Introduzione ad Horizon 2020
Pilastri, tipologie di azione e regole di partecipazione

Università degli Studi di Foggia
28 ottobre 2019

APRE
Agenzia per la Promozione
della Ricerca Europea

enterprise
europe
network
Business Support on Your Doorstep

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- Linkedin https://www.linkedin.com/in/matteosabini3/

Mission

Promuove e supporta la partecipazione italiana ad Horizon 2020

Contribuisce al miglioramento della "qualità" della partecipazione italiana nei programmi europei di Ricerca & Innovazione

NCP

APRE ospita tutti **i Punti di Contatto Nazionale (NCP)** di Horizon 2020

Dove

Roma – sede principale
Bruxelles – Liaison Office

APRE
Agenzia per la Promozione della Ricerca Europea

Associazione di ricerca **no-profit**

Fondata nel **1989** → **30 anni di esperienza** nei programmi europei di ricerca

Lavora in stretto contatto con il **MIUR**

135 Soci

18 sportelli regionali

Cosa facciamo

NCP

- Orientamento bandi
- Pre-screening proposte
- Informazione
- Individuazione policy

Corsi di
formazione

Formazione

- Formazione in aula
- Webinar
- Coaching

Networking

- Liaison Office
- Ricerca partner
- Advocacy

Informazione

- APRE*magazine*
- Studi e pubblicazioni
- Analisi dati

APRE*informa*

website

APRE
Agenzia per la Promozione della Ricerca Europea

magazine

APRE*magazine*

Verso un Consiglio Europeo dell'innovazione (EIC)

Una panoramica sulla partecipazione italiana a Horizon 2020 - la fotografia a metà percorso

APREdati

APRE

Una panoramica sulla partecipazione italiana a Horizon 2020

La fotografia a metà percorso

APREdati - Luglio 2017

Guide e Dossier dati

APRE*forma*

Corsi di formazione

APRE
Webinar
Registrati e mettiti comodo.

- **Corso di formazione:** di durata di uno o due giorni con possibilità di esercitazioni pratiche.
- **Webinar:** un corso "light" della durata di un'ora dove interagire con il docente via chat.

Oltre 130 Soci interdisciplinari e intersettoriali

APRE
Conferenza
Annuale

#APREcon2019
C'è valore nella rete

LA RETE DEI SOCI APRE

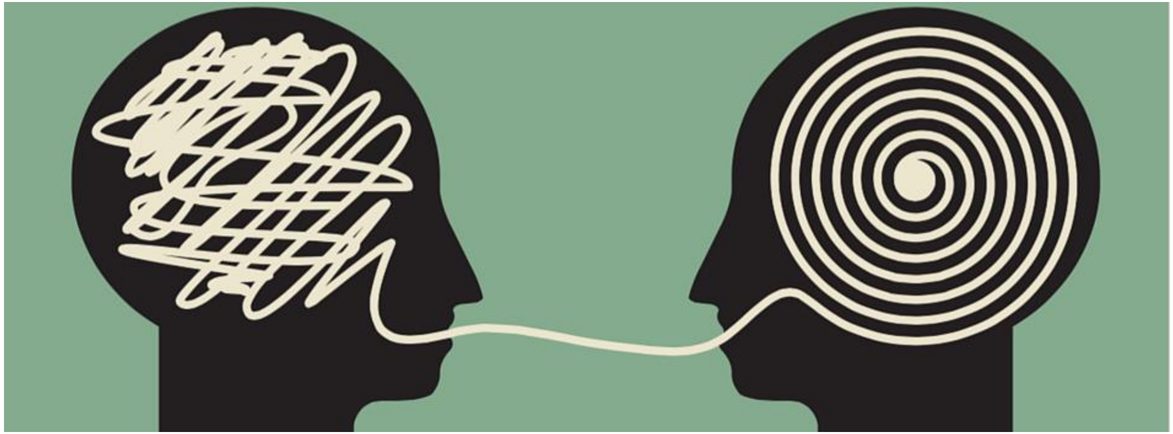
Agenda e sito: https://conferenzaapre2019.wixsite.com/apre
Live: https://www.apre.it/eventi/2019/ii-semestre/conapre2019/
Video della conferenza https://www.youtube.com/watch?v=A3U2gr584Uk

Prima di cominciare…

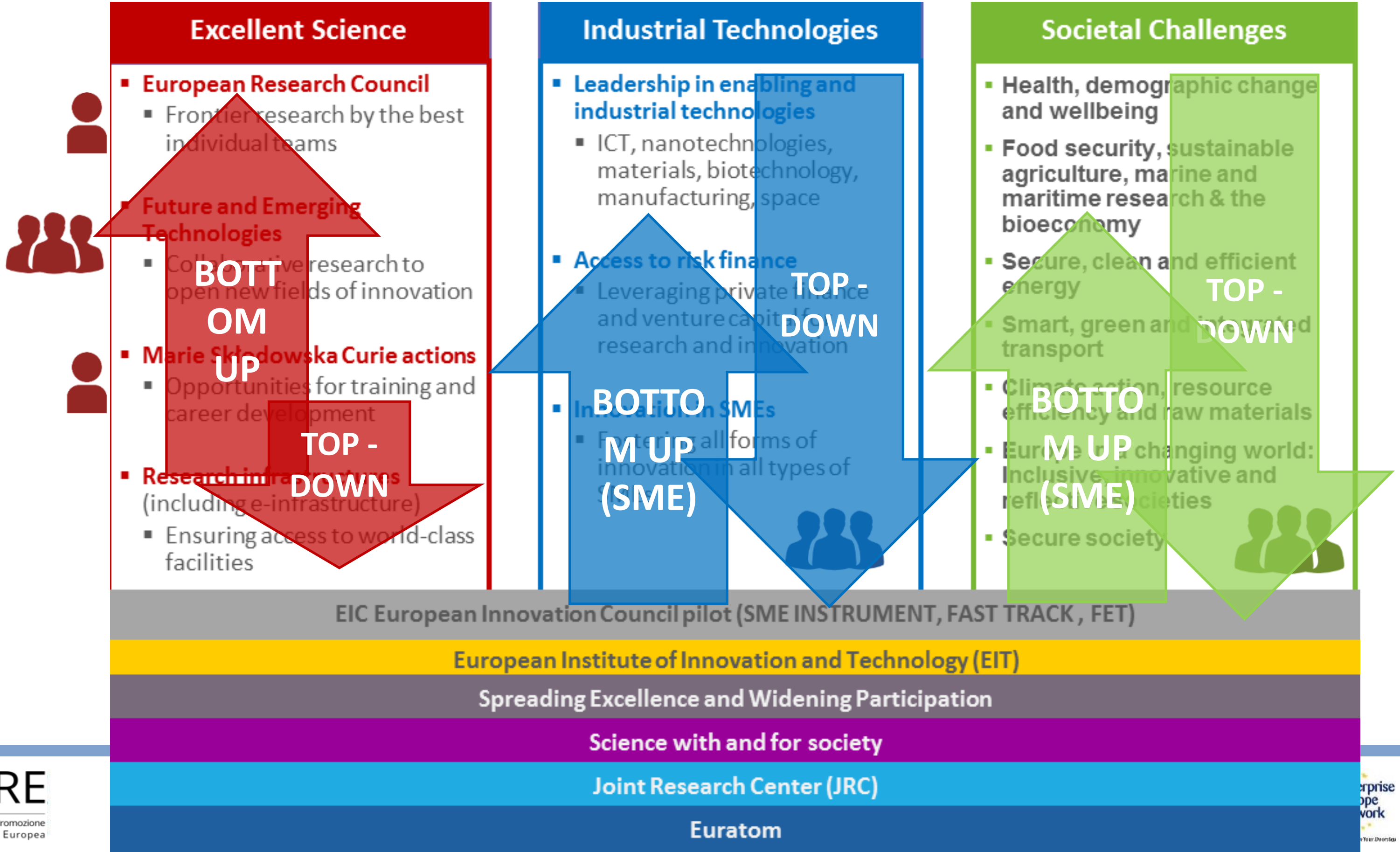
- Prendi il tuo smartphone
- Vai su www.menti.com
- Inserisci il codice **66 83 17**

Horizon 2020

La struttura del programma



La struttura del programma



Excellent Science

- **European Research Council**
  - Frontier research by the best individual teams
- **Future and Emerging Technologies**
  - Collaborative research to open new fields of innovation
- **Marie Skłodowska Curie actions**
  - Opportunities for training and career development
- **Research infrastructures** (including e-infrastructure)
  - Ensuring access to world-class facilities

Industrial Technologies

- **Leadership in enabling and industrial technologies**
  - ICT, nanotechnologies, materials, biotechnology, manufacturing, space
- **Access to risk finance**
  - Leveraging private finance and venture capital for research and innovation
- **Innovation in SMEs**
  - Fostering all forms of innovation in all types of SMEs

Societal Challenges

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime research & the bioeconomy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Europe in a changing world: Inclusive, innovative and reflective societies
- Secure societies

EIC European Innovation Council pilot (SME INSTRUMENT, FAST TRACK , FET)

European Institute of Innovation and Technology (EIT)

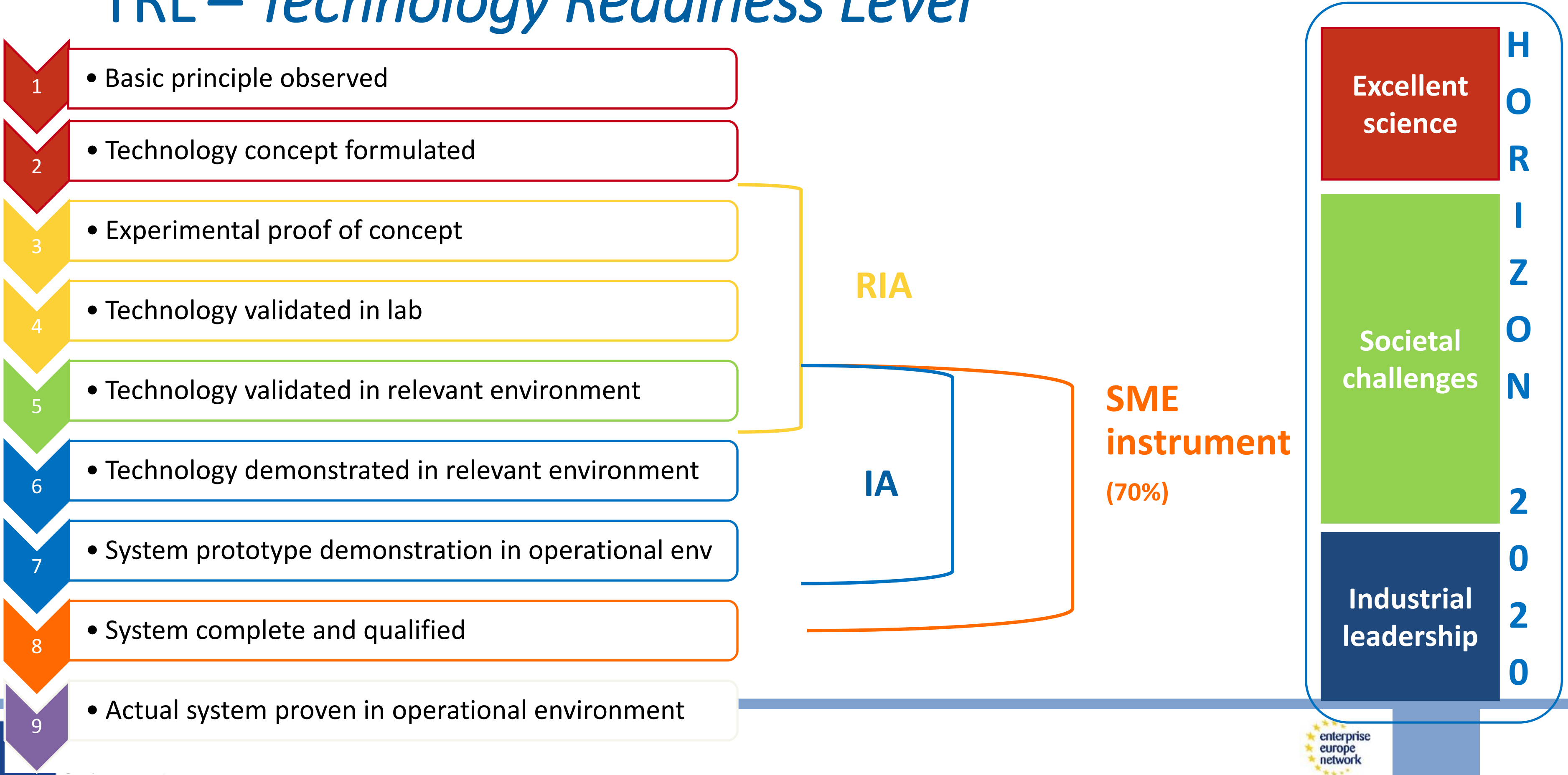
Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

Euratom

TRL – *Technology Readiness Level*



1
- Basic principle observed

2
- Technology concept formulated

3
- Experimental proof of concept

4
- Technology validated in lab

5
- Technology validated in relevant environment

6
- Technology demonstrated in relevant environment

7
- System prototype demonstration in operational env

8
- System complete and qualified

9
- Actual system proven in operational environment

RIA

IA

SME instrument

(70%)

Excellent science

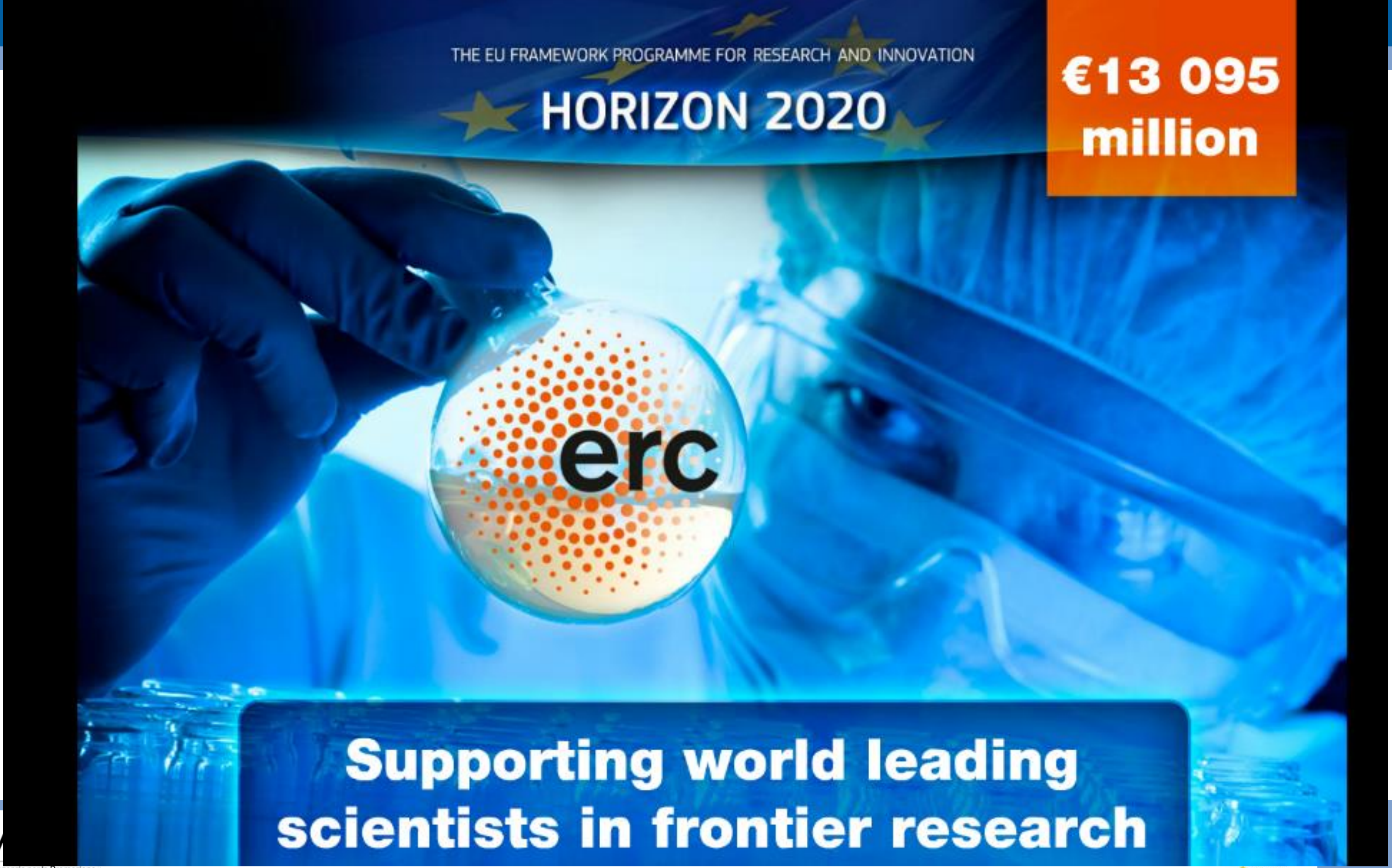
Societal challenges

Industrial leadership

HORIZON 2020

Excellent Science

H2020 – Pillar 1


THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION
HORIZON 2020
€13 095 million
erc
Supporting world leading scientists in frontier research

ERC – I principi

- **1 ricercatore; 1 host institution; 1 progetto; 1 criterio di selezione** (excellence)
- No consorzi, no networks, no co-financing → focus su **Principal Investigator**
- Applications in **ogni ambito di ricerca** (incluso le SSH)
- **Ricercatori indipendenti** da qualsiasi parte del mondo, di ogni età, in ogni fase della propria carriera
- Le Host institutions devono mettere in condizione I ricercatori di dirigere e gestire I propri fondi
- **Portabilità del grant** → il ricercatore può cambiare host institution
- Il progetto può durare massimo 5 anni e può essere portato avanti in uno dei 28 Stati Membri o negli Associated Country

ERC – Le azioni

Starting Grant (StG)

Early career top researchers, **2-7 years after PhD** | up to €1.5 mio.

Consolidator Grant (CoG)

Top researchers, **7-12 years after PhD** | up to €2 mio.

Advanced Grant (AdG)

Senior researchers with a significant **ten-year-track record** | up to €2.5 mio.

Synergy Grant (SyG)

2-4 excellent researchers and their teams (**researchers with complementary skills, knowledge and resources**) project duration max. 6 years | up to a maximum of €10 mio.

Indicative summary of main calls from the 2019 budget[1]

	Starting Grant	*Consolidator Grant*	*Advanced Grant*	*Synergy Grant*	*Proof of Concept Grant*
Call identifier	**ERC-2019-StG**	**ERC-2019-CoG**	**ERC-2019-AdG**	**ERC-2019-SyG**	**ERC-2019-PoC**
Call Opens	14/09/2018	24/10/2018	21/05/2019	14/09/2018	16/10/2018
Call closes (cut-off dates for PoC)	17/10/2018	07/02/2019	29/08/2019	08/11/2018	22/01/2019 25/04/2019 19/09/2019

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/erc/h2020-wp19-erc_en.pdf

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€6 162 million

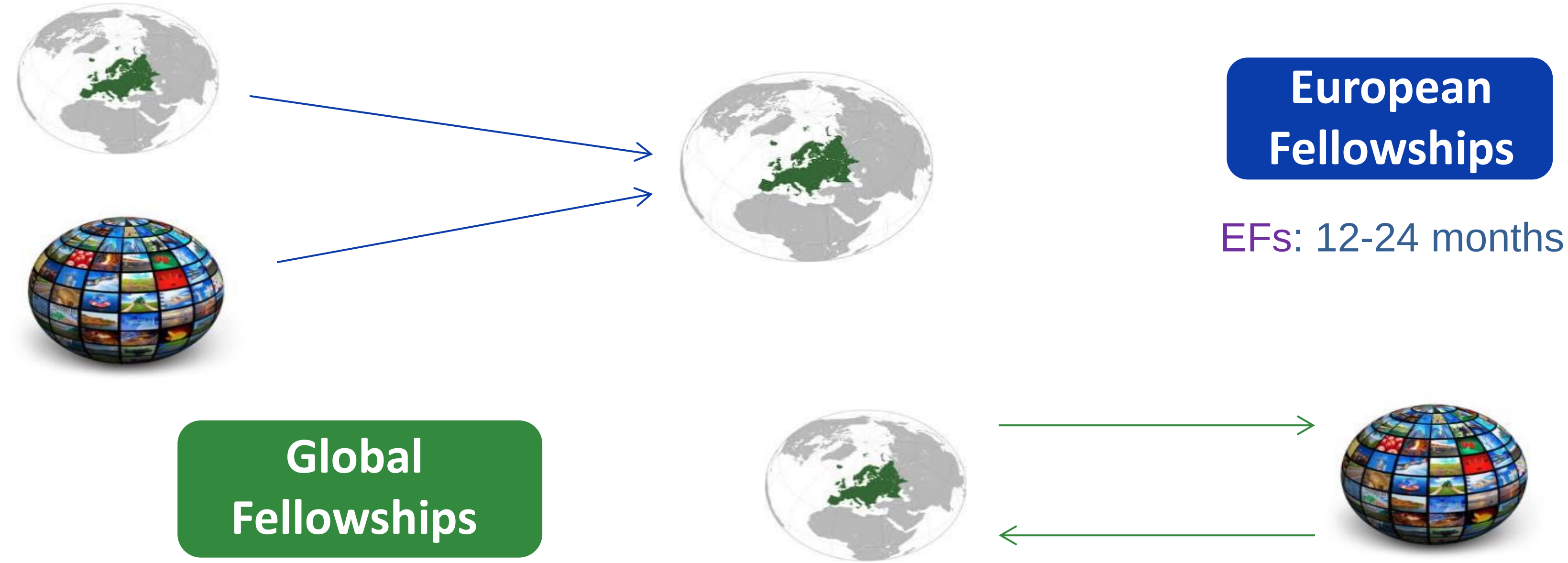
RESEARCH & INNOVATION
Marie Skłodowska-Curie Actions
Home
About
Apply now
Funded projects
News and events
RESEARCHERS' NIGHT: One night, 33 countries, about 300 European cities
Open calls
Participant portal
Research Fellowship Programme

Providing training & career development opportunities

Research and Innovation

Which action?	**ITN** **Innovative Training Networks** *(Host applies)*	**IF** **Individual Fellowships** *(Individuals apply)*	**RISE** **Research and Innovation Staff Exchange** *(Host applies)*	**COFUND** **Co-Funding of Regional, National and International Programmes** *(Funder applies)*
What does it offer?	High-quality research training delivered through international and interdisciplinary networks, industrial doctorates or joint doctorates	Opportunities to work on personal research projects by moving between countries and possibly sectors to acquire new skills	International and/or intersectoral exchanges of staff members involved in research and innovation to develop sustainable collaborative projects and transfer knowledge	Regional, national or international programmes to foster excellence in researchers' training, mobility and career development
Who is it for?	Networks of organisations that train researchers at doctoral level (less than four years of full-time research experience and no doctoral degree)	Postdoctoral researchers (doctoral degree or at least four years of full-time research experience)	Partnerships of organisations that undertake a joint research project supported by the exchange of their staff (researchers, technical, administrative and managerial staff)	Organisations funding or managing doctoral programmes or fellowship programmes

IF- European and Global



European Fellowships

EFs: 12-24 months

Global Fellowships

GFs: 12-24 months for the outgoing phase plus
12 month return phase in Europe

IF European Fellowships

4 European Fellowship schemes

- Standard
- Career restart Panel
- Society & Enterprise Panel
- Reintegration Panel

Mobility Rule

Researchers must not have resided or carried out their main activity in the country of their host organization for more than 12 months in the previous 3 years prior to the submission

Countries where the host institution is located

– EU Member States (MS)

– Associated Countries (AC)

IF European Fellowship - Standard

- **1 to 2-year research stay in Europe** (MS/AC)
- **Experienced researchers** of **any nationality** (➜ mobility rule), *many successful applications from Chinese researchers in H2020*
- **Host institution**:
  active in Research & Development, e.g. University, Research Organization, Company (incl. SME), NGO, …
- Submission and evaluation in eight **scientific panels**: CHE, SOC, ECO, ENG, ENV, LIF, MAT, PHY
- **Host institution and supervisor can be chosen freely by the researchers**
  (researchers must look for a supervisor/host institution, who is willing to supervise the applicant during the stay – neccessary)

IF European Fellowship – Career Restart Panel

- Assistance in resuming a scientific career after a break
- Conditions:
  - At the submission deadline not active in research for at least 12 consecutive months in the 18 months prior to the deadline
  - Modified mobility rule: Researchers must not have resided or carried out their main activity in the country of their host organisation for more than 3 years in the previous 5 years.

Submission and evaluation in one multidisciplinary Panel

IF European Fellowship – Society & Enterprise Panel

- Assistance in **doing research in the non-academic sector**
- Conditions:
  - Host institution must be a non-academic institution and be located in a MS/AC
  - Modified mobility Rule: the researcher must not have resided and/or carried out his/her main activity for more than 3 years within the last 5 years immediately prior to the application

Submission and evaluation in one multidisciplinary Panel

IF European Fellowship – Reintegration Panel

- Assistance in returning to Europe
- Conditions:
  - Researchers with MS/AC nationality or MS/AC long-term residence (at least 5 consecutive years in Europe as a researcher in the past)
  - Mobility from a third country to MS/AC (where the host institution is located)
  - Modified mobility rule: Researchers must not have resided or carried out their main activity in the Country of their host organisation for more than 3 years in the previous 5 years

Submission and evaluation in one multidisciplinary panel

IF Global Fellowship

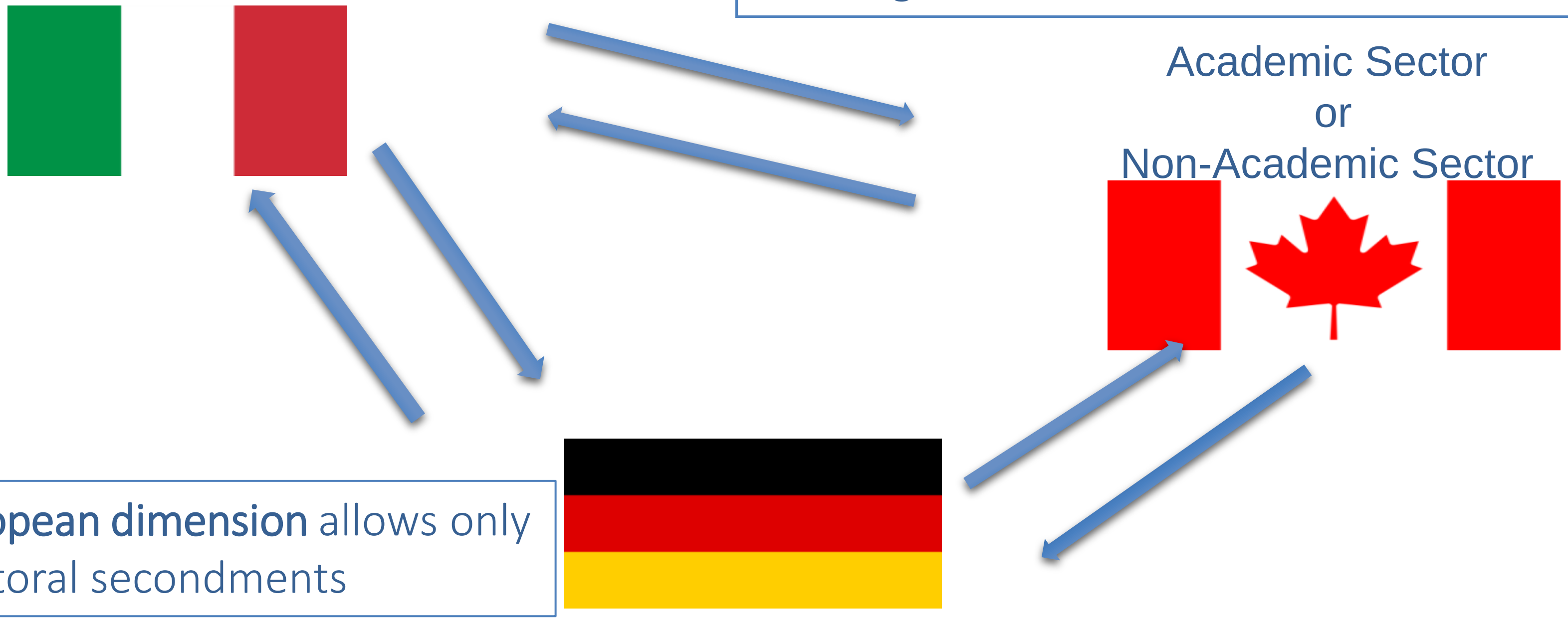
- **1 to 2-year research stay outside of Europe** (➜ mobility rule), **mandatory 1-year return phase in Europe** (MS/AC)
- **Experienced researchers** with **MS/AC nationality** or **MS/AC long-term residence** (at least 5 consecutive years in an MS/AC as a researcher in the past)
- 2 host institutions
  - in a third country (partner organisation)
  - in MS/AC (return phase), contractual partner of the EU (employer for the whole time)
- Submission and evaluation in 8 scientific panels: CHE, SOC, ECO, ENG, ENV, LIF, MAT, PHY

Research and Innovation Staff Exchange (RISE)

- Promoting international and inter-sectoral collaboration through research and innovation staff exchanges
- **Transfer of knowledge through secondment of staff members,** from research to market and vice versa
- Fostering a shared culture of research and innovation
- At least **3** institutions from **3 different** countries, of which **at least 2** from MS/AS
- **Cross-sectoral transfer of knowledge** and **enhancement of skills and expertise** of the staff seconded
- In case all institutions belong to the same sector (e.g. academic sector):
  At least 1 institution from a third country
- Maximum duration of the programme: (up to) **4 years**

RISE Partnership – Esempio 1

The international dimension does not exclude exchanges within the same sector



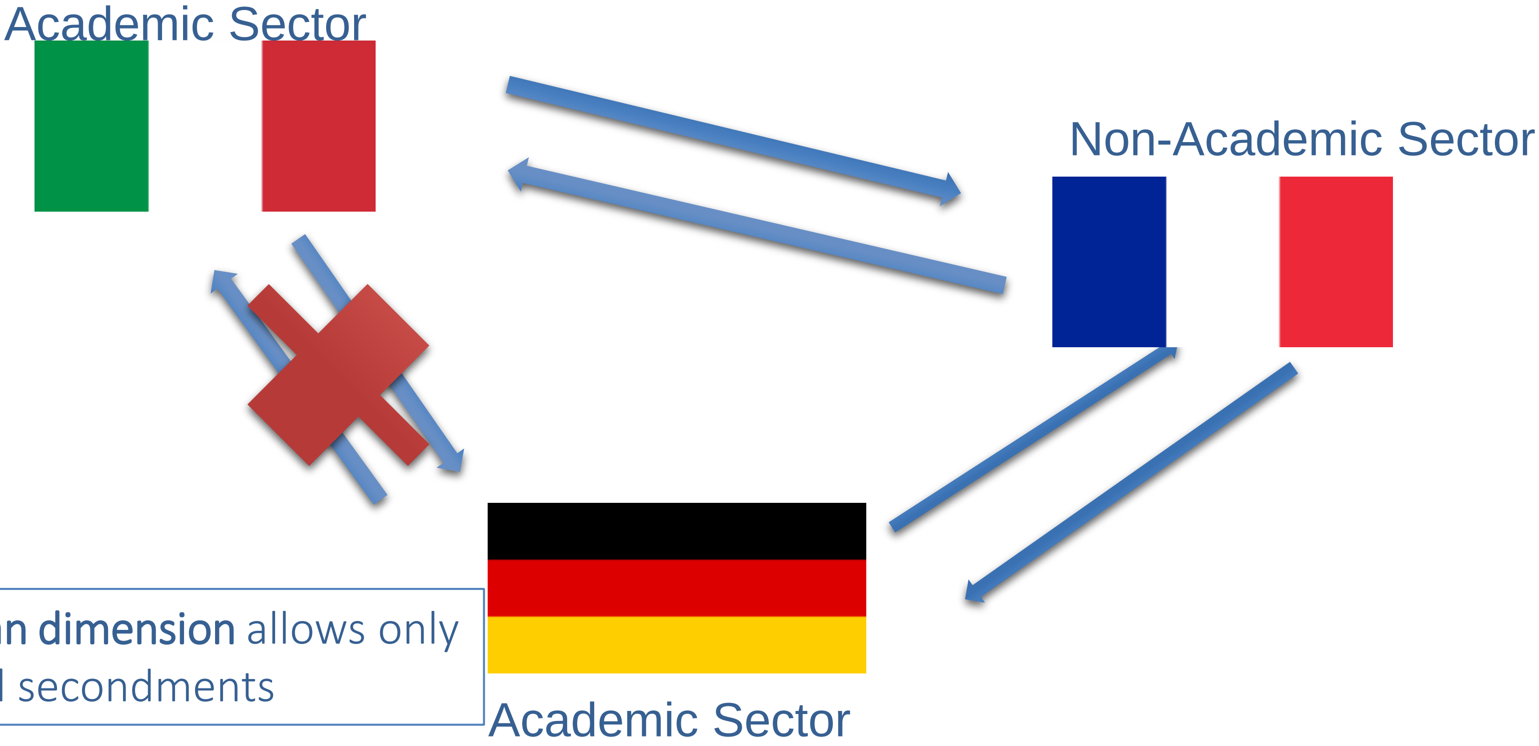
Academic Sector

Academic Sector
or
Non-Academic Sector

Non-Academic Sector

The European dimension allows only intersectoral secondments

RISE Partnership – Esempio 2


Academic Sector
Non-Academic Sector
Academic Sector

The European dimension allows only intersectoral secondments

Innovative Training Networks (ITN)

MSCA - main EU programme for structured doctoral training

- Objective
  - raise excellence and structure research and doctoral training
  - train a new generation of creative, entrepreneurial and innovative early-stage researchers
- Scope
  - European Training Networks (ETN), European Industrial Doctorates (EID) or European Joint Doctorates (EJD)
  - Triple 'i' dimension of mobility and particular focus on innovation skills
- Expected Impact
  - structure research and doctoral training in Europe
  - trigger cooperation and exchange of best practice among participants
  - enhance researchers' employability and provide them with new career perspectives

Innovative Training Networks (ITN)

European Training Networks (ETN)

- The most general mode, epitomising the ITN policy objectives
- Does not require mandatory doctoral training but…

European Industrial Doctorates (EID)

- Focus on academic/non-academic collaboration
- Widening fellows' career horizons

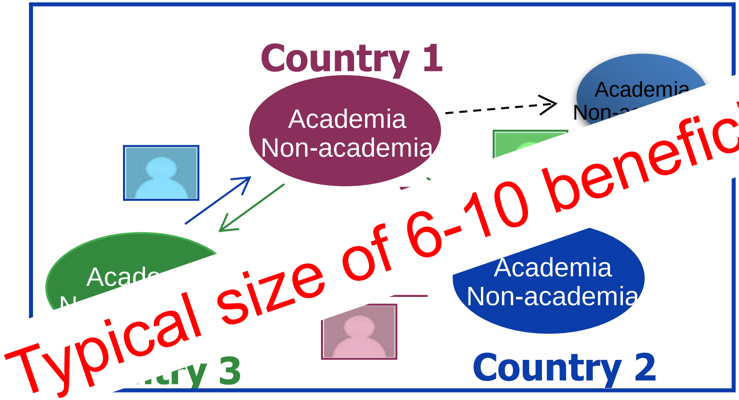
European Joint Doctorates (EJD)

- Promoting greater structural co-operation between universities
- Offering more employment opportunities to fellows

ITN – Main features

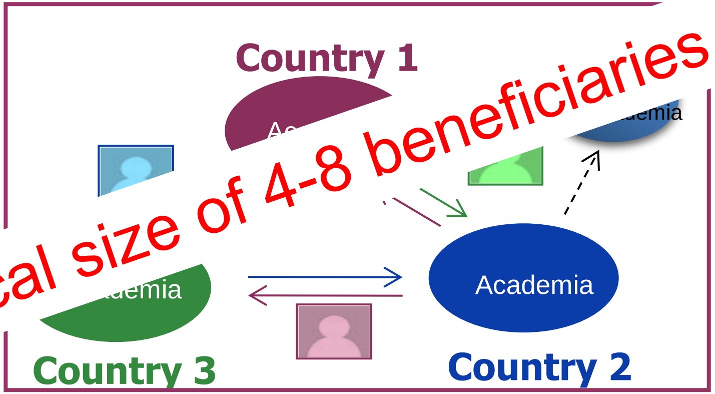
- Duration of projects: maximum 4 years
- Consortium agreement: required only for EID
- Support to early-stage researchers only
- Fellowships of 3-36 months
- Maximum 540 researcher-months per consortium (180 for EID with 2 partners)
- Separate multidisciplinary panels for EID and EJD

ITN – consortia


Country 1
Academia
Non-academia
Academia
Non-a
Acade
N
Academia
Non-academia
try 3
Country 2

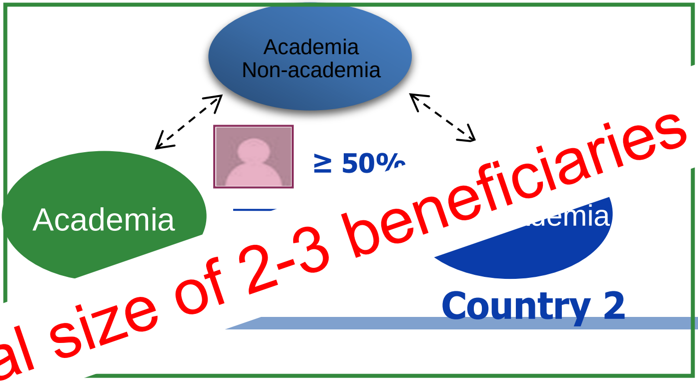
Typical size of 6-10 beneficiaries

European Training


Country 1
Ac
demia
demia
Academia
Country 3
Country 2

Typical size of 4-8 beneficiaries

European Joint Doctorates


Academia
Non-academia
≥ 50%
Academia
demia
Country 2

Typical size of 2-3 beneficiaries

European Industrial Doctorates

Funding scheme	Publication	Budget	Deadline
ITN 19	13.09.2018	470 Mio. €	15.01.2019
ITN 20	12.10.2019	525 Mio. €	09.01.2020
RISE 19	04.12.2018	80 Mio. €	02.04.2019
RISE 20	05.12.2019	80 Mio. €	07.04.2020
IF 19	**11.04.2019**	**295,62 Mio. €**	**11.09.2019**
IF 20	08.04.2020	325 Mio. €	09.09.2020
COFUND 19	**04.04.2019**	**90 Mio. €**	**26.09.2019**
COFUND 20	08.04.2020	100 Mio. €	29.09.2020

Opportunità per ricercatori: https://euraxess.ec.europa.eu/

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION
HORIZON 2020
EU research infrastructures
Research and Innovation

€2 488 million

Research Infrastructures

The term ‘research infrastructures’ refers to facilities, resources and related services used by the scientific community to conduct top-level research in their respective fields, ranging from social sciences to astronomy, genomics to nanotechnologies.

RIs may be ‘**single-sited**’ (a single resource at a single location), ‘**distributed**’ (a network of distributed resources), or ‘**virtual**’ (the service is provided electronically).

Objectives

1. Developing the European RIs for 2020 and beyond
    - Developing new world-class RIs
    - Integrating and opening national and regional RIs of European interest;
    - Development, deployment and operation of ICT based e-infrastructures:
2. Fostering the innovation potential of RIs and their human resources
3. Reinforcing European RI policy and international cooperation

Industrial Leadership

H2020 – Pillar 2

What are the KETs?

*Key Enabling Technologies**

The Commission defines KETs as “**knowledge intensive** and associated with **high R&D intensity**, **rapid innovation cycles**, **high capital expenditure and highly skilled employment**. They **enable process, goods and service innovation** throughout the economy and are of systemic relevance. They are **multidisciplinary**, cutting across many technology areas with a trend towards convergence and integration. KETs can assist technology leaders in other fields to capitalise on their research efforts”

*Current situation of key enabling technologies in Europe, SEC (2009)

Photonics

Manufacturing

Biotechnology

Advanced Materials

Micro/Nanoelectronics

Nanotechnologies

Artificial Intelligence

Digital security and connectivity

Proposal for rethinking KETs (*Re-finding Industry*)

https://ec.europa.eu/research/industrial_technologies/pdf/re_finding_industry_022018.pdf

ICT priorities

Six main activity lines have been identified in the ICT-LEIT part of the Work Programme:

- A new generation of components and systems
- Advanced Computing
- Future Internet
- Content technologies and information management
- Robotics
- Micro- and nano-electronic technologies, Photonics

SPACE priorities

- Prioritising the existing two EU Space flagships of European Global Navigation Satellite System (EGNSS) and Earth Observation reaping the benefits they can generate in the coming years and ensuring their state-of-the-art also in the future;

- Ensuring support for the third priority of the EU space policy: the protection of space infrastructure, and in particular the setting up of a Space Surveillance and Tracking system (SST) at European level;

- Ensuring support to EU industry to meet the objectives defined in the Commission communication on Space Industrial Policy, notably to maintain and enhance industry's competitiveness and its value-chain in the global market;

- Ensuring that Europe's investments made in space infrastructure are exploited to the benefit of citizens; as well as supporting European space science; and

- Enhancing Europe's standing as an attractive partner for international partnerships in space science and exploration.

NMPB priorities

- Open Innovation Test Beds (OITBs)
- Modelling and characterization
- Nanotechnologies
- Advanced materials
- Advanced manufacturing and processing (Factories of the Future – FOF; Sustainable Process Industry through Resources and Energy – SPIRE)
- Biotechnologies
- Energy Efficient Buildings (EEB)

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€2 842 million

RISK FINANCE
Euro Stoxx 600
176,93 pt
Dow Jones
7.365,67 pt
VENTURE CAPITAL

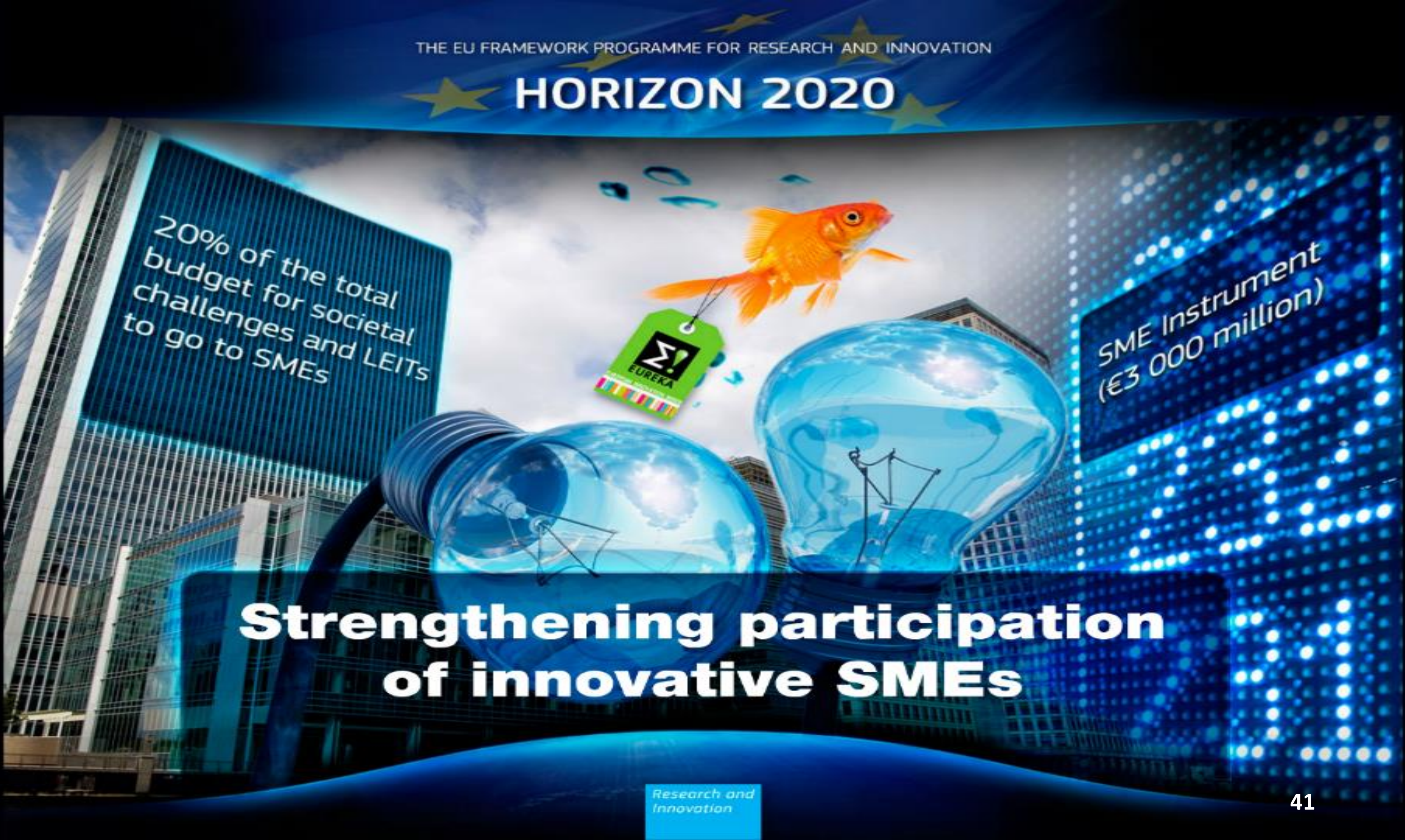
Cooperation with
European Investment Bank &
European Investment Fund

Debt & Equity Financing

Access to risk finance

INVESTMENT-READY – BANKABILITY - AFFORDABLE FINANCE - SMES-MIDCAPS - GROWTH-EXPANSI

Research and Innovation



THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

20% of the total budget for societal challenges and LEITs to go to SMEs

SME Instrument (€3 000 million)

Strengthening participation of innovative SMEs

EUREKA
Research and Innovation

Societal Challenges

H2020 – Pillar 3

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€7 472 million

Better health for all

EVENTING DISEASE - BETTER DIAGNOSTICS AND TREATMENTS - AGEING WELL - SUSTAINABLE HEAL

SC1 Objectives

- improve our understanding of the causes and mechanisms underlying health, healthy ageing and disease;
- improve our ability to monitor health and to prevent, detect, treat and manage disease;
- support older persons to remain active and healthy;
- and test and demonstrate new models and tools for health and care delivery.

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€3 851 million

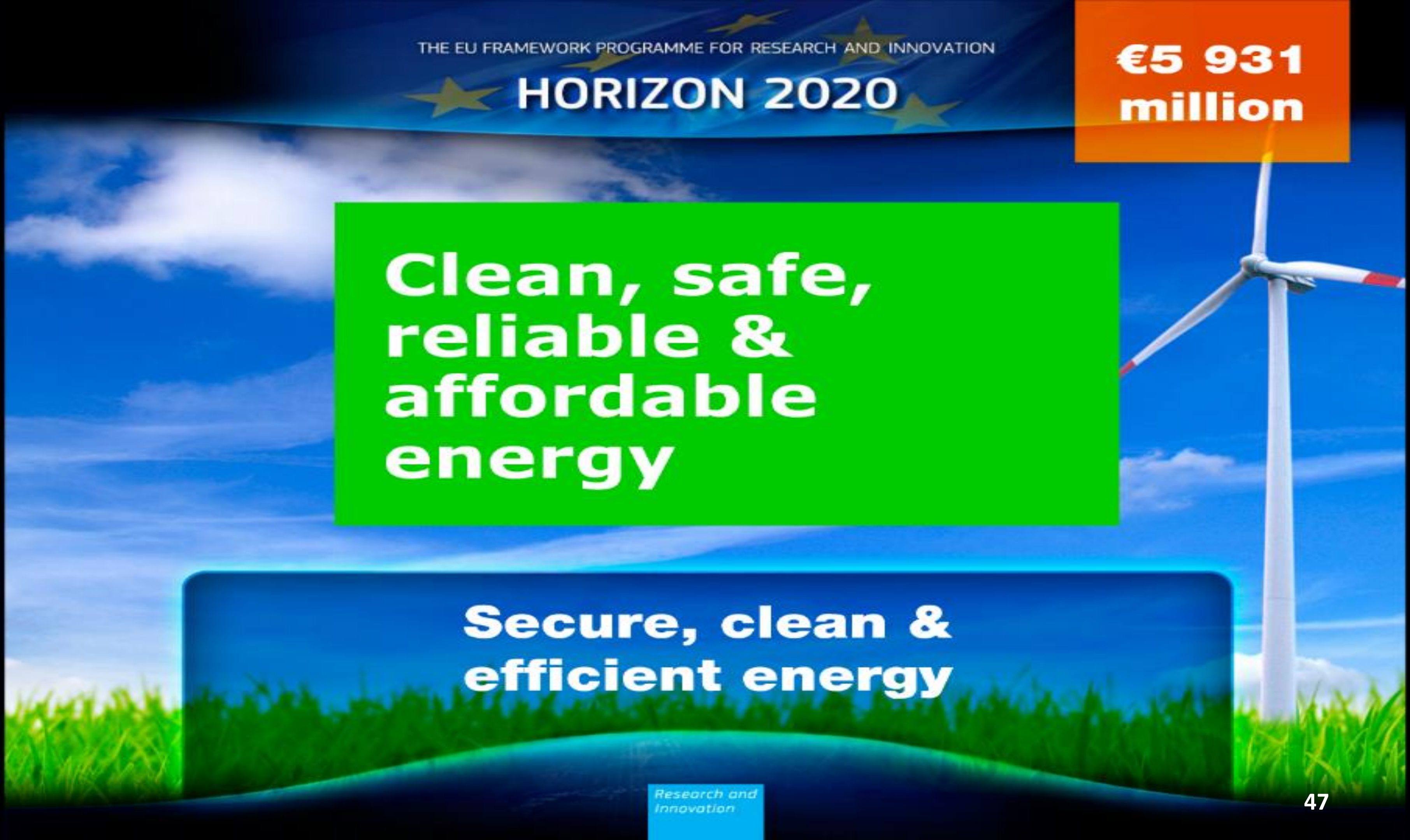
Making the best of our biological resources for food security and sustainable growth

- BLUE GROWTH - BIOECONOMY - GREEN GROWTH - FOOD SECURITY - RENEWABLE BIOLOGICAL RE

Research and Innovation

SC2 Objectives

- Agriculture and forestry
- Agri-food sector for a safe and healthy diet
- Aquatic living resources and marine research
- Bio-based industries


THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION
HORIZON 2020
Secure, clean & efficient energy
Research and Innovation

€5 931 million

Clean, safe, reliable & affordable energy

SC3 Objectives

- Reducing energy consumption and carbon footprint
- Low-cost, low-carbon electricity supply
- Alternative fuels and mobile energy sources
- A single, smart European electricity grid
- New knowledge and technologies
- Robust decision making and public engagement
- Market uptake of energy and ICT innovation.

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€6 339 million

Smart, Green & Integrated Transport

ENT TRANSPORT - NEXT GENERATION OF INFRASTRUCTURES - BETTER MOBILITY - MOBILITY FOR G

Research and Innovation

SC4 Objectives

- Sustainable transports
- Integration of transports
- Blue Growth
- Autonomous transports
- Green Vehicles

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€3 081 million

Climate action, environment, resource efficiency & raw materials

ET - SUSTAINABLE SUPPLY OF RAW MATERIALS - LOW CARBON ECONOMY - MANAGING WATER RES

Research and Innovation

SC5 Objectives

- Fighting and adapting to climate change
- Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems
- Ensuring the sustainable supply of non-energy and non-agricultural raw materials
- Enabling the transition towards a green economy and society through eco-innovation
- Developing comprehensive and sustained global environmental observation and information systems
- Cultural heritage

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€1 310 million

Inclusive, innovative & reflective societies

LE AND INCLUSIVE GROWTH - CONTRIBUTING TO THE EUROPEAN RESEARCH AREA - STUDYING NE

Research and Innovation

SC6 Objectives

- New ideas, strategies and governance structures for overcoming the crisis in Europe (resilient economic and monetary Union, EU growth agenda, EU social policies, the future of European integration, emerging technologies in the public sector).
- The young generation in an innovative, inclusive and sustainable Europe (job insecurity, youth mobility, adult education, social and political engagement of young people, modernisation of public administrations).
- Reflective societies: transmission of European cultural heritage, uses of the past, 3D modelling for accessing EU cultural assets.
- Europe as a global actor: focusing research and innovation cooperation with third countries, new geopolitical order in the Mediterranean, EU eastern partnership and other third countries.
- New forms of innovation in the public sector, open government, business model innovation, social innovation community, ICT for learning and inclusion

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€1 695 million

Cyber security

04.05.2015
02727,48
02:18
00:01:55:00

Natural hazards

Safeguarding a secure society

ACE BUILDING - COMPETITIVENESS - FIRST RESPONDERS - FIGHT AGAINST CRIME AND TERRORISM

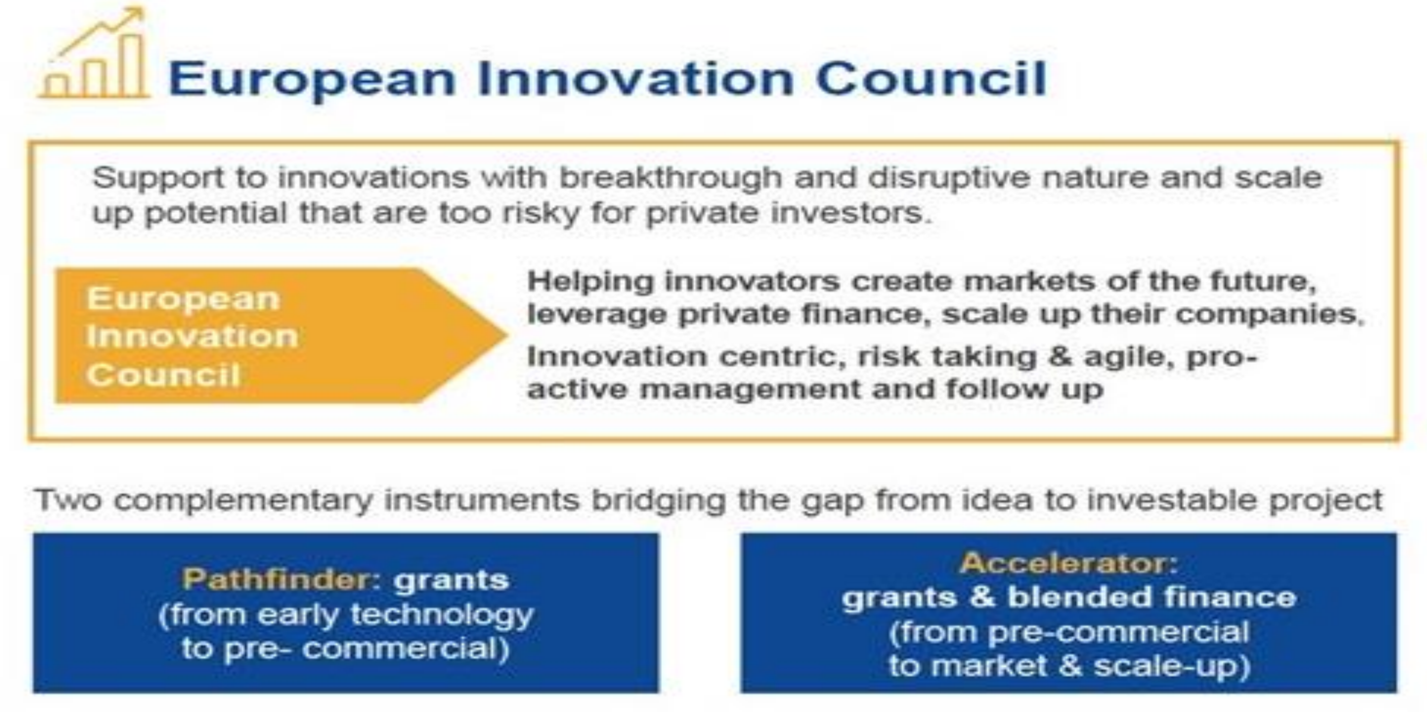
Research and Innovation

SC7 Objectives

- to enhance the resilience of our society against natural and man-made disasters, ranging from the development of new crisis management tools to communication interoperability, and to develop novel solutions for the protection of critical infrastructure;
- to fight crime and terrorism ranging from new forensic tools to protection against explosives;
- to improve border security, ranging from improved maritime border protection to supply chain security and to support the Union's external security policies including through conflict prevention and peace building;
- and to provide enhanced cyber-security, ranging from secure information sharing to new assurance models.

EIC Pilot

European Innovation Council



European Innovation Council

Support to innovations with breakthrough and disruptive nature and scale up potential that are too risky for private investors.

European Innovation Council

Helping innovators create markets of the future, leverage private finance, scale up their companies.

Innovation centric, risk taking & agile, pro-active management and follow up

Two complementary instruments bridging the gap from idea to investable project

Pathfinder: grants
(from early technology to pre- commercial)

Accelerator:
grants & blended finance
(from pre-commercial to market & scale-up)

'The European Council invites the Commission to launch a new pilot initiative on breakthrough innovation within the remaining period of Horizon 2020. A European Innovation Council will be set up under the next Multiannual Financial Framework to identify and scale up breakthrough and disruptive innovation.'

European Council conclusions, 28 June 2018

- The EIC pilot supports top-class innovators, entrepreneurs, small companies and scientists with bright ideas and the ambition to scale up internationally. It brings together the parts of Horizon 2020 that provide funding, advice and networking opportunities for those at cutting edge of innovation.

- With this aim the European Commission on the 18 March 2019 published the updated version of the Work Programme called [Enhanced European Innovation Council (EIC) pilot]() for the period 2019-2020 of Horizon 2020 programme, with the allocated budget of around 2 billion euros. The updated Work Programme brings together a number of existing funding instruments and some new features, which will foresee next Horizon Europe 2021-2027 Programme.

THE EIC: EU LEADERSHIP IN THE NEXT WAVE OF INNOVATION

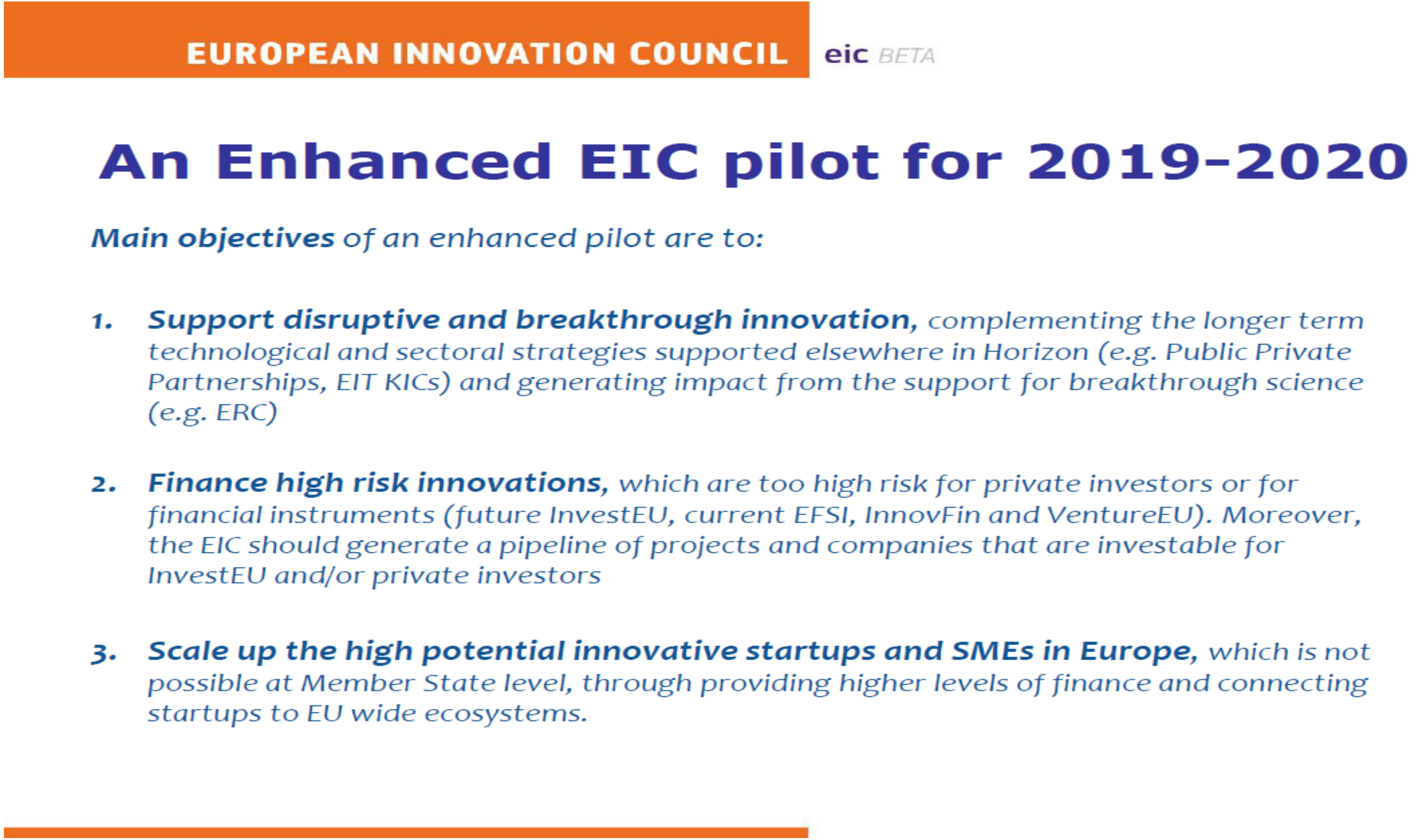
more innovations that create the new markets of the future

scaled-up companies and higher SME growth

attract more private-sector investors to innovation

more entrepreneurship and risk-taking

more accessible and user friendly support for innovation



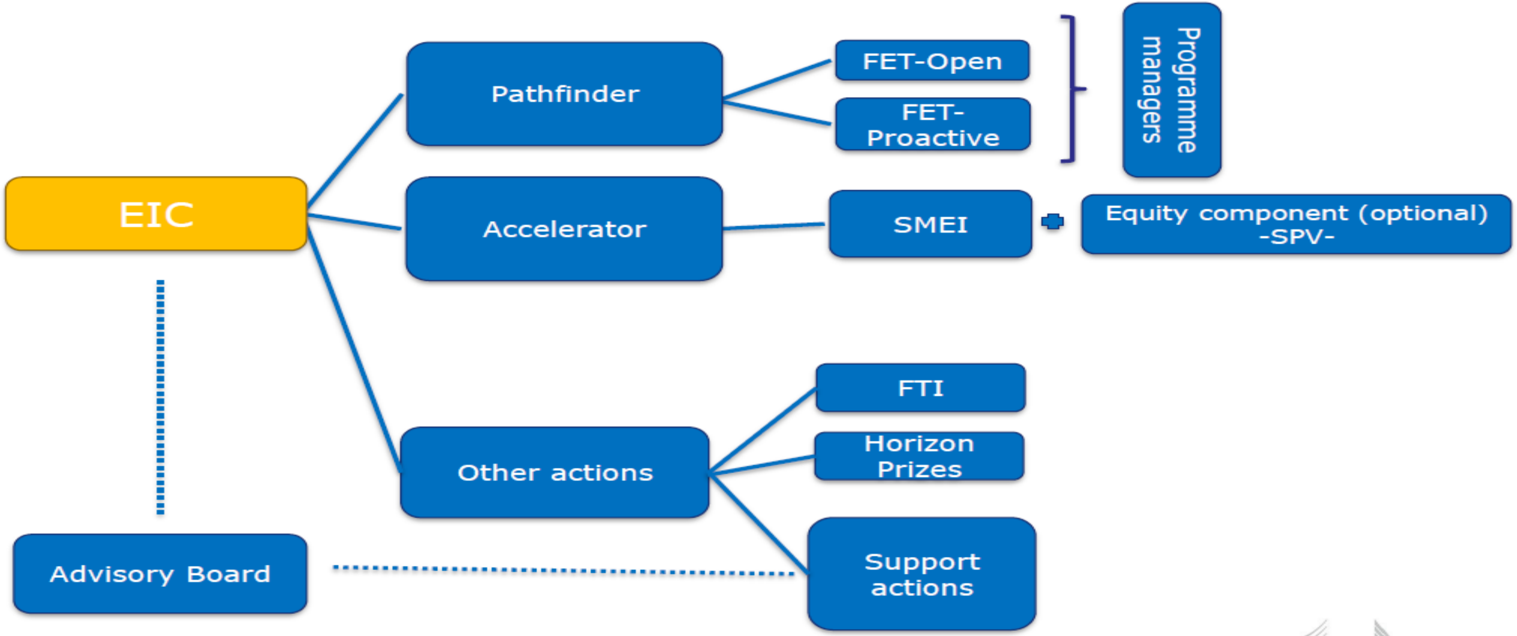
EUROPEAN INNOVATION COUNCIL eic *BETA*

An Enhanced EIC pilot for 2019-2020

***Main objectives** of an enhanced pilot are to:*

1. ***Support disruptive and breakthrough innovation,** complementing the longer term technological and sectoral strategies supported elsewhere in Horizon (e.g. Public Private Partnerships, EIT KICs) and generating impact from the support for breakthrough science (e.g. ERC)*
2. ***Finance high risk innovations,** which are too high risk for private investors or for financial instruments (future InvestEU, current EFSI, InnovFin and VentureEU). Moreover, the EIC should generate a pipeline of projects and companies that are investable for InvestEU and/or private investors*
3. ***Scale up the high potential innovative startups and SMEs in Europe,** which is not possible at Member State level, through providing higher levels of finance and connecting startups to EU wide ecosystems.*

Enhanced EIC pilot for 2019-2020


EIC

Pathfinder

FET-Open

FET-Proactive

Programme managers

Accelerator

SMEI

Equity component (optional) -SPV-

Other actions

FTI

Horizon Prizes

Support actions

Advisory Board

! Not legally binding

PATHFINDER:
Researchers, technologists

- For radically new technologies emerging from collaborative research
- Grant funding of up to €4 million (100% of costs)
- From proof of concept to demonstration of commercial viability
- Access to EIC coaching and mentoring services
- Majority of funding is open (no predefined themes). Strategic breakthrough technologies are also supported (challenge-based)

ACCELERATOR:
Start-ups, SMEs and entrepreneurs

- For development and scaling up of high risk innovations by startups and SMEs
- Grant funding of up to €2.5 million (70% of costs)
- Option of equity investment of up to €15 million
- Access to EIC coaching and mentoring services, pitches with corporates, VCs, etc
- All funding is open (no predefined thematic areas)

1. Basic Principles Observed
2. Technology Concept formulated
3. Experimental Proof of Concept
4. Technology validated in lab
5. Technology validated in relevant environment
6. Technology demonstrated in relevant environment
7. System Prototype in operational environment
8. System complete & qualified
9. System operational

2nd step

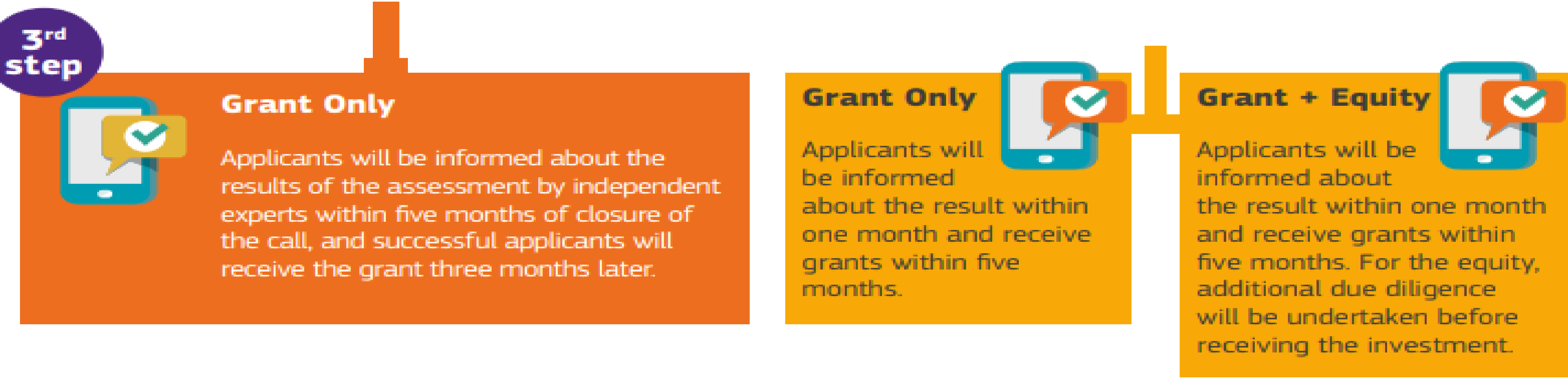
Pathfinder applications must be **interdisciplinary**, offer a **radical vision** and a **breakthrough technology target**.

They will also be assessed on their potential to **create new markets and social and economic impacts**.

Applications to the accelerator will be assessed first by a set of independent experts based on their potential for **future social or economic impact or market creation, the high risk/ high potential nature of the innovation, and the business plan.**

The applicants with the highest overall assessments will be invited to **pitch to a panel** of experienced investors and entrepreneurs who will take a go/no-go decision.

Grant or equity?



3rd step

Grant Only

Applicants will be informed about the results of the assessment by independent experts within five months of closure of the call, and successful applicants will receive the grant three months later.

Grant Only

Applicants will be informed about the result within one month and receive grants within five months.

Grant + Equity

Applicants will be informed about the result within one month and receive grants within five months. For the equity, additional due diligence will be undertaken before receiving the investment.

FET programme

- **FET Open** funds ***projects on new ideas for radically new future technologies***, at an early stage when there are few researchers working on a project topic. This can involve a wide range of new technological possibilities, inspired by cutting-edge science, unconventional collaborations or new research and innovation practices.
- **FET Proactive** nurtures emerging themes, seeking ***to establish a critical mass of European researchers in a number of promising exploratory research topics***. This supports areas that are not yet ready for inclusion in industry research roadmaps, with the aim of building up and structuring new interdisciplinary research communities.
- **FET Flagships** are 1-billion, 10-years initiatives where hundreds of excellent European researchers unite forces to ***focus on solving an ambitious scientific and technological challenge***, like understanding the Human Brain or developing the new materials of the future, such as Graphene.

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€816 million

EXCELLENCE

Widening participation

Research and Innovation

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

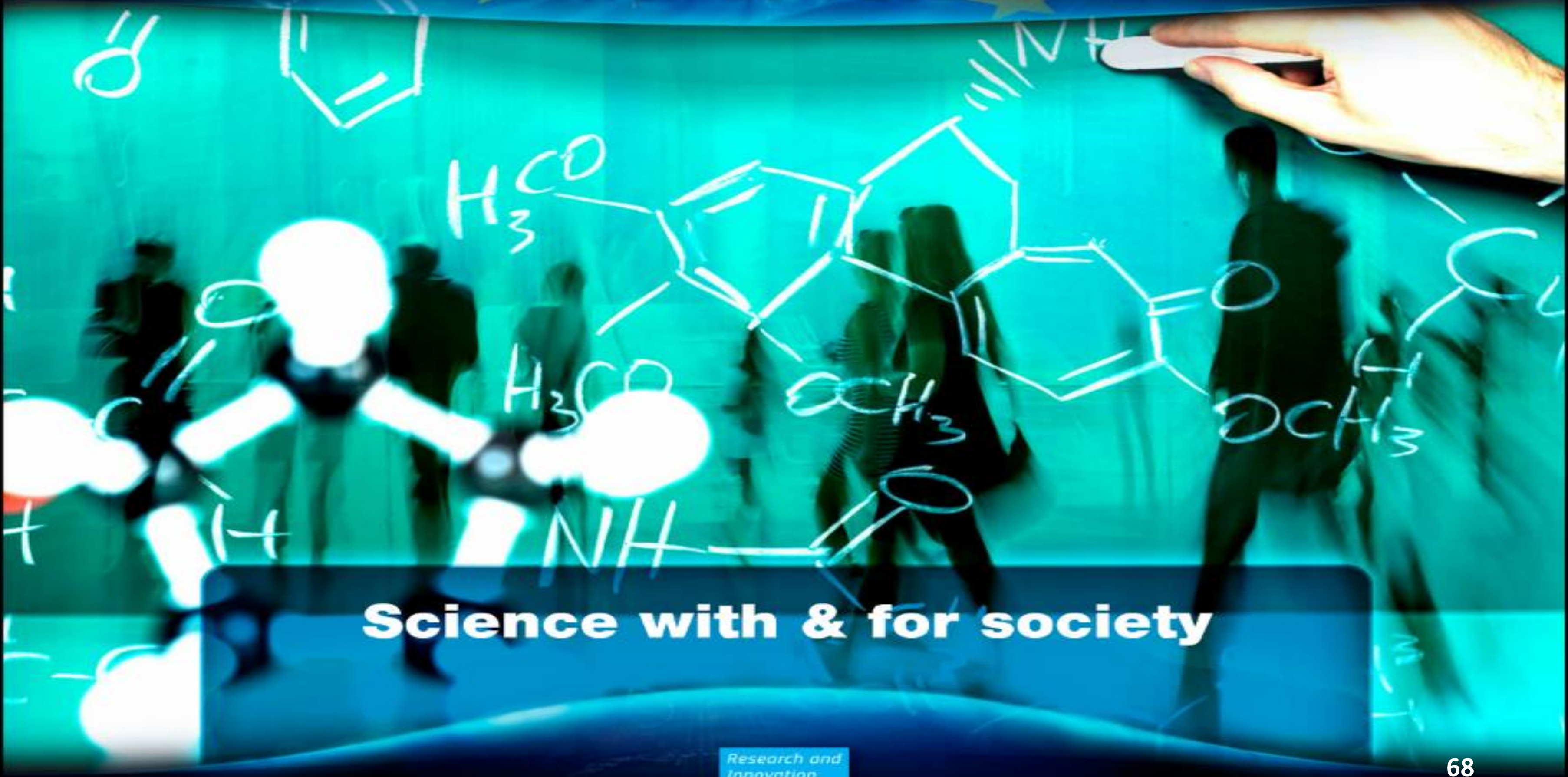
eit European Institute of Innovation & Technology

Integrating higher education with Research & Innovation

Research and Innovation

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020



Science with & for society

Research and Innovation

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

€939 million

Strong focus on nuclear safety

Euratom Programme: nuclear fission & fusion research

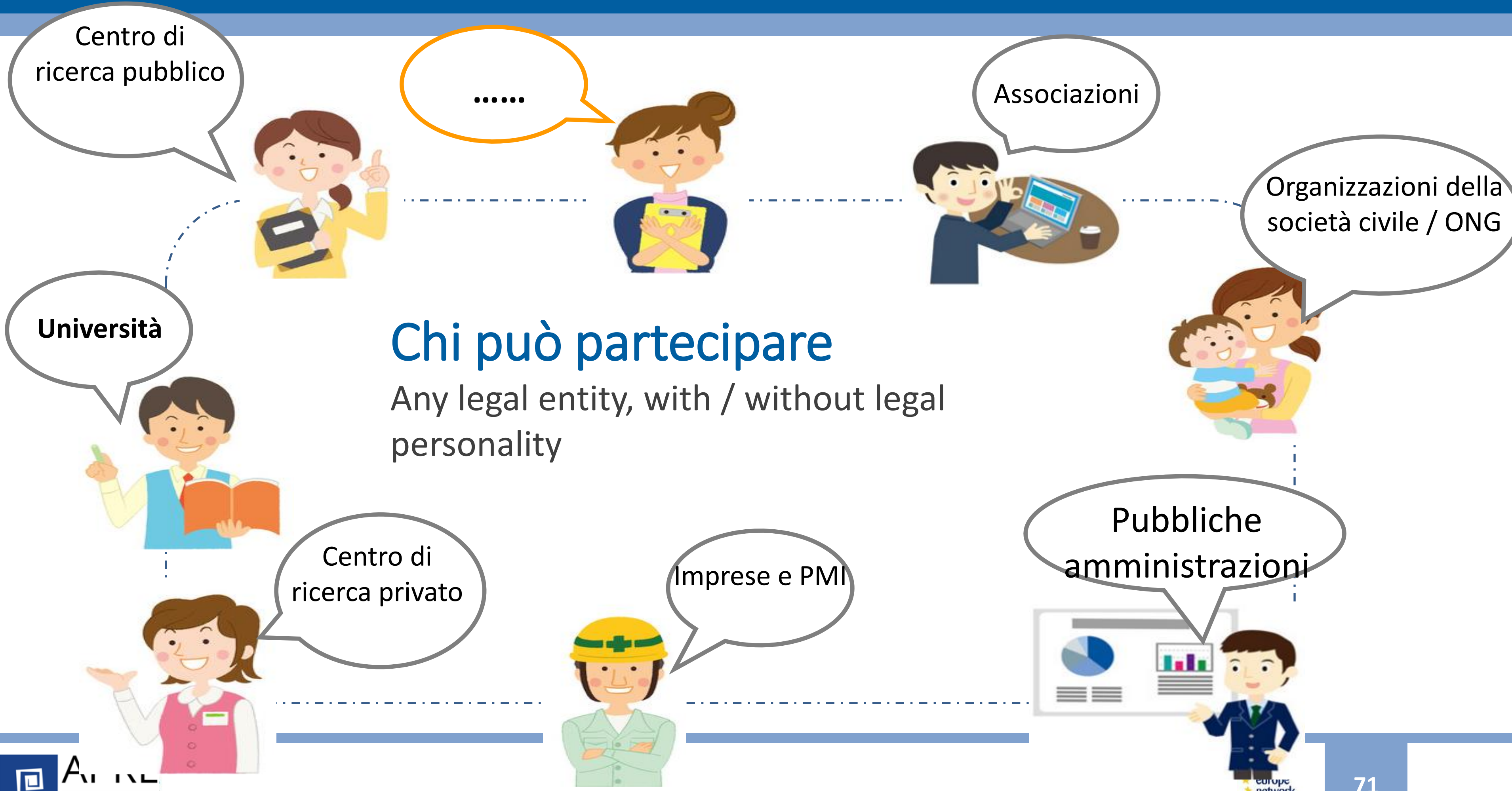
Research and Innovation

Horizon 2020

Regole di partecipazione e tipologia di azione

Chi può partecipare

Any legal entity, with / without legal personality


Centro di ricerca pubblico
……
Associazioni
Organizzazioni della società civile / ONG
Università
Centro di ricerca privato
Imprese e PMI
Pubbliche amministrazioni

Quali Stati?

Tutti possono partecipare

Ma Non tutti possono essere finanziati

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-3cpart_en.pdf

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/international-cooperation_en.htm#countries

Quali stati vengono finanziati *automaticamente*?

Paesi Membri UE		**sì**
Paesi Associati a H2020	Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Moldova, Montenegro, North Macedonia, Norway, Serbia, Switzerland, Tunisia, Turkey, Ukraine http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf	**sì**
Paesi Terzi basso/medio reddito	Circa 130 paesi cooperazione internazionale	**sì**
Paesi industrializzati	(es: USA+ Japan + Australia + BRIC + Messico) Available local support for H2020 participants from non-EU countries Brazil Canada China India Japan Mexico Russia Republic of Korea USA	**no**

https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2016-2017/annexes/h2020-wp1617-annex-a-countries-rules_en.pdf

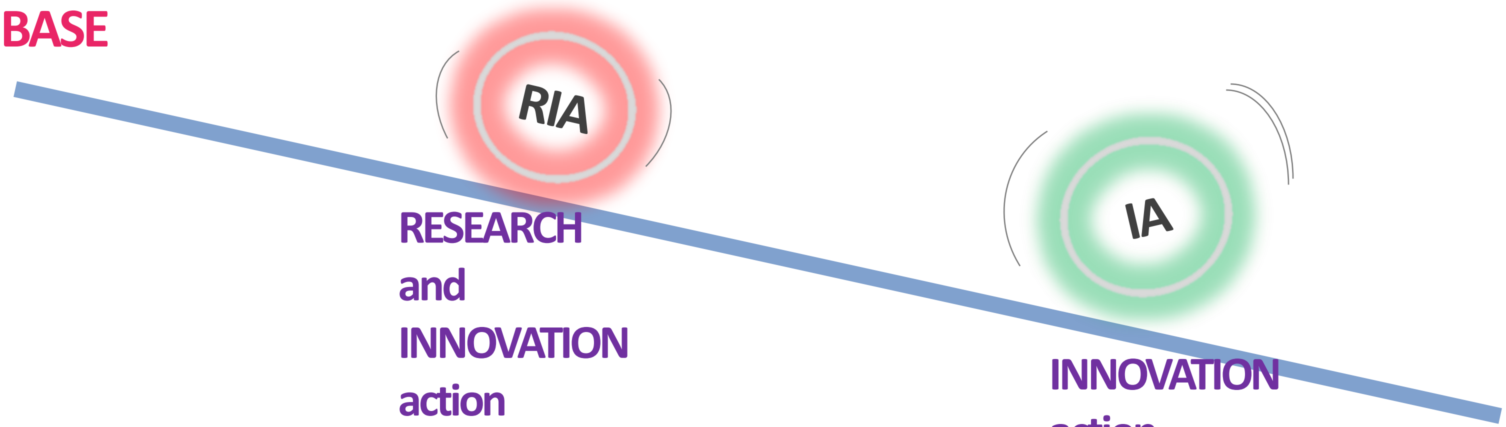
Progetti collaborativi – *Standard Eligibility Conditions*

At least three legal entities.

Each of the three must be **established in a different EU Member State or Horizon 2020 associated country**.

All three legal entities must be **independent of each other**.

http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-c-elig_en.pdf



RICERCA DI BASE

RESEARCH and INNOVATION action

INNOVATION action

SOCIETA' / MERCATO

RIA - *Research & Innovation action*

- Sono progetti la cui attività principale è Ricerca e Sviluppo il cui obiettivo è ottenere nuova conoscienza scientifica e tecnologica e/o verificare la fattibilità di una nuova/migliorata tecnologia, prodotto, processo, servizio o solouzione.
- Può includere ricerca di base e applicata, sviluppo e e integrazione tecnologica, test e realizzazione di prototipi su piccola scala in laboratorio o ambienti simulati.
- Può contenere attività di dimostrazione o attività pilota, ma in misura limitata, allo scopo di dimostrare la fattibilità tecnica in un ambiente quasi operativo.
  - 100% funding rate costi diretti
  - 25% indirect costs
- Durata: 2-3 anni
- Grandezza: dai 3 per l'elegibilità – 7 – 10 - ……

IA - *Innovation Action*

- Azioni di Innovazione pura
- un'azione costituita prevalentemente da attività volte direttamente a produrre piani, progetti o disegni per nuovi, modificati o migliorati prodotti, processi o servizi. A questo scopo possono includere prototipazione, sperimentazione, dimostrazione, pilot, validazione del prodotto su larga scala e replica di mercato "
  - 70% funding rate direct costs (100% for non-profit legal entities)
  - 25% indirect costs
- Durata: 3-5 anni
- Grandezza: dai 3 per l'elegibilità – 7 – 12 - ……

CSA - Coordination and Support Action

- Azioni costituite principalmente da misure di supporto quali:
  - la standardizzazione, la divulgazione, sensibilizzazione e comunicazione, networking, servizi di coordinamento o di supporto,
  - i policy dialogue ed esercizi di apprendimento reciproco e studi, compresi studi di progettazione per nuove infrastrutture e che possano comprendere anche le attività complementari di pianificazione strategica, collegamento in rete e il coordinamento tra i programmi di diversi paesi.
  - Esempi: social platform, dissemination platform, international cooperation activities
    - 100% funding rate direct costs
    - 25% indirect costs

Single stage *Vs.* Two-stage

Single Stage

- Unica deadline
- Presentazione di una proposta completa (70 pag.)
- Template compilato in tutte le sue sezioni
- Valutazione → Grant agreement

Two-Stage

2 deadline per 2 valutazioni

1° Stage

- Presentazione di una proposta breve (10 pag.)
- Template compilato solo parzialmente
- Valutazione → Invito a presentare proposta completa (***Threshold dinamico*** - nr. Proposte che verranno finanziate X 3)

2° Stage

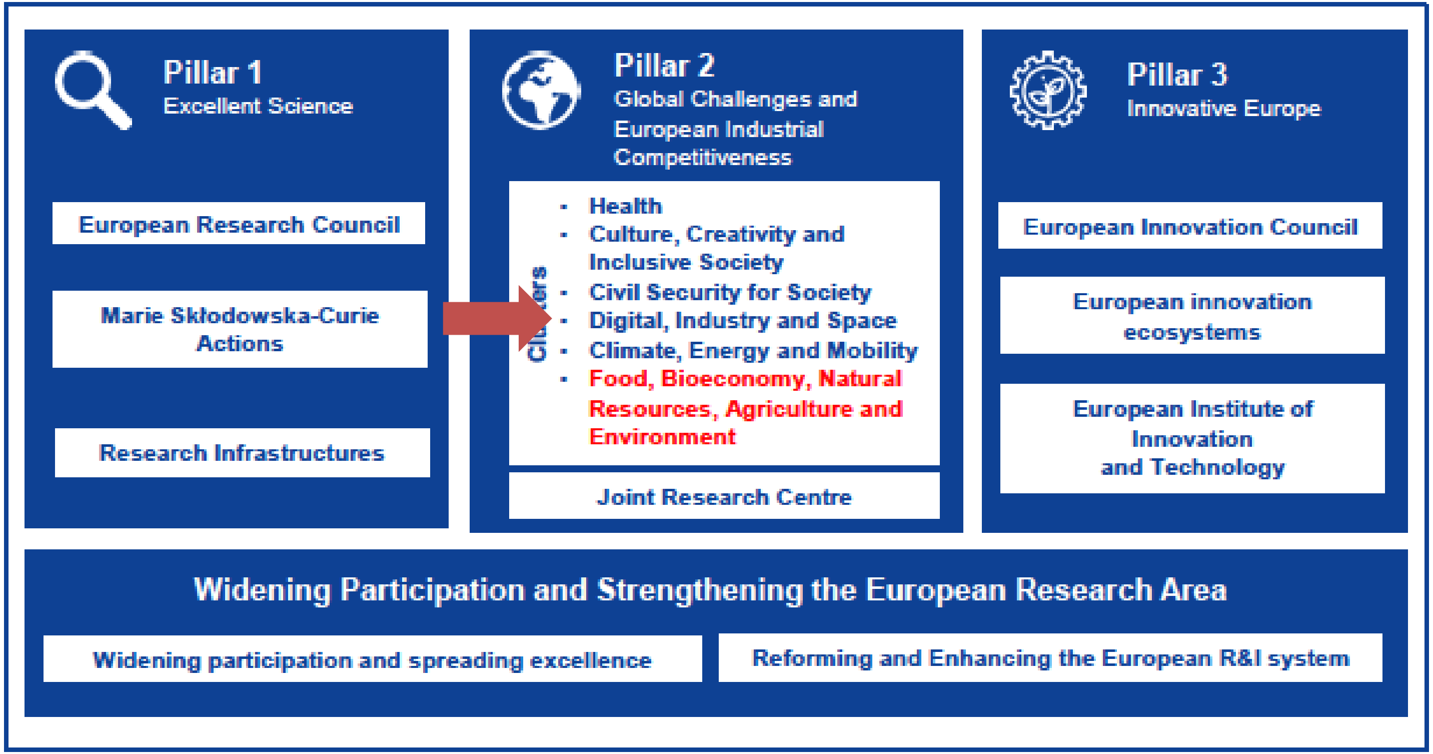
- Presentazione di una proposta completa
- Valutazione → Grant Agreement

Verso Horizon Europe

https://www.versohorizoneurope.it/

Horizon
Europe

Struttura preliminare



Pillar 1
Excellent Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and European Industrial Competitiveness

Clusters
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre

Pillar 3
Innovative Europe

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Widening Participation and Strengthening the European Research Area

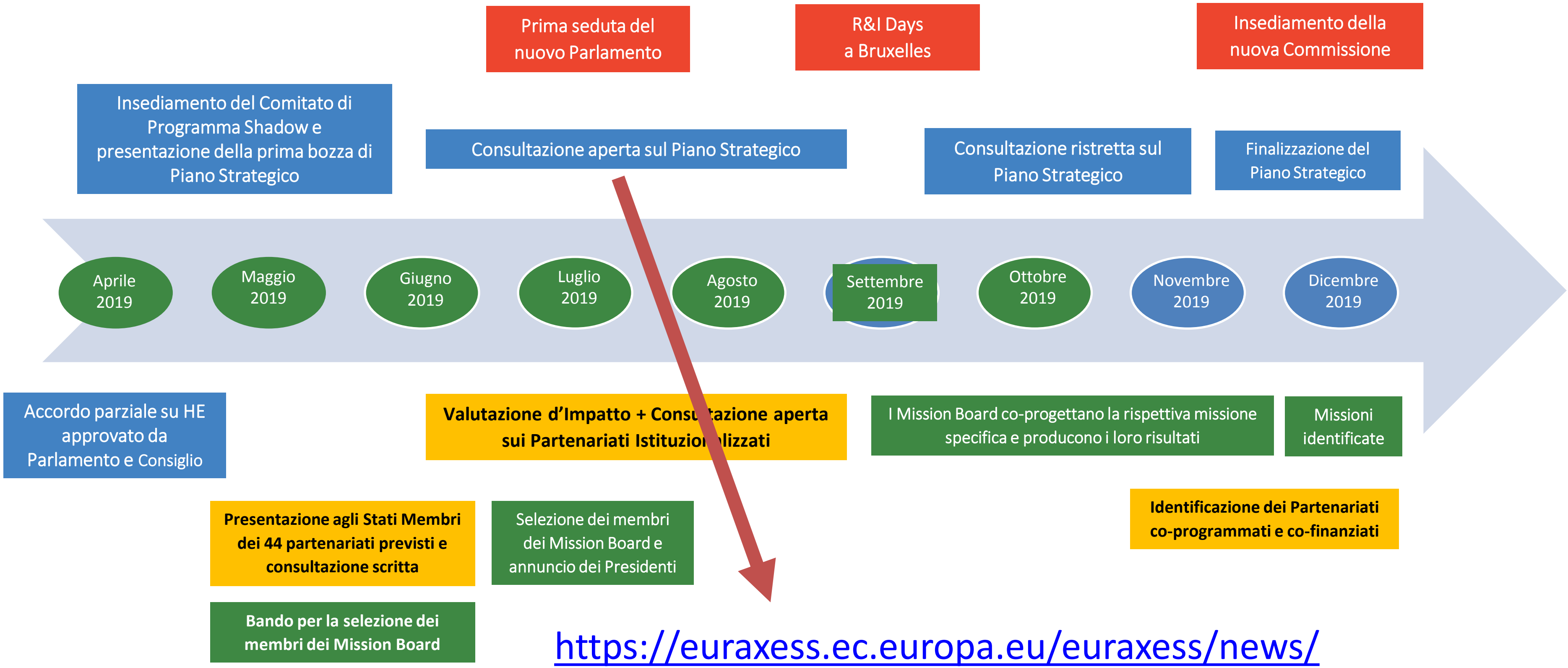
- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system

Clusters in 'Global Challenges and Industrial Competitiveness'

Clusters	Areas of intervention	
Health	▪ Health throughout the life course ▪ Non-communicable and rare diseases ▪ Tools, technologies and digital solutions for health and care, including personalised medicine	▪ Environmental and social health determinants ▪ Infectious diseases, including poverty-related and neglected disease ▪ Health care systems
Culture, creativity and inclusive society	▪ Democracy and Governance ▪ Social and economic transformations	▪ Culture, cultural heritage and creativity
Civil security for society	▪ Disaster-resilient societies ▪ Protection and Security	▪ Cybersecurity
Digital, Industry and space	▪ Manufacturing technologies ▪ Advanced materials ▪ Next generation internet ▪ Circular industries ▪ Space, including Earth Observation ▪ Emerging enabling technologies	▪ Key digital technologies, including quantum technologies ▪ Artificial Intelligence and robotics ▪ Advanced computing and Big Data ▪ Low-carbon and clean industry ▪ Emerging enabling technologies
Climate, Energy and Mobility	▪ Climate science and solutions ▪ Energy systems and grids ▪ Communities and cities ▪ Industrial competitiveness in transport ▪ Smart mobility	▪ Energy supply ▪ Buildings and industrial facilities in energy transition ▪ Clean, safe and accessible transport and mobility ▪ Energy storage
Food, bioeconomy, natural resources, agriculture and environment	▪ Environmental observation ▪ Agriculture, forestry and rural areas ▪ Circular systems ▪ Food systems	▪ Biodiversity and natural resources ▪ Seas, oceans and inland waters ▪ Bio-based innovation systems in the EU Bioeconomy

# Lessons Learned from Horizon 2020 Interim Evaluation	# Key Novelties in Horizon Europe
Support breakthrough innovation	European Innovation Council
Create more impact through mission-orientation and citizens' involvement	R&I Missions
Strengthen international cooperation	Extended association possibilities
Reinforce openness	Open science policy
Rationalise the funding landscape	New approach to Partnerships
Encourage participation	Spreading Excellence

Cosa succede nel 2019



Prima seduta del nuovo Parlamento

R&I Days a Bruxelles

Insediamento della nuova Commissione

Insediamento del Comitato di Programma Shadow e presentazione della prima bozza di Piano Strategico

Consultazione aperta sul Piano Strategico

Consultazione ristretta sul Piano Strategico

Finalizzazione del Piano Strategico

Aprile 2019

Maggio 2019

Giugno 2019

Luglio 2019

Agosto 2019

Settembre 2019

Ottobre 2019

Novembre 2019

Dicembre 2019

Accordo parziale su HE approvato da Parlamento e Consiglio

Valutazione d'Impatto + Consultazione aperta sui Partenariati Istituzionalizzati

I Mission Board co-progettano la rispettiva missione specifica e producono i loro risultati

Missioni identificate

Presentazione agli Stati Membri dei 44 partenariati previsti e consultazione scritta

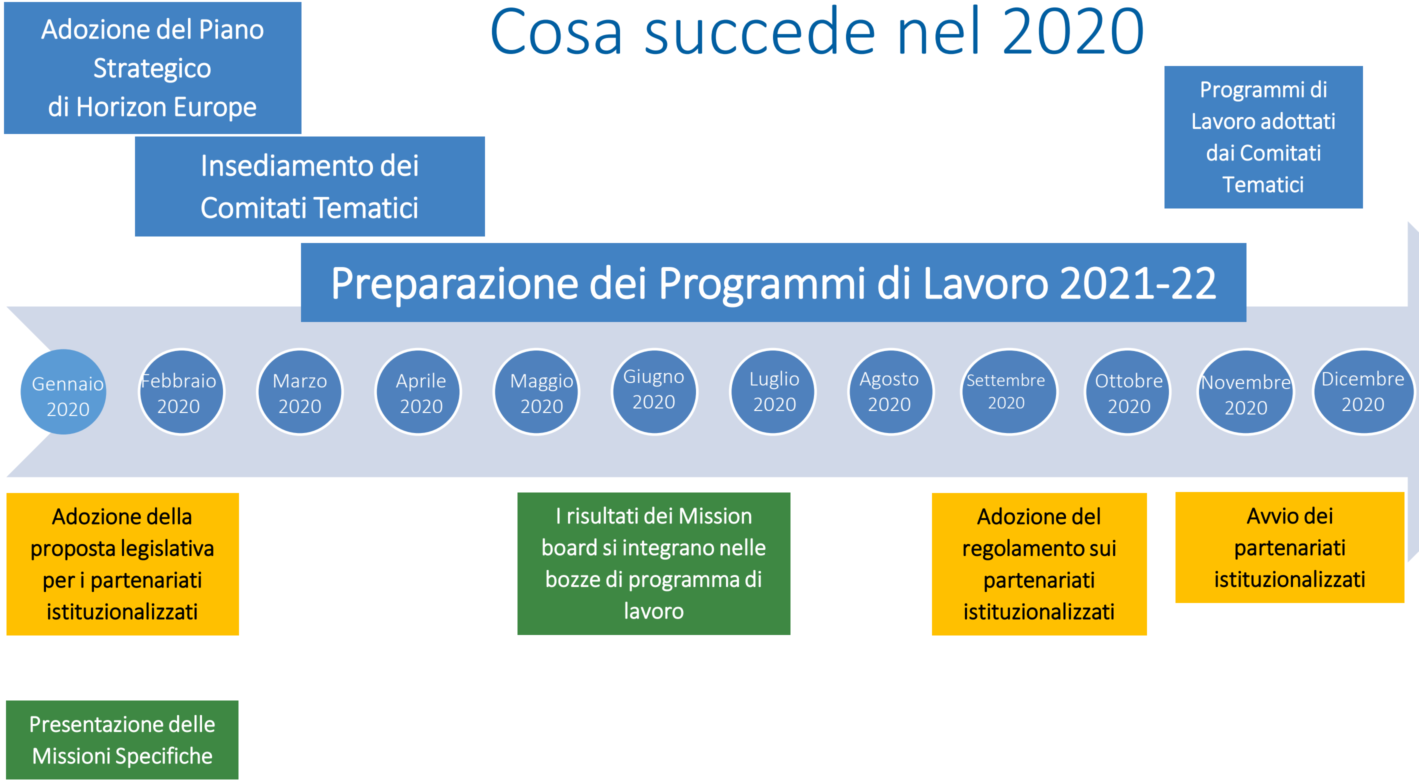
Selezione dei membri dei Mission Board e annuncio dei Presidenti

Identificazione dei Partenariati co-programmati e co-finanziati

Bando per la selezione dei membri dei Mission Board

https://euraxess.ec.europa.eu/euraxess/news/horizon-europe-online-consultation-open

Cosa succede nel 2020



Adozione del Piano Strategico di Horizon Europe

Insediamento dei Comitati Tematici

Programmi di Lavoro adottati dai Comitati Tematici

Preparazione dei Programmi di Lavoro 2021-22

Gennaio 2020
Febbraio 2020
Marzo 2020
Aprile 2020
Maggio 2020
Giugno 2020
Luglio 2020
Agosto 2020
Settembre 2020
Ottobre 2020
Novembre 2020
Dicembre 2020

Adozione della proposta legislativa per i partenariati istituzionalizzati

I risultati dei Mission board si integrano nelle bozze di programma di lavoro

Adozione del regolamento sui partenariati istituzionalizzati

Avvio dei partenariati istituzionalizzati

Presentazione delle Missioni Specifiche

Lancio di Horizon Europe