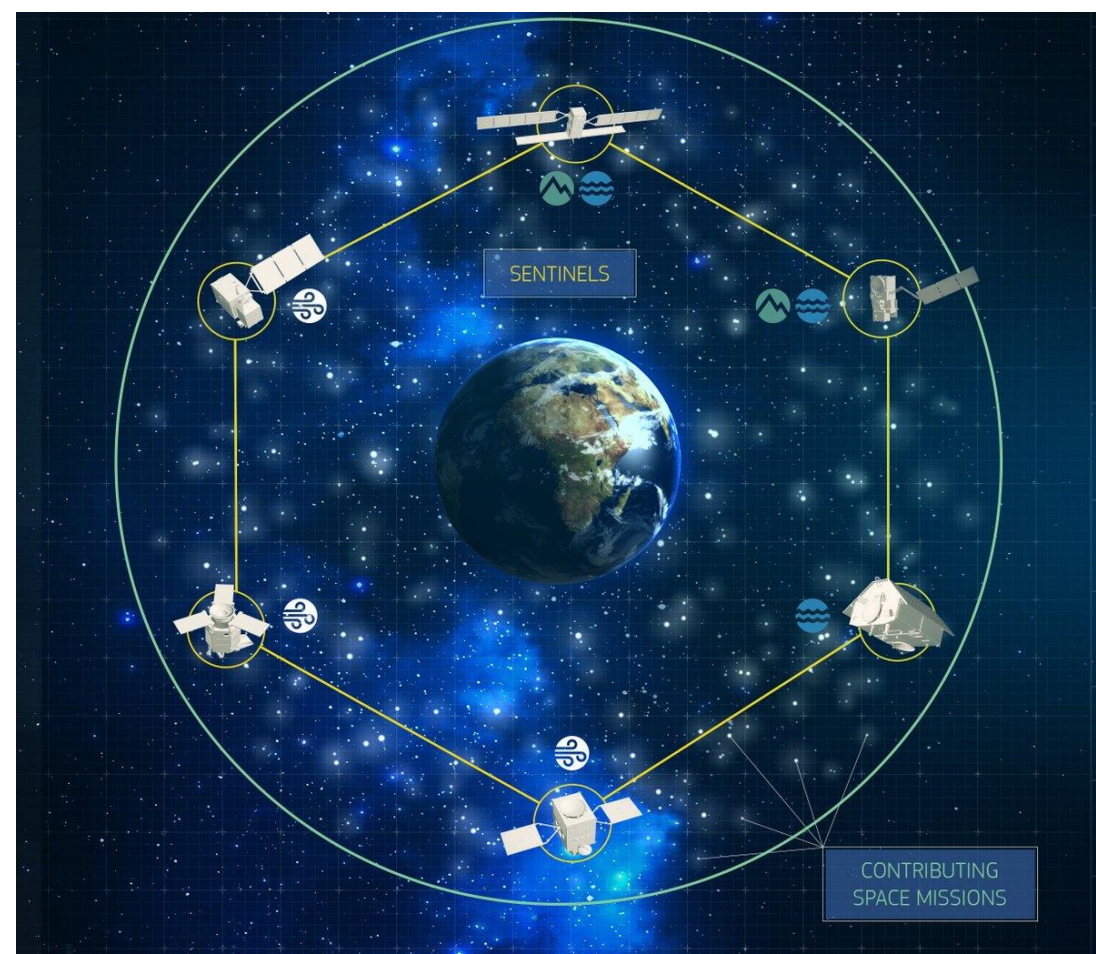
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DT-SPACE-25-EO-2020: BIG DATA TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE FOR COPERNICUS

- **Objective:** Foster the development of data manipulation tools, compatible with the Copernicus DIAS, to facilitate the use of big data from space
- **Idea:**
 - Develop operational solution to improve capabilities and performance across the Copernicus value chain
 - Solve the big data management challenges of the integration, processing and analysis of Copernicus data with other distributed data sources
 - Promote the collaboration of ICT actors, both from industry and academia, with the earth observation/space stakeholders
- **Budget:** 10 M€, RIA (2-4 M€ per project)

Crossover



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SPACE IN BRIEF – SPACE TECH

➤ **Space Technologies**

- Support to generic and mission-oriented R&D technology at low and mid TRL levels
- On the low TRL side, support for future and emerging space technologies are expected to initiate new lines of disruptive technologies

➤ **Why ICT?**

- There is scope in the areas of Key Enabling Technologies or Future Emerging Technologies to consider potential application to Space



SPACE-29-TEC-2020:

SATELLITE COMMUNICATION TECHNOLOGIES

- ▶ **Objective:** Satellite communication technologies are looking for proposals addressing one of the 5 subtopics:
 1. Secure and robust satellite communications including quantum technologies
 2. Bandwidth efficient transmission techniques
 3. High speed processing and flexible and reprogrammable telecommunication payloads
 4. Flexible broadband passive and active antenna techniques
 5. Ground systems technologies for satellite communication services and applications

Budget: 9 M€, RIA (2-3 M€ per project)

[Space - Draft WP 2020](#)



SPACE 27 TEC 2020 :

SRC SPACE ROBOTICS TECHNOLOGIES

- **Objective:** Input from PERASPERA (based on roadmap approach) now at the stage of preparing the technologies for demonstrators planned to be implemented in the 2023-2027 timeframe

- **Idea:** Building on results from previous projects, address only one of the scenarios:
 - a) Orbital mission study targeting IOD in Horizon Europe (2 grants)
 - b) Planetary robotics exploration demonstrator (1 grant)

- **Budget:** 9 M€, RIA (3 M€ per project)

Space - Draft WP 2020



SPACE IN BRIEF - EGNSS

- ▶ **Galileo: the EU Global Navigation Satellite System (EGNSS)**
 - ▶ Allows greater precision in location
 - ▶ Critical, emergency response-services benefit from Galileo.
 - ▶ Galileo's services will make Europe's roads and railways safer and more efficient.
 - ▶ It boosts European innovation

- ▶ **Why ICT?**
 - ▶ Integration with digital technologies





DT-SPACE-EGNSS-2-2019-2020:

EGNSS APPLICATIONS FOSTERING DIGITISATION

- ▶ **Objective:** Combination of digital technologies with Location-Based Services (LBS) to increase industrial competitiveness, growth and jobs.
- ▶ **Idea:**
 - LBS are a fast growing market
 - Challenge is to foster the adoption of Galileo in mass market applications
 - Use the EGNSS innovative features
 - Address societal challenges
 - Deliver new innovative applications, with commercial impact and a clear market uptake perspective
- ▶ **Budget:** 4 M€, IA (1-3 M€ per project)

Crossover



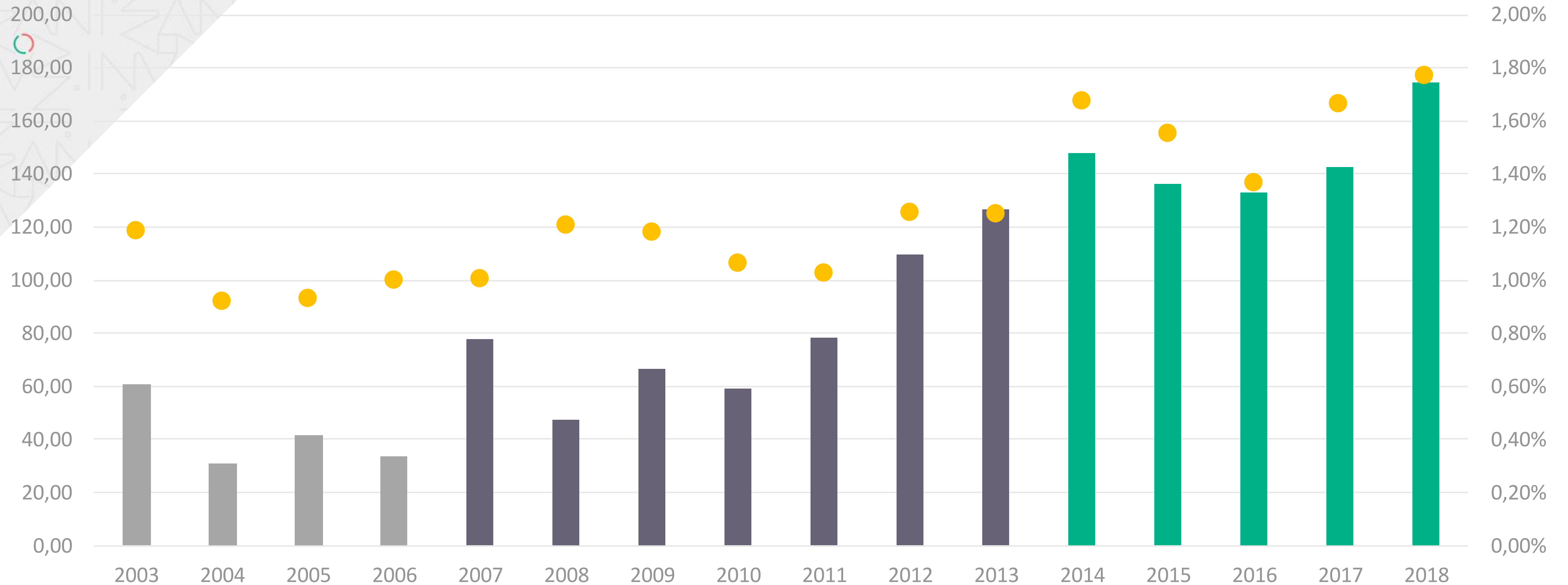


Is the work worth the effort?





EVOLUTION OF PT PARTICIPATION EU R&I FRAMEWORK PROGRAMMES



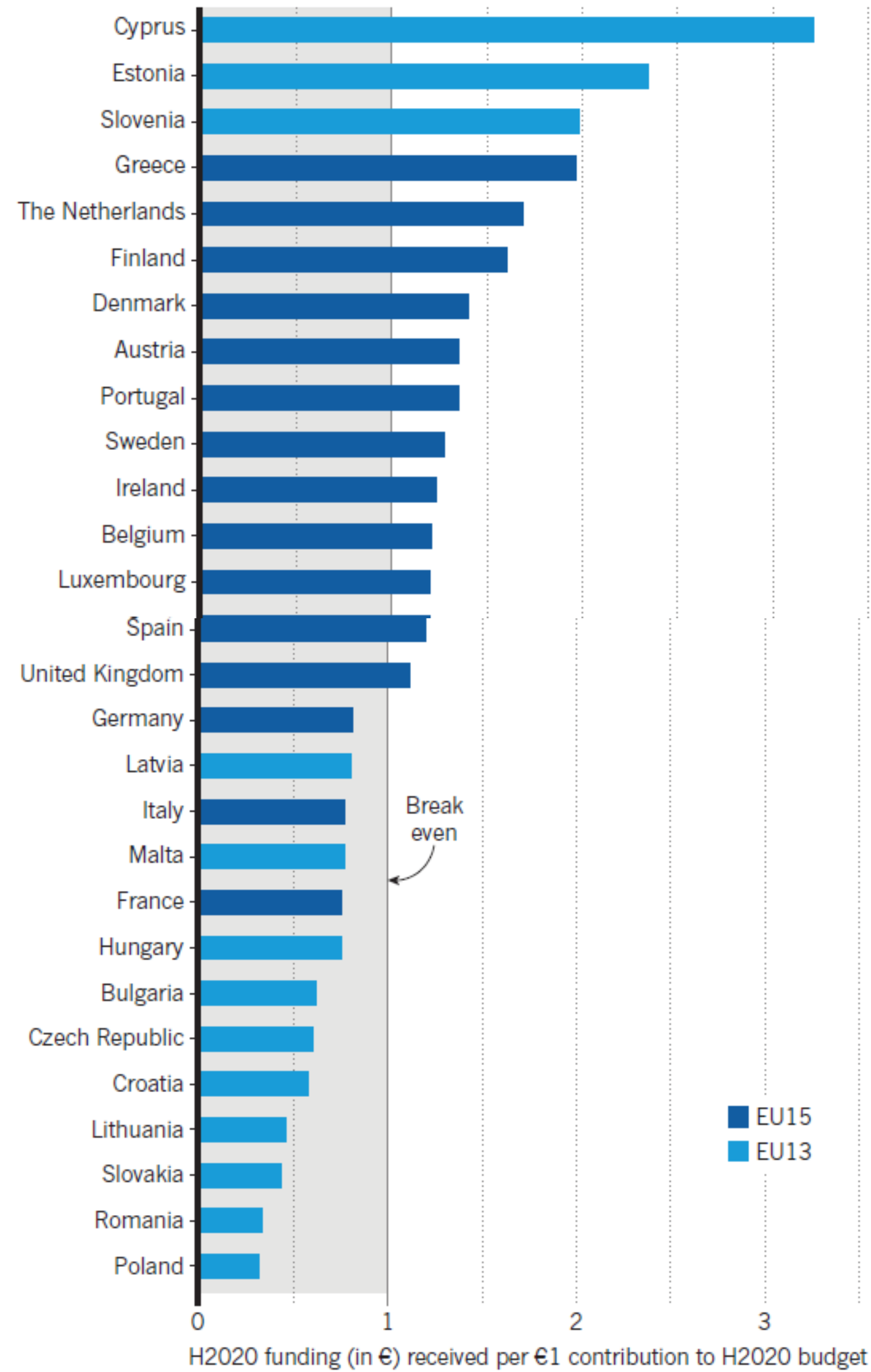
■ Financiamento para entidades PT (M€) ● Percentagem PT

**H2020
~782 M€**

Dados provisórios (Jun 2019)



H2020 WINNERS AND LOSERS

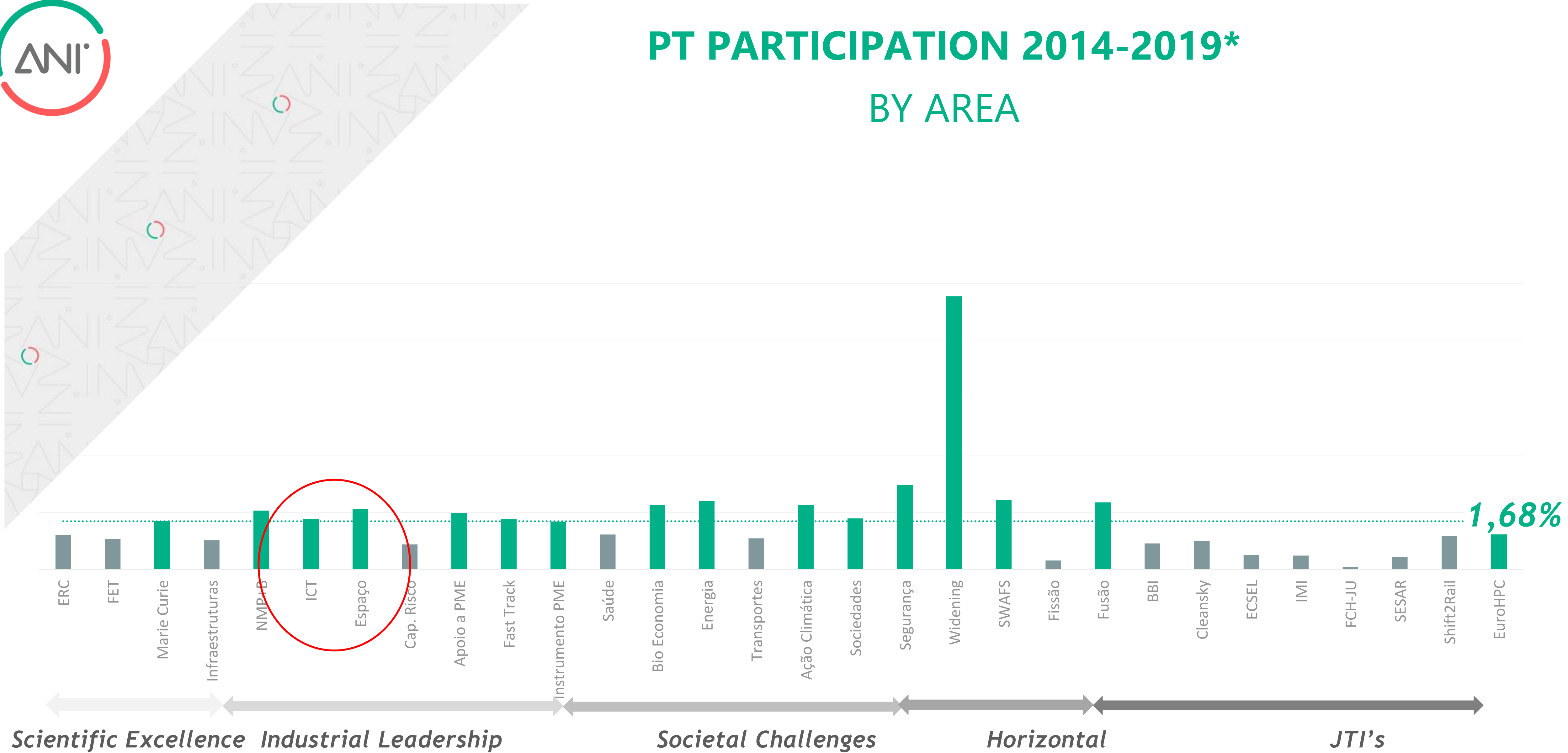


Source: Nature magazine



PT PARTICIPATION 2014-2019*

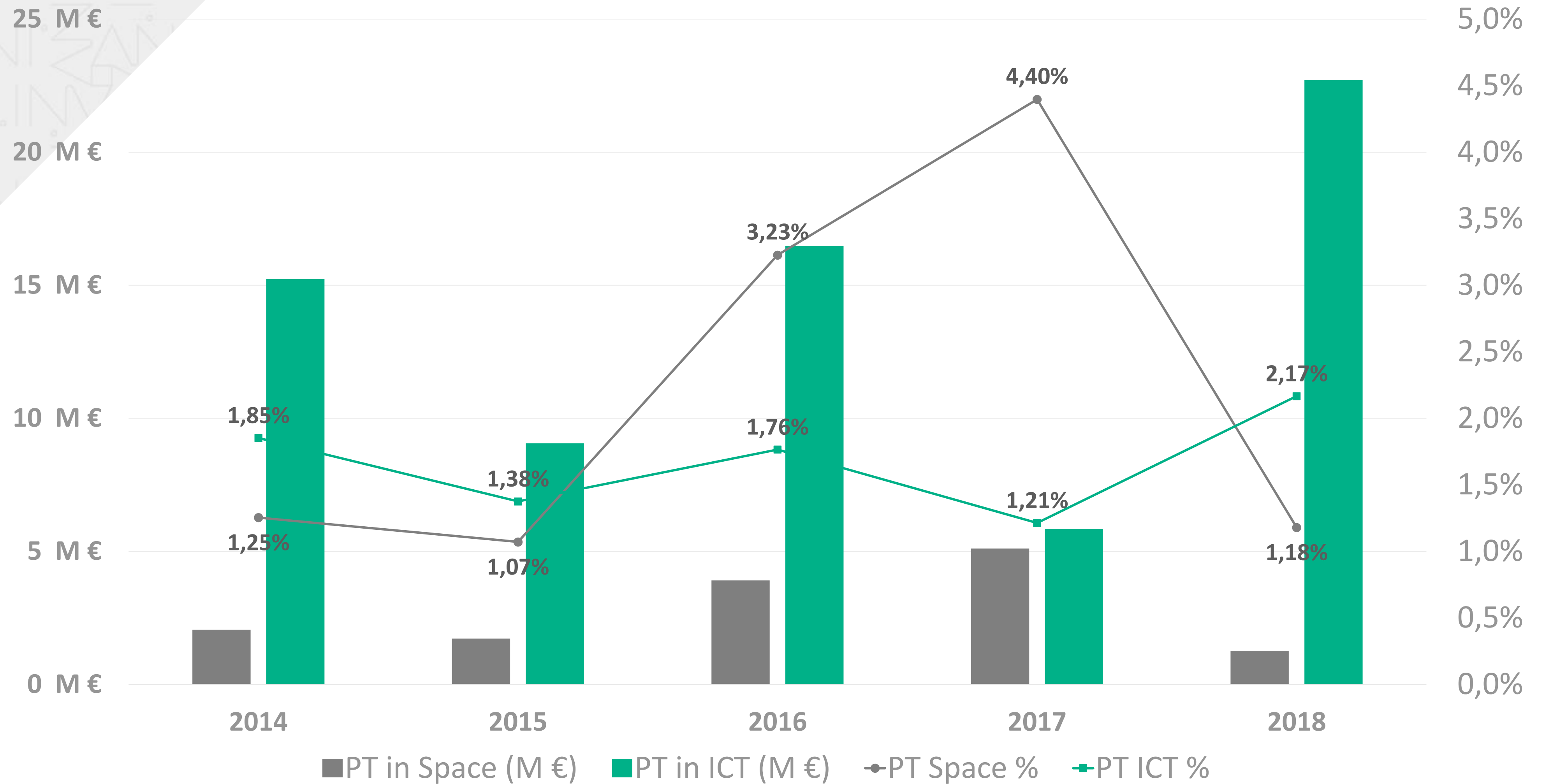
BY AREA





PT SUCCESS 2014-2018

ICT AND SPACE





EU INFOSSESSIONS

- 1. Prague, Czech Republic, 12th of September 2019** brokerage event including pre-arranged B2B meetings will be organized, at the European Global Navigation Satellite Systems Agency (GSA)

<https://h2020-space-information-day.b2match.io/>

- 2. Rome Space week, 2019 - 4rd edition**, will take place from the **9th to the 11th of October 2019** and will be hosted by the Italian Space Agency.

SPACE week 2019



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Thank you!

Our Team at ANI



CONTACTS



1. We inform

2. We advise

3. We connect