

# H2020 Focused Group Training "Legal and Financial Issues"

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THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

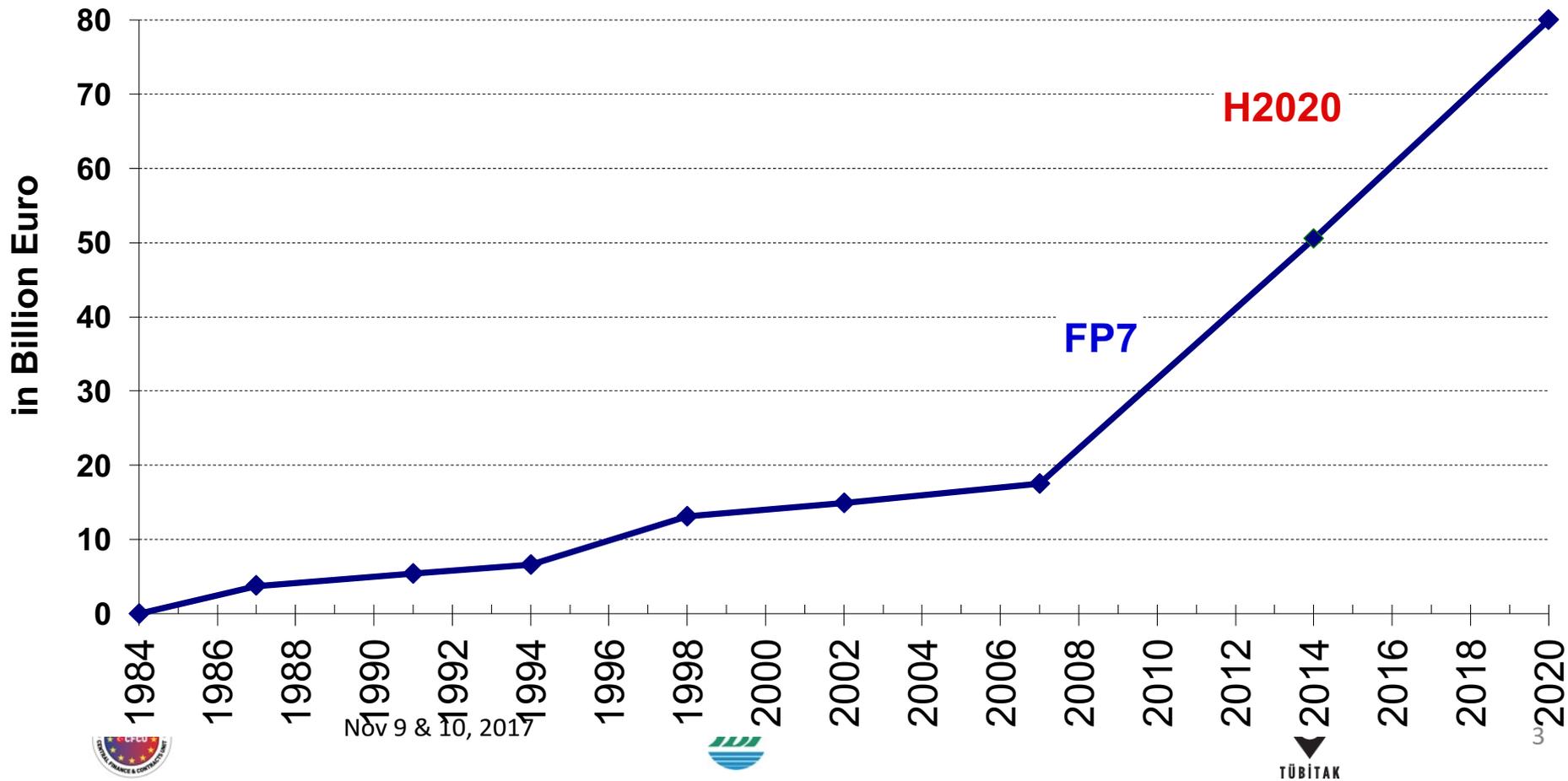
# HORIZON 2020



**The EU Funding Programme for  
Research and Innovation**

# FP Budget Development

- Horizon 2020 has nearly €80 billion Euro of funding available over 7 years (2014 to 2020).



# Principles of EU R&D&I Activities

- Transnational collaboration (min. 3 partners/3 countries from MS or AC)
- Open to all: Industry, SMEs, Universities,...)
- Based on strategic objectives - programme oriented
- Consortia are selected by Calls for Proposals
- Innovative, based on science & technology excellence
- Competitive - competition of the best teams in EU
- Project results are the property of the participants



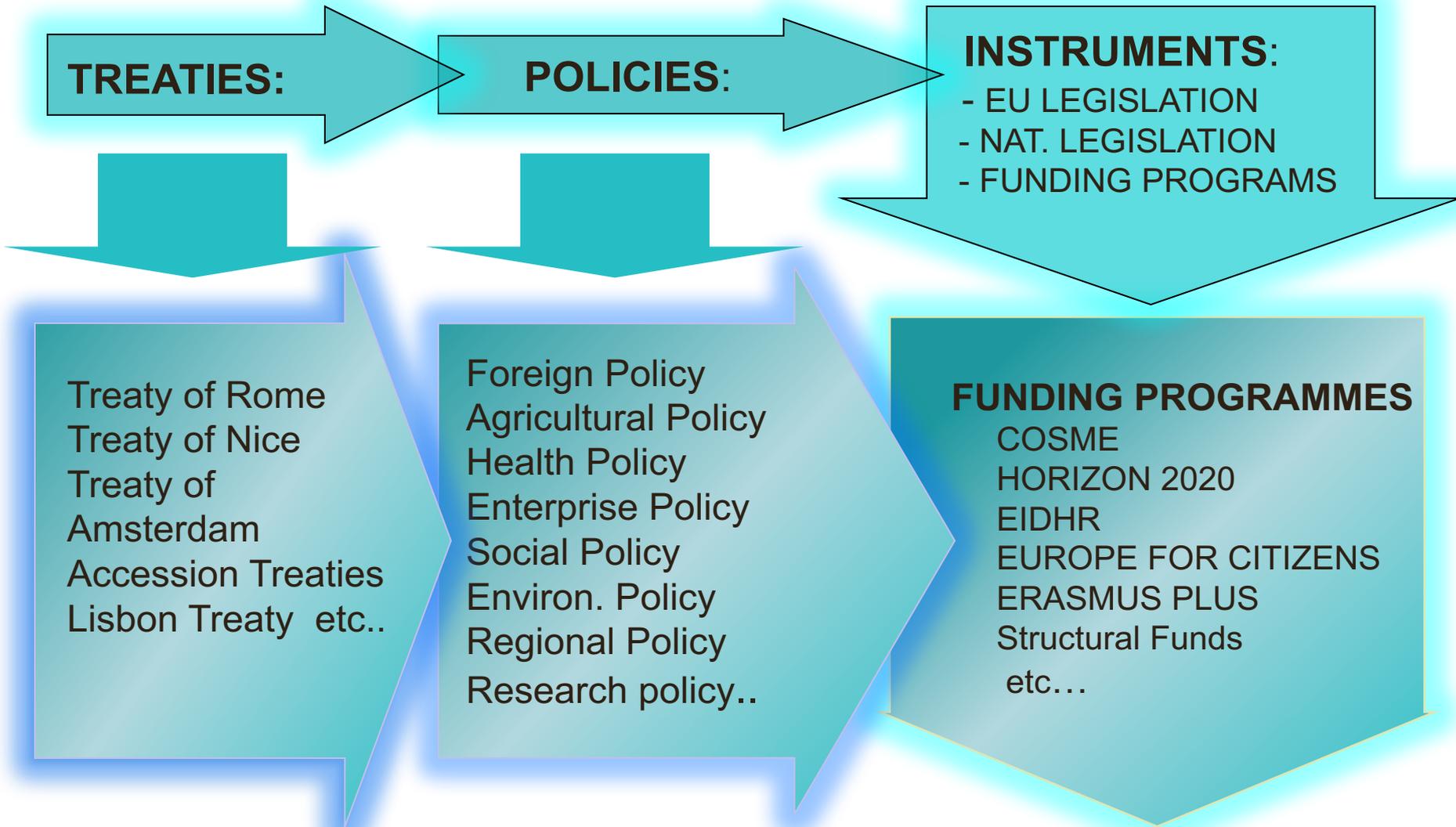
# 28 (27) Member States and 16 Associated Countries



## Associated Countries

- Iceland
- Norway
- Albania
- Bosnia and Herzegovina
- The former Yugoslav Republic of Macedonia
- Montenegro
- Serbia
- **Turkey**
- Israel
- Moldova
- Switzerland
- Faroe Islands
- Ukraine
- Tunisia
- Georgia
- Armenia

# The logic of EU funding programmes



THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

# HORIZON 2020



**What it is about**

# What is HORIZON 2020

Horizon 2020 focuses on Research and Innovation.

It does not cover, for example, Education or Arts.

It addresses 3 main areas ("Pillars"):

- Technologies to strengthen Industrial Leadership.
- Excellent Science to make European research and innovation system more competitive.
- Societal Challenges, responding to the priorities of the EU2020 Strategy.



# The H2020 Structure – 3 Pillars

24%

## Leadership in Enabling and Industrial Technologies – LEIT

ICT  
Nanotechnologies  
Advanced materials  
Biotechnology  
Advanced Manufacturing & Processing  
Space  
The SME Instrument

33%

## Excellent Science

ERC  
FET  
Marie Curie  
Research Infrastructures

43%

## Societal Challenges

Health and wellbeing  
Food  
Energy  
Transport  
Environment  
Reflective societies  
Secure societies

Spreading excellence and widening participation

Science with and for society

Remember: H2020 is called

Framework Programme  
for  
Research and **Innovation**



Nov 9 & 10, 2017



# What is Innovation ?

What is INNOVATION and why is it so important?

- New ideas ?
- New knowledge ?
- New research results ?
- New methodologies ?

**Of course, but ...**



# What is Innovation ?

- Innovation = Invention (research) + **exploitation**
- A new way of doing things, which is commercialized.
- Schumpeter said “an idea that finds its way to the market”

Innovation relates to **Products, Processes,**  
or **Business Models**

# ... or as Steve Jobs said:

"One of the ways that I believe people express their appreciation to the rest of humanity is to make something wonderful and put it out there."



# INNOVATION

- Innovation is **not improvement**, it is doing something **different**
- Innovation results in a **significant impact**
- Innovation is **invention applied**
- Innovation can be **disruptive**

Let's look at some examples ...

# INNOVATION



**Is this idea from  
1956 Innovation?**

**No!**

**It never went past  
this first stage.**

# INNOVATION



1979

**Was this SONY walkman an Innovation?**

**Yes!**

**A completely new concept that was highly successful on all markets!**

**Was it a Disruptive Innovation?**

**No!**

**There was nothing comparable to it before.**

# INNOVATION



**Are MP3 players an Innovation?**

**Yes!**

**A new concept (small, light, no moving parts) that is highly successful on all markets!**

**Was it a Disruptive Innovation?**

**YES!**

**It killed the tape-based walkman!**

# INNOVATION

What is next?



**Streaming to mobile devices!**

**Disruptive?  
At least a serious threat to MP3 players but also to CDs.**

# The Innovation Chain

Research & development

Covered by H2020

Prototyping,  
'plans' for new  
products

Market  
development

Market  
replication



Nov 9 & 10, 2017



# Research and Innovation

Calls in **Industrial Technologies** and **Societal Challenges** either address

- Research and Innovation (RIA),
- Innovation (IA), or
- Coordination and Support (CSA)

For Innovation calls, the research part has been done previously and some prototype of a certain matureness must exist.

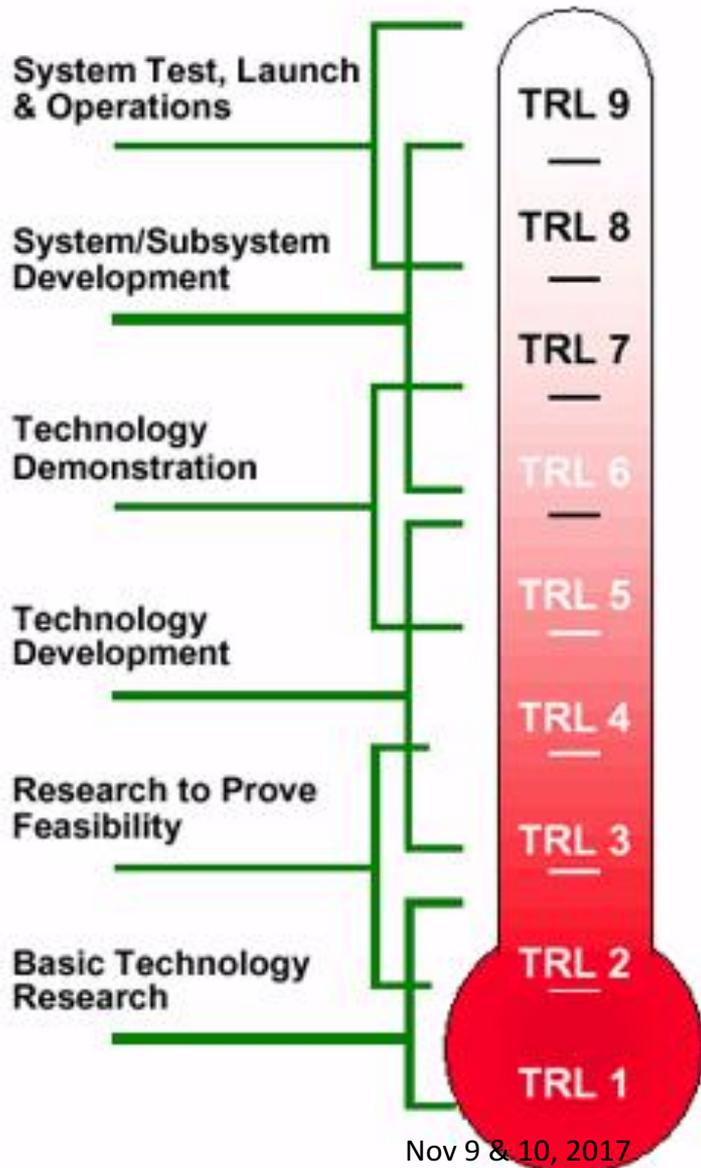
How can we measure such maturity?

# Measuring Technology Maturity

## Technology Readiness Levels (TRLs)

- The use of TRLs as a measurement of the maturity level of particular technologies is a new development in Horizon 2020.
- TRLs provide a common understanding of a technology development status
- Many of the call topics have a defined TRL at which the implementation of the proposal is intended to start. For example a project has to start at TRL 3 and end at TRL 5.

# A measurement of the maturity level of technologies: a new development in H2020



Nov 9 & 10, 2017

TRL9 – actual system proven in operational environment

TRL8 – system complete and qualified

TRL7 – system prototype demonstration in operational environment

TRL6 – technology demonstrated in relevant environment

TRL5 - technology validated in relevant environment

TRL4 – technology validated in LAB

TRL3 – experimental proof of concept

TRL2 – Technology concept formulated

TRL1 - Basic principles observed

# Innovation and the Private Sector

To ensure that innovation is happening in H2020

**SME participation become obligatory in most projects. Around 20% of the total budget for Societal Challenges and LEITs must go to SMEs.**

This is good news for SMEs, of course !

It is also an important message for universities: purely academic consortia in these 2 areas are out !



# Work Programmes

What are these Work Programmes and what do they contain?

## The Participants Portal:

Where to find them:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/>



HOME

FUNDING OPPORTUNITIES

HOW TO PARTICIPATE

EXPERTS

SUPPORT ▾

Search PP

### EU Programmes 2014-2020

Search Topics

Call Updates



Calls



H2020

Research Fund for Coal & Steel

COSME

3rd Health Programme

Consumer Programme

## Calls for Proposals



Horizon 2020

- Future and Emerging Technologies (FET)
- Marie-Sklodowska-Curie Actions
- Research Infrastructures
- Industrial Leadership
  - Leadership in enabling and industrial technologies (LEIT)
    - Information and Communication Technologies
    - Nanotechnologies
    - Advanced materials
    - Biotechnology



# RESEARCH & INNOVATION

European Commission

## Participant Portal

European Commission > Research & Innovation > Participant Portal > Reference Documents

HOME

FUNDING OPPORTUNITIES

HOW TO PARTICIPATE

PROJECTS & RESULTS

EXPERTS

SUPPORT

LOGIN

REGISTER

Reference Documents

### Reference Documents

Beneficiary Register

#### Work Programmes

2014-15

2016-17

2018-20

#### Main WP

1. Introduction 2018-20 >

2. Future and Emerging Technologies (FETs) 2018-20 >

3. Marie Skłodowska-Curie actions (MSCA) 2018-20 >

4. Research infrastructures (including e-Infrastructures) 2018-20 >

5. Introduction to Leadership in enabling and industrial technologies (LEITs) 2018-20 >

5i. Information and communication technologies (ICT) 2018-20 >

5ii. Nanotechnologies, advanced materials, advanced manufacturing and processing, biotechnology 2018-20 >

5iii. Space 2018-20 >



**EN**

**Horizon 2020**

**Work Programme 2018-2020**

*5.ii. Nanotechnologies, Advanced Materials, Biotechnology and  
Advanced Manufacturing and Processing*

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# HORIZON 2020



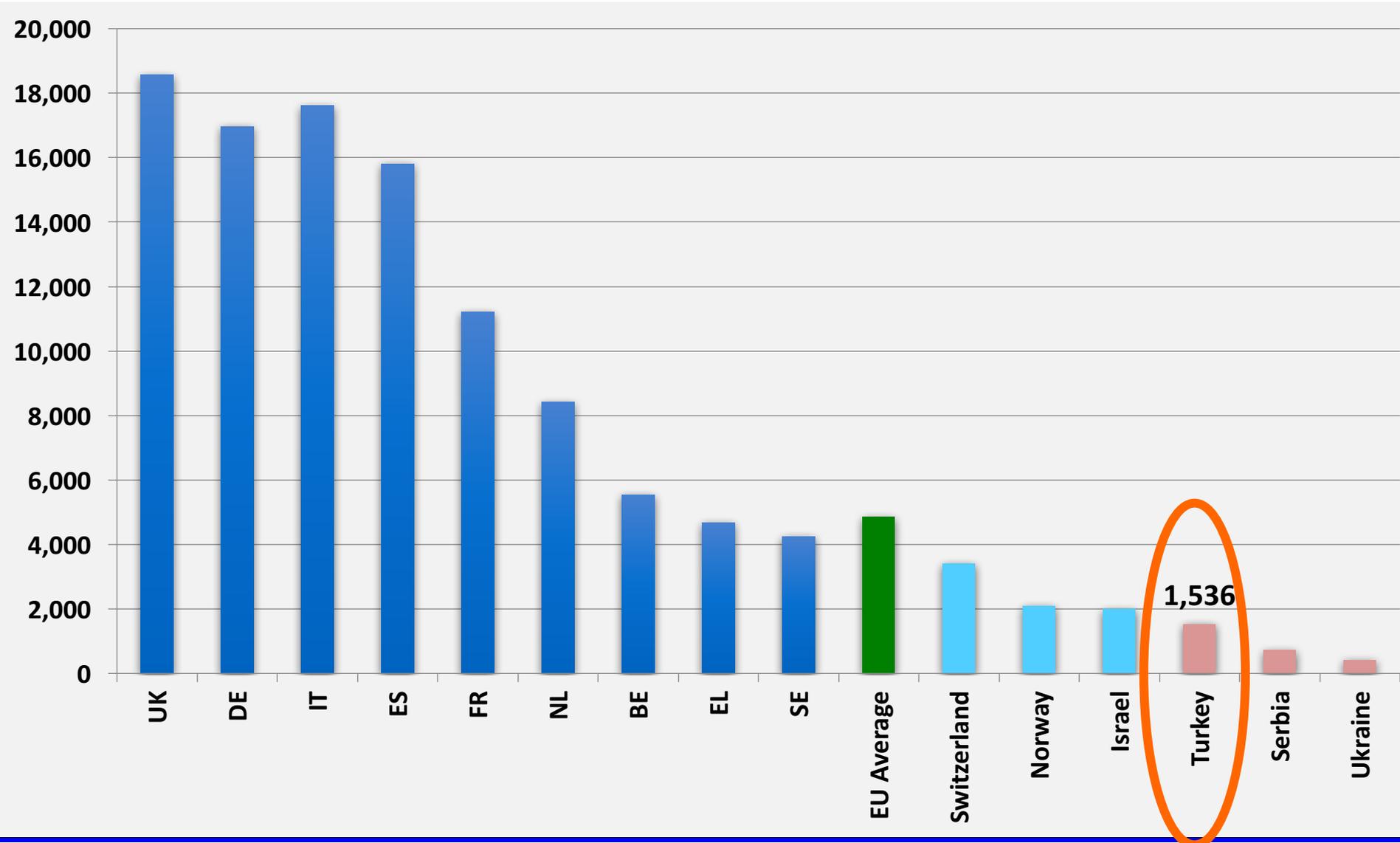
The first two years

# KEY FACTS AND FIGURES

- Over **76,400 proposals** were submitted in the first two years, requesting a total contribution of €125.4bn.
- Around **9,200 proposals** were retained for funding. The overall success rate was **11.8%**.
- Over **9,000 grant agreements** were signed by 1/9/16, with a budget allocation of over **€15.9bn** funding.



# Proposals submitted in the first Two Years



# Success Rates

Average for 2014 and 2015: **11.8 %**

Newcomers to H2020: **49%**

The 20% budget target for the funding of SMEs was achieved: **23.7%**



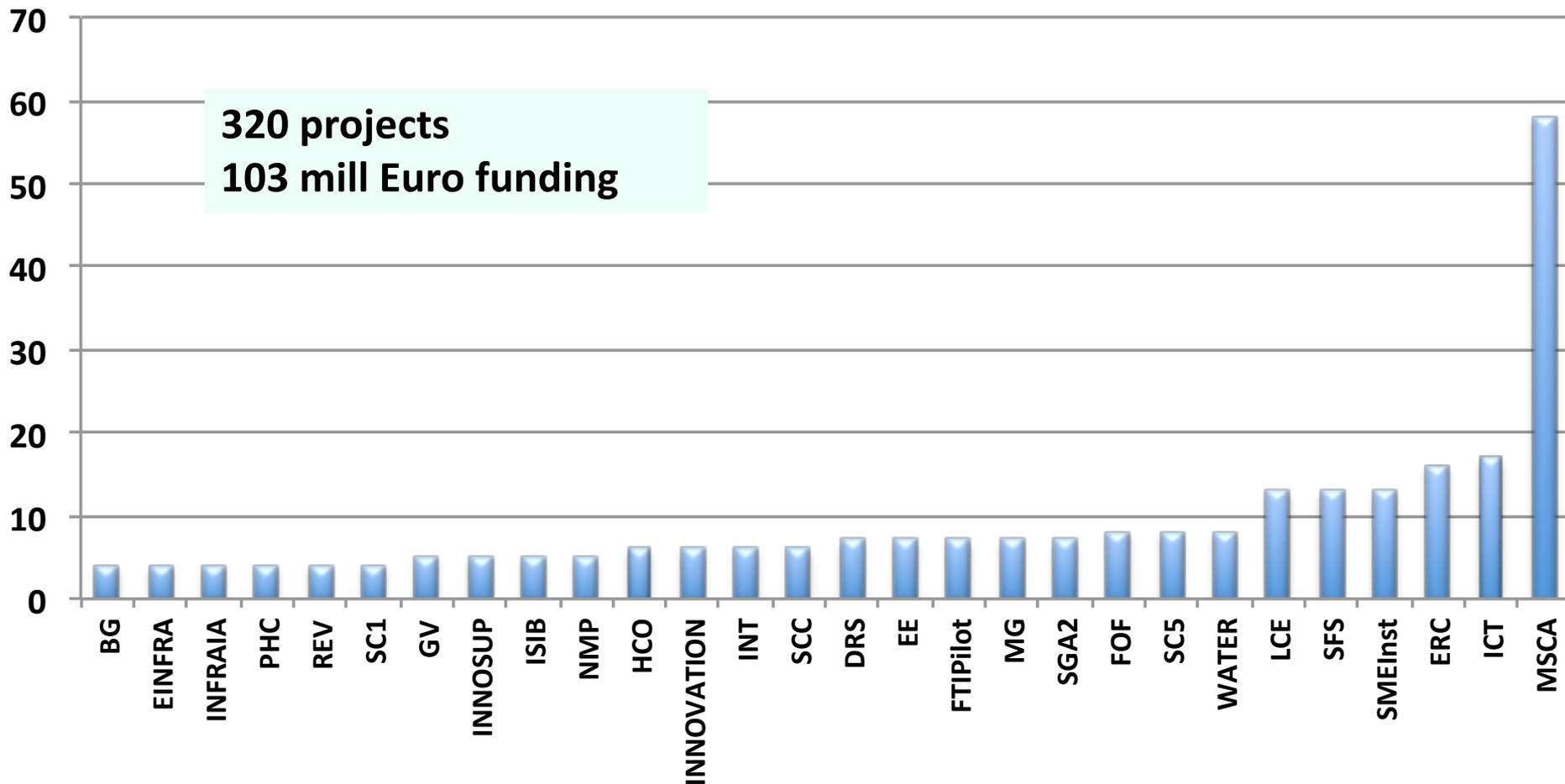
# How about Turkey?



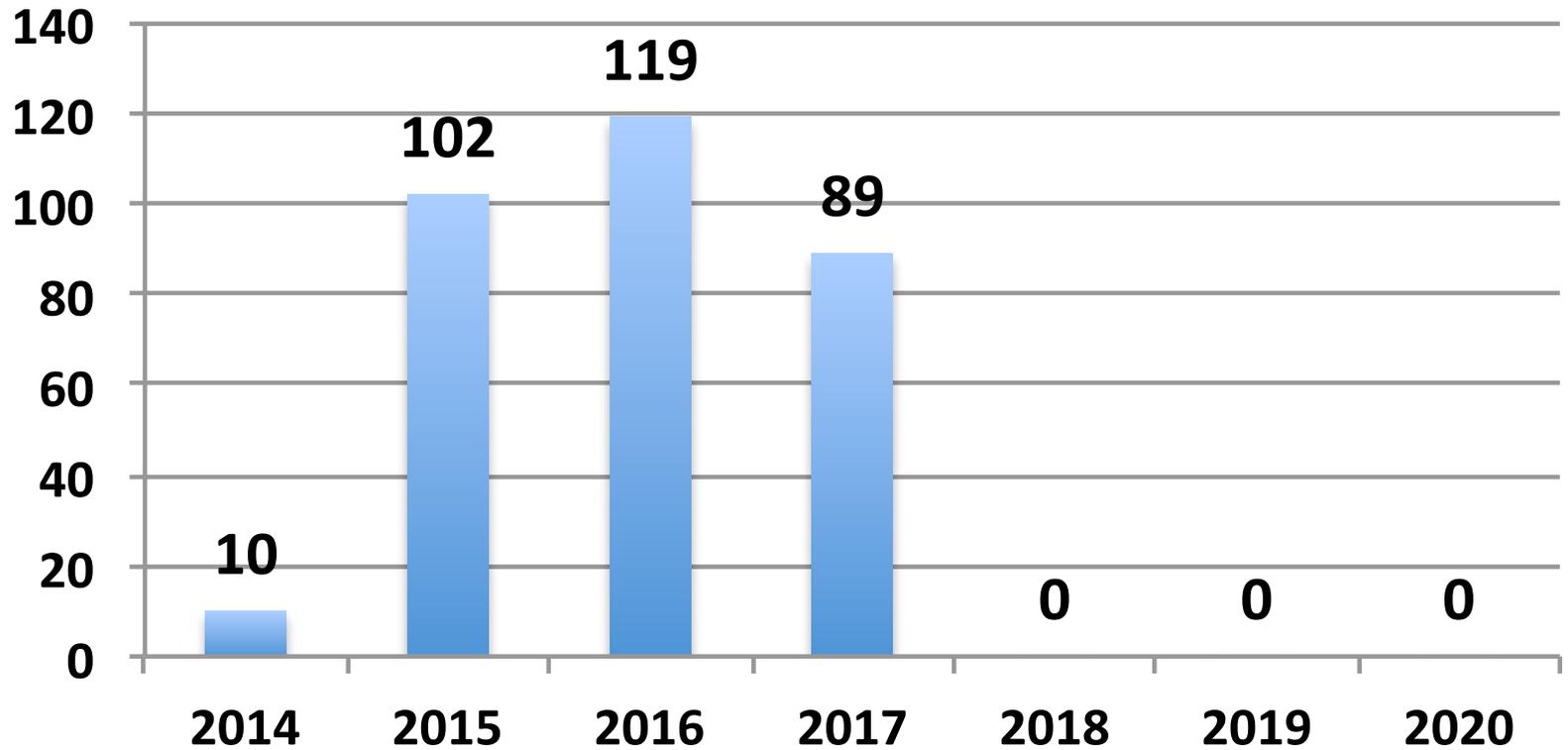
# Turkey in H2020

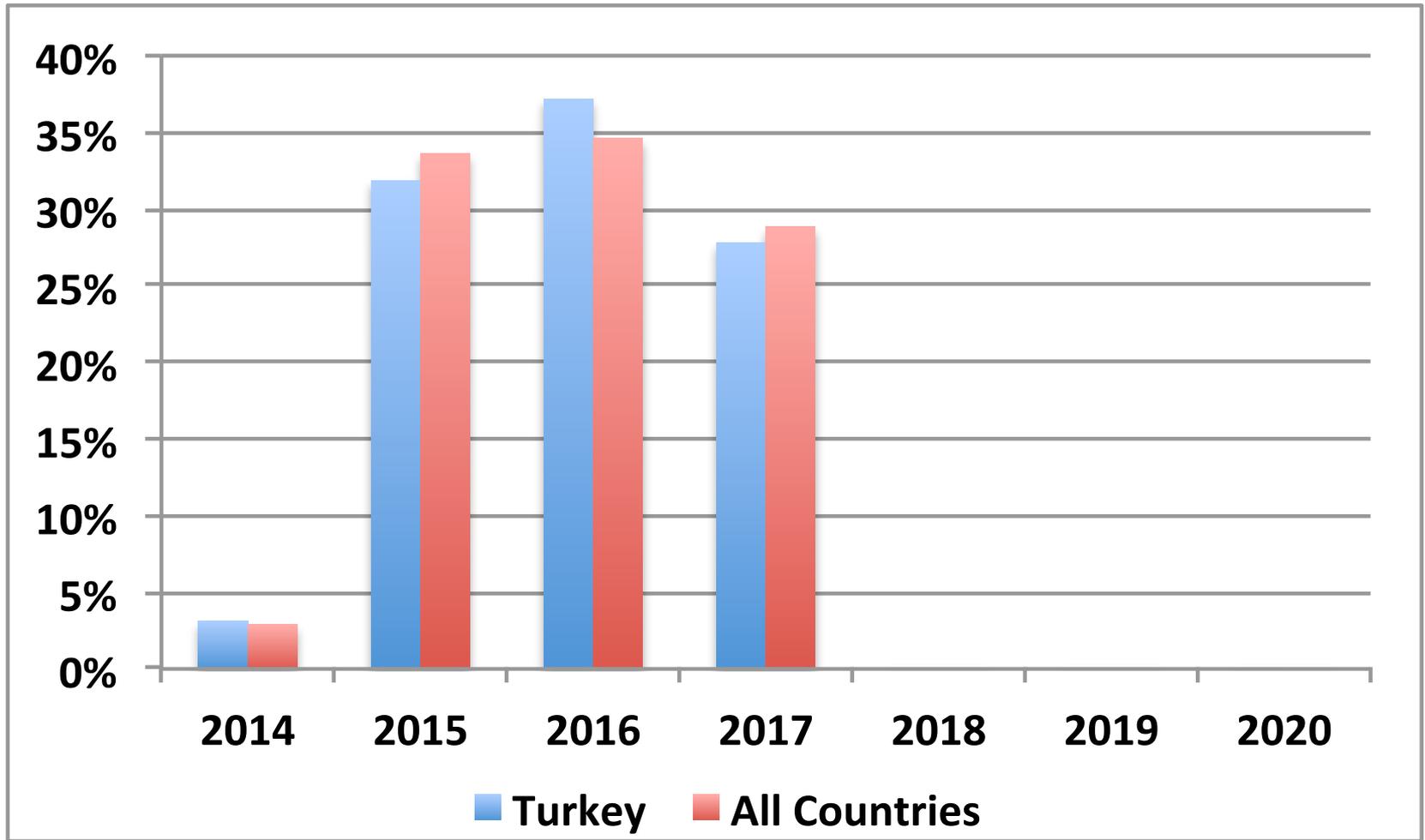
## H2020 Project with Turkish Participation (Oct 17)

320 projects  
103 mill Euro funding



## Turkey: New projects per year





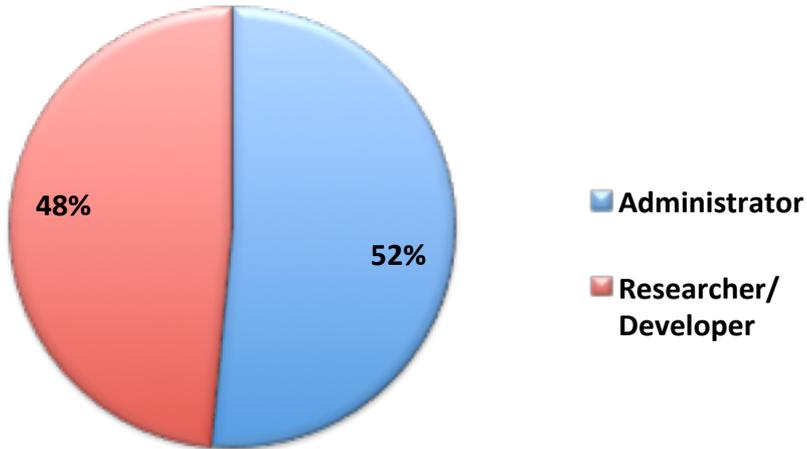
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# HORIZON 2020

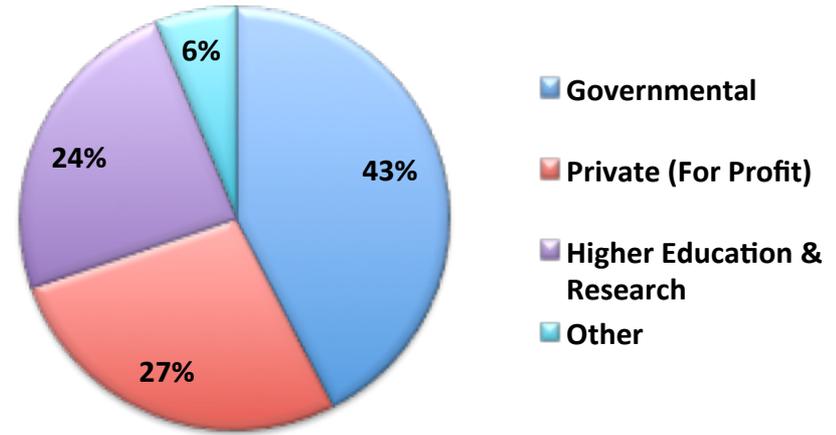
The background of the slide is a deep blue gradient with a glowing horizon line. A small globe of the Earth is positioned in the center, acting as the letter 'O' in the word 'HORIZON'. From behind the globe, a bright light source creates a sunburst effect with rays of light extending across the frame. The overall aesthetic is futuristic and high-tech.

Our Event today:

### Role in the Organisation

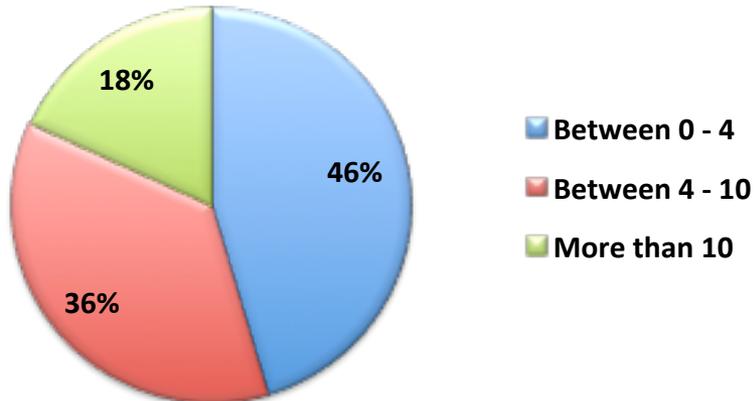


### Type of Organisation



HC COOPER

### For how many years have you been a researcher?



### Knowledge about EU Programmes

