



Consiglio Nazionale delle Ricerche

Gli strumenti UE di supporto a R&I 2021 – 2027 Il contesto politico e gli obiettivi UE

Bruxelles 13 novembre 2019

Michele Guerrini

Policy Officer

Michele.guerrini@cnr.it

National Research Council of Italy

Bruxelles Office



Consiglio Nazionale delle Ricerche

Outline

- Programma Quadro UE - Panoramica e Contesto politico
- Gli attori
- Il negoziato di un programma quadro
- Horizon Europe

The Bruxelles “machine”

Diversi Stati Membri hanno interessi diversi

Stakeholders di Stati Membri hanno interessi diversi

L'UE ha una sua agenda





Consiglio Nazionale delle Ricerche

Le ultime agende europee



Programma focalizzato “jobs and growth” con particolare focus su “unacceptably high levels youth unemployment” >> molto finalizzato alla ricaduta delle azioni politiche sulla civil society



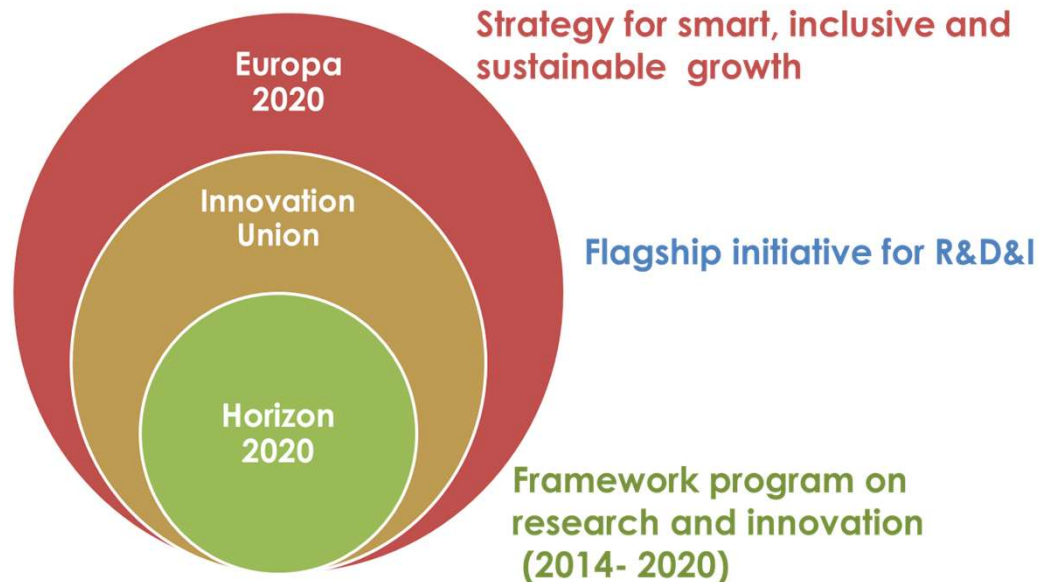
Programma focalizzato ugualmente su “jobs and growth” ma con particolare accento agli investimenti, agli aspetti economico-finanziari, al pareggio di bilancio, crescita del Sistema produttivo, al ruolo dell'UE nel mondo



Programma focalizzato su agenda per il clima affinché l'Europa diventi il primo continente a impatto climatico zero entro il 2050. Rafforzamento della democrazia per un'economia sociale di mercato equa. Digitalizzazione.



Horizon 2020



È parte integrante delle politiche europee Europe 2020, Innovation Union & European Research Area:

- Per rispondere alla crisi economica e investire in lavoro e crescita
- Rafforzare il posizionamento EU nel settore di Ricerca ed innovazione

Horizon 2020 è ad oggi il più grande programma di finanziamento globale per ricerca e innovazione con un budget nei 7 anni di €79,4 miliardi di euro e finanzia tutti le tipologie di organizzazione, coprendo tutta il ciclo di ricerca e innovazione dalla ricerca di base passando per i dimostratori fino all'ingresso di un prodotto servizio sul mercato;

MA E' IN PRIMIS UNO STRUMENTO POLITICO



Consiglio Nazionale delle Ricerche

Strategy for smart, inclusive and sustainable growth

Europa 2020

Innovation

Excellent Science

Open Research
Frontier research
Individual teams

Future and Emerging Technologies
Collaborative research
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

Innovation in SMEs
Fostering all forms of innovation in all types of SMEs

Smart, green and integrated transport
Climate action, resource efficiency and raw materials
Inclusive, innovative and reflective societies
Security society

European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

Euratom

(A-Z) Sitemap About this site Contact Legal Notice Search English

RESEARCH & INNOVATION

Participant Portal

European Commission > Research & Innovation > Participant Portal > Opportunities

HOME FUNDING OPPORTUNITIES HOW TO PARTICIPATE EXPERTS SUPPORT Search LOGIN REGISTER

EU Programmes 2014-2020

Search Topics

Updates

Calls

H2020

3rd Health Programme

Asylum, Migration and Integration Fund

Consumer Programme

COSME

TOPIC : FET-Open research and innovation actions

Topic identifier: FETOPEN-01-2016-2017
Publication date: 14 October 2015

Types of action: RIA Research and Innovation action
DeadlineModel: multiple cut-off
Opening date: 08 December 2015

Cut-off dates: 11 May 2016 17:00:00
17 January 2017 17:00:00
27 September 2017 17:00:00

Time Zone : (Brussels time)

Horizon 2020
Pillar: Excellent Science
Work Programme Year: H2020-2016-2017
Work Programme Part: Future and Emerging Technologies
Call : H2020-FETOPEN-2016-2017

H2020 website
Call budget overview

Call - FET-Open – Novel ideas for radically new technologies 7

FETOPEN-01-2016-2017: FET-Open research and innovation actions..... 7
FETOPEN-02-2016: FET-Open Coordination and Support Actions 9
FETOPEN-03-2017: FET-Open Coordination and Support Actions 10
FETOPEN-04-2016-2017: FET Innovation Launchpad 11

Conditions for the Call - FET-Open – Novel ideas for radically new technologies 14

Call - FET Proactive – Boosting emerging technologies 19

FETPROACT-01-2016: FET Proactive: emerging themes and communities 19
FETPROACT-02-2017: FET ERANET Cofund 22
FETPROACT-03-2016: FET ERANET Cofund in Quantum Technologies 23

Conditions for the Call - FET Proactive – Boosting emerging technologies 25

Call - FET Proactive – High Performance Computing 28

FETHPC-01-2016: Co-design of HPC systems and applications 28
FETHPC-02-2017: Transition to Exascale Computing 29
FETHPC-03-2017: Exascale HPC ecosystem development 32

Conditions for the Call - FET Proactive – High Performance Computing 34

Call - FET FLAGSHIPS – Tackling grand interdisciplinary science and technology challenges 35

FETFLAG-01-2016: Partnering environment for FET flagships 35
FETFLAG-02-2017: Coordination and Support Action for Quantum Technologies 36



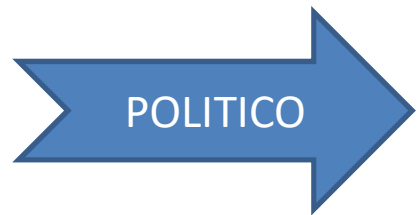
Consiglio Nazionale delle Ricerche

**Come ci siamo
arrivati??**

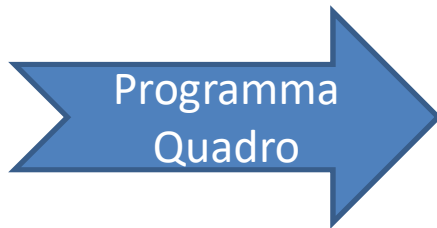


Consiglio Nazionale delle Ricerche

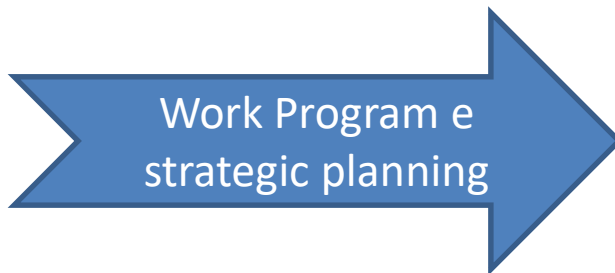
Tre livelli di azione



Influenza sulle strategie



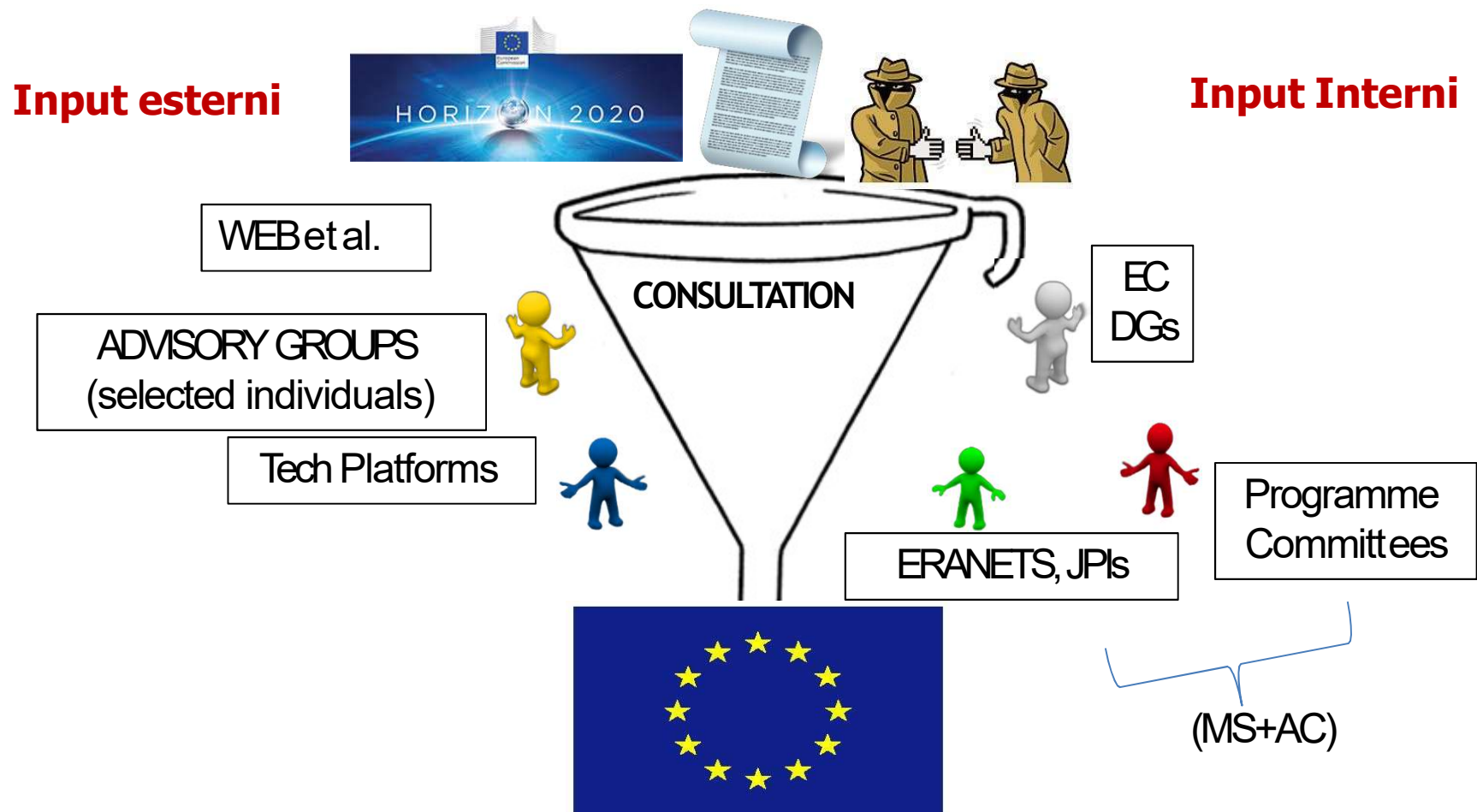
Influenza sulla costruzione



Influenza sull'attuazione

Horizon 2020: il processo verso l'adozione di un PQ

Quali priorità, Chi le sostiene, Come?:
individuals, institutes, funders, boards, Member States...



Attori "Istituzionali" : EC+EP+Council



Commissione Europea

E' l'esecutivo UE

Sottopone la **proposta del PQ** ai colegislatori.

Ha poi pieni poteri per l'attuazione del programma con in supporto degli SM attraverso i Comitati di Programma



Consiglio EU

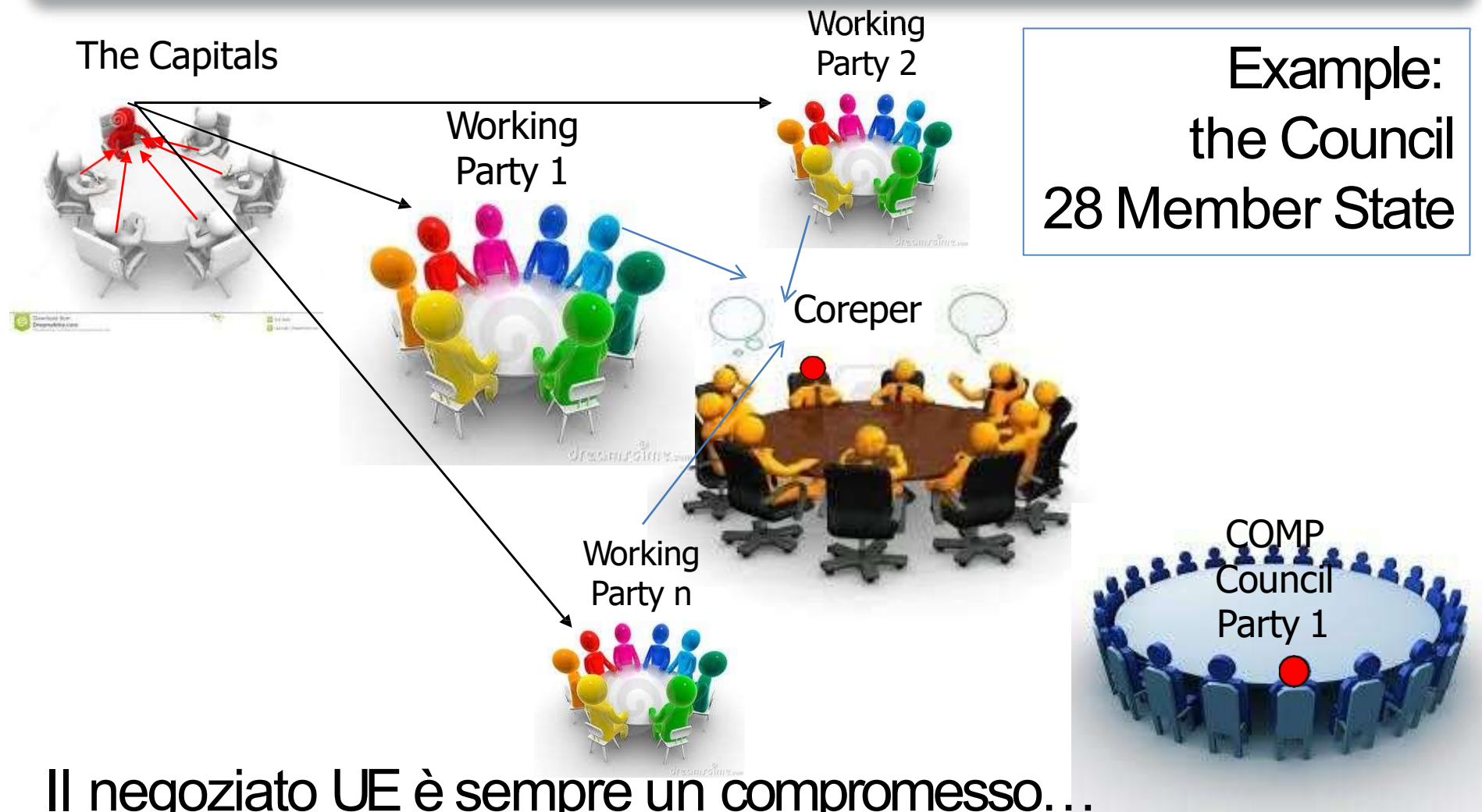
Rappresentano rispettivamente i Governi e cittadini

Negozano la **proposta** del PQ ricevuta dalla Commissione e raggiunto un compromesso la adottano.



Parlamento EU

Il processo in consiglio



Il negoziato UE è sempre un compromesso...
La strategia è lobby e negoziato



Consiglio Nazionale delle Ricerche

THE NEW MULTIANNUAL FINANCIAL FRAMEWORK 2021 - 2027 A BUDGET FOR A UNION THAT PROTECTS, EMPOWERS AND DEFENDS

In billion euro, current prices

I. SINGLE MARKET, INNOVATION AND DIGITAL €187.4

- 1 Research and Innovation
- 2 European Strategic Investments
- 3 Single Market
- 4 Space

II. COHESION AND VALUES €442.4

- 5 Regional Development and Cohesion
- 6 Economic and Monetary Union
- 7 Investing in People,
Social Cohesion and Values

III. NATURAL RESOURCES AND ENVIRONMENT €378.9

- 8 Agriculture and Maritime Policy
- 9 Environment and Climate Action

IV. MIGRATION AND BORDER MANAGEMENT €34.9

- 10 Migration
- 11 Border Management

V. SECURITY AND DEFENCE €27.5

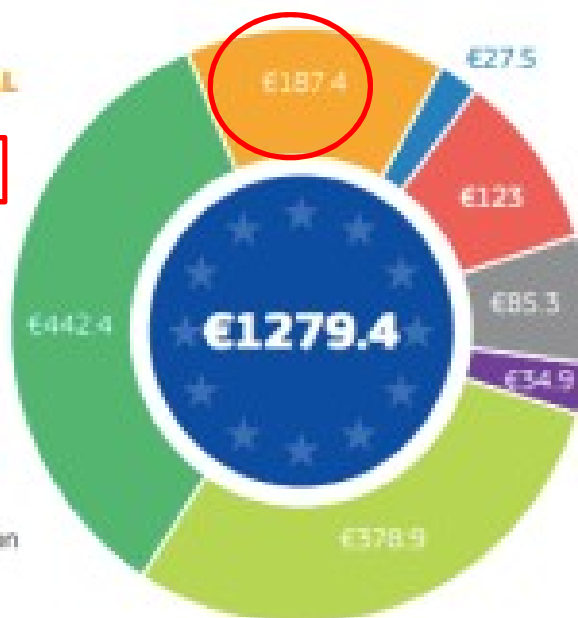
- 12 Security
- 13 Defence
- 14 Crisis Response

VI. NEIGHBOURHOOD AND THE WORLD €123

- 15 External Action
- 16 Pre-Accession Assistance

VII. EUROPEAN PUBLIC ADMINISTRATION €85.3

- 17 European Public Administration





Consiglio Nazionale delle Ricerche

EU budget chief wants to protect research from cuts in 2021 - 2027 budget cycle

Günther Oettinger says research should be the only programme spared spending cuts as the EU weighs how to make up for losing the UK's €11B per annum contribution

By Éanna Kelly



EU Parliament wants a substantially bigger research budget

Research spending should rise to €120B in the 2021 - 2028 budget, despite shrinking EU funds post-Brexit, say MEPs

By Éanna Kelly



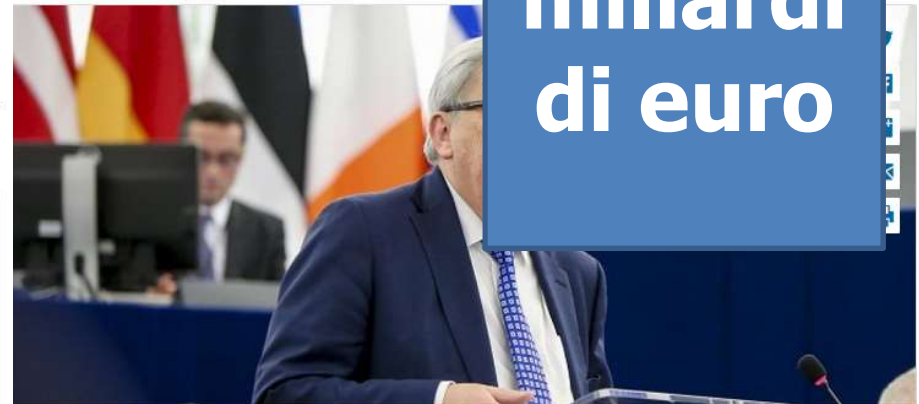
HORIZON EUROPE

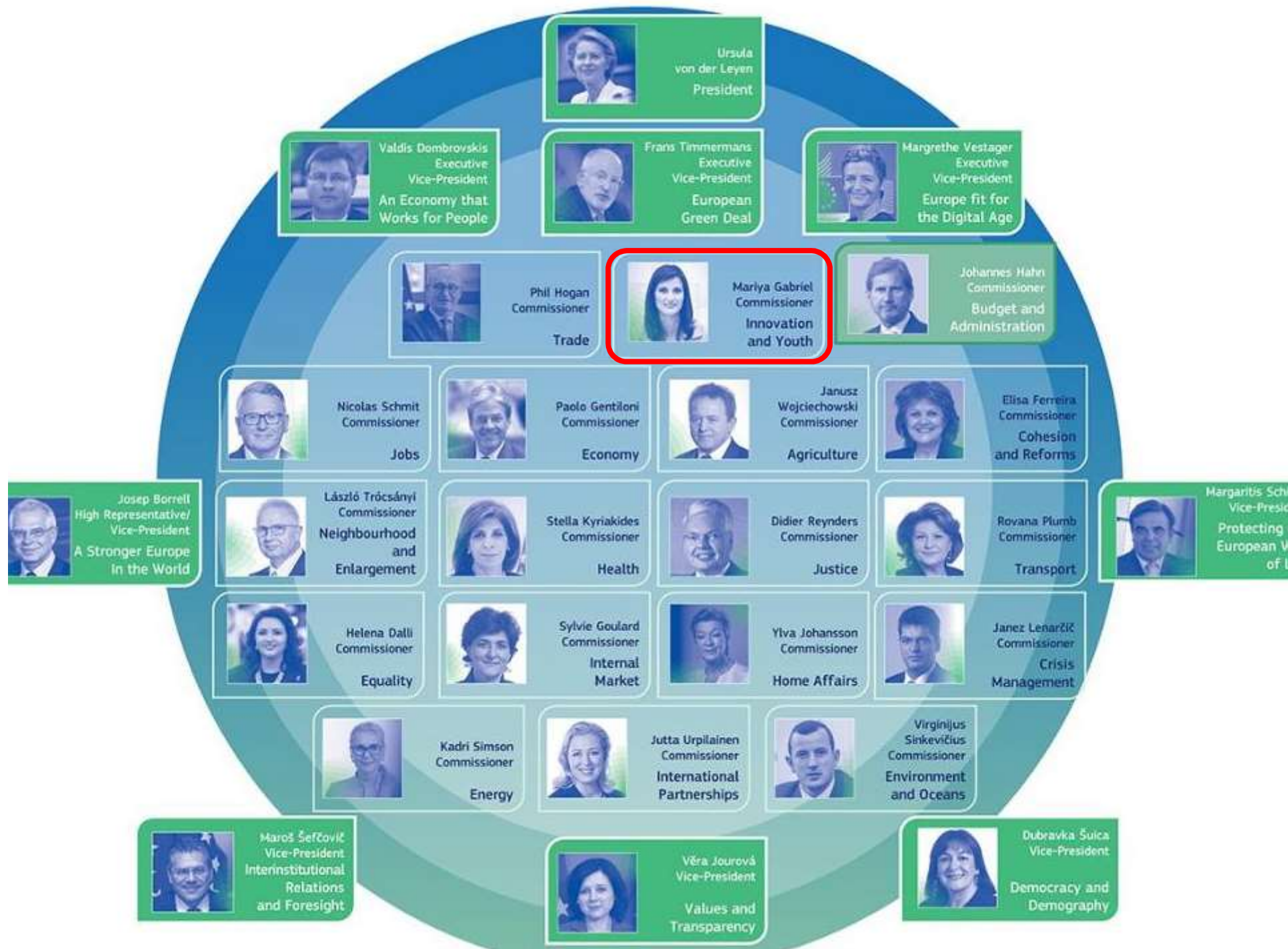
100
miliardi
di euro

Juncker dreams of €160B for re

European Commission President wants to double current i

By Éanna Kelly







Consiglio Nazionale delle Ricerche

Towards Horizon Europe





Consiglio Nazionale delle Ricerche

Horizon Europe- Research and innovation funding programme

La Commissione ha proposto 100 miliardi di euro per 7 anni di durata del programma (2021-2027)



rafforzare le basi scientifiche e tecnologiche dell'UE



rafforzare la capacità di innovazione, la competitività e l'occupazione dell'Europa

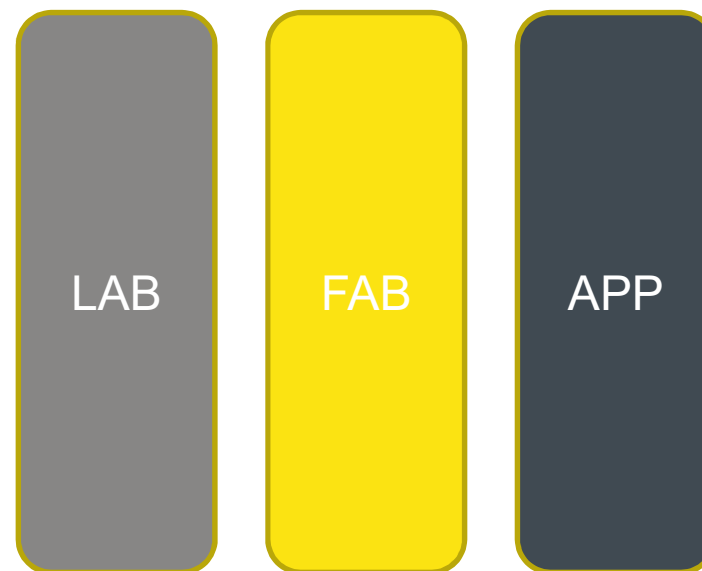
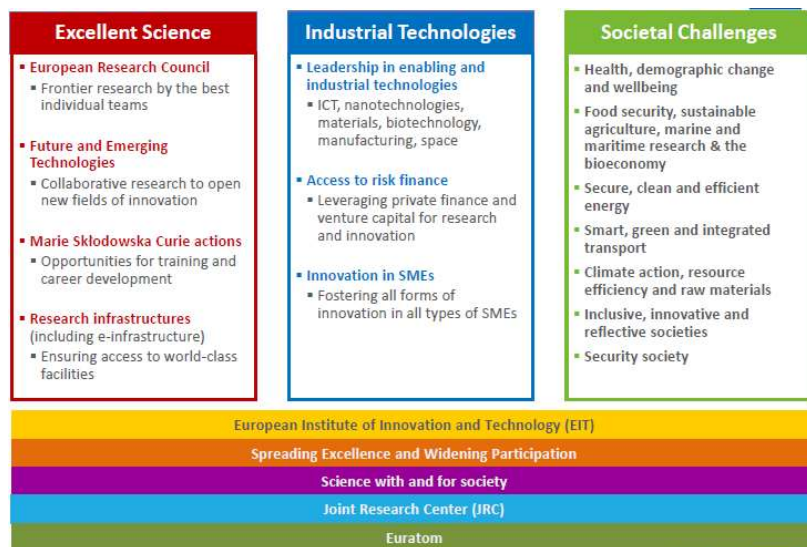


realizzare le priorità dei cittadini e sostenere il nostro modello e i nostri valori socio-economici.

*Si propongono inoltre ulteriori 4,1 miliardi di euro destinati alla **ricerca nel settore della difesa**, che è dettagliata nel «Fondo europeo di difesa», oggetto di una proposta distinta ma complementare.*



Consiglio Nazionale delle Ricerche

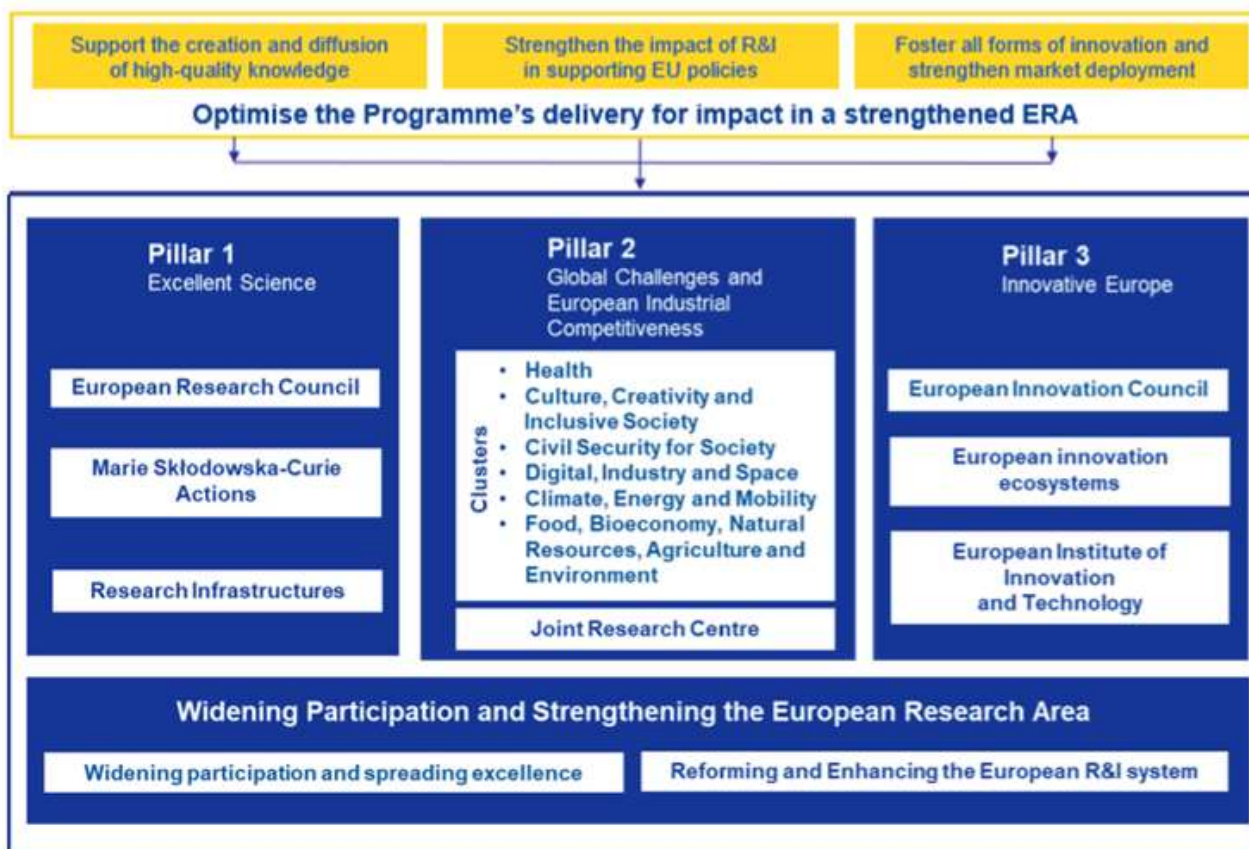




Consiglio Nazionale delle Ricerche

Horizon Europe

Specific objectives of the Programme





Consiglio Nazionale delle Ricerche



Connecting to citizens: R & I Missions

Missions are expected to relate EU's research and innovation actions better to concrete needs of society and of citizens, and thus give them a much stronger visibility and impact.

R&I Missions

Will generate more impact, achieve better outreach, improve cross-sectoral and cross-disciplinary cooperation, encourage a systemic approach and align R&I instruments and agendas in Europe

- A mission will consist of a portfolio of actions intended to achieve **a bold and inspirational as well as measurable goal** within a set timeframe, with impact for science and technology, society and citizens that goes beyond individual actions

Horizon Europe proposal defines mission characteristics and a few implementation modalities. Concrete missions will be **co-designed with Member States, stakeholders and citizens** during implementation (strategic planning).



Consiglio Nazionale delle Ricerche

Mission oriented approach

Public consultation February 2018



A total of 1190 valid replies were received. In addition, 150 position papers were received separately. The most widely represented areas in the proposed missions were: Digitalisation (14%), Health and well-being (11%), Social and economic transformations (10%), Sustainable production (7%), Transport and mobility (6%), Diseases (6%), Energy production and consumption (6%).

The five mission areas are:

1. Adapting to climate change, including societal transformation
2. Cancer
3. Healthy oceans, seas, coastal and inland waters
4. Climate-neutral and smart cities
5. Soil health and food

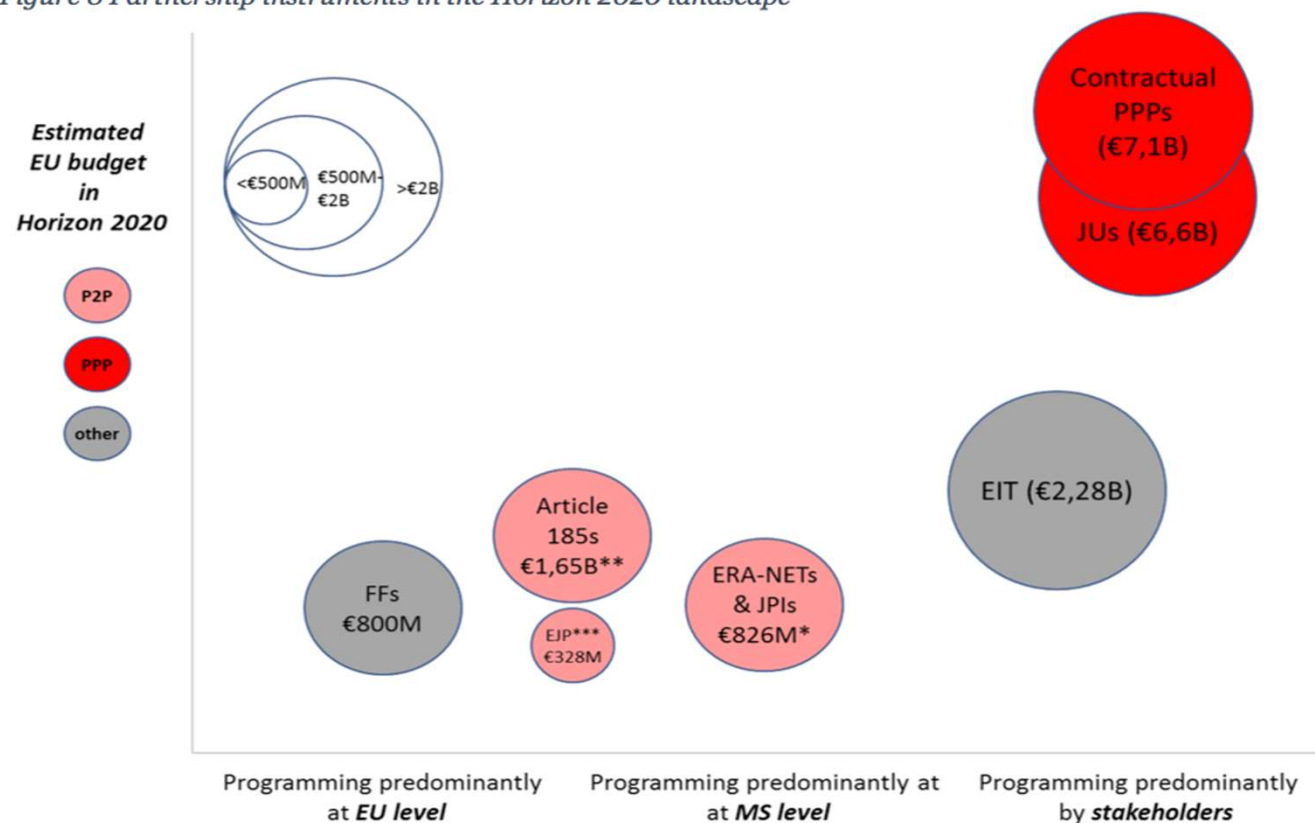




Consiglio Nazionale delle Ricerche

Revisione delle partnership

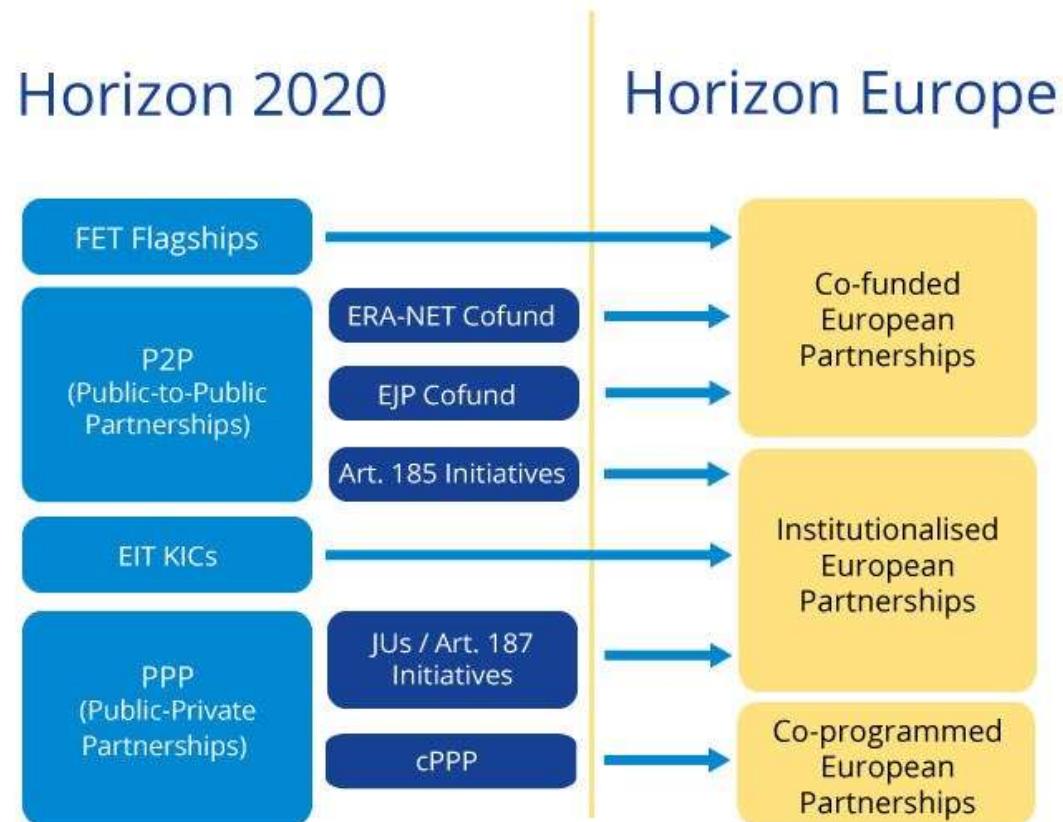
Figure 8 Partnership instruments in the Horizon 2020 landscape





Consiglio Nazionale delle Ricerche

Revisione delle partnership





Consiglio Nazionale delle Ricerche

Revisione delle partnership

Proposals for institutionalised Partnerships based on Article 185 / 187

Partnership area (Annex Va of the Regulation)	Proposal
Partnership Area 1: Faster development and safer use of health innovations for European patients, and global health	<ul style="list-style-type: none">▪ EU-Africa research partnership on health security to tackle infectious diseases▪ Innovative Health Initiative
Partnership Area 2: Advancing key digital and enabling technologies and their use, including but not limited to novel technologies such as Artificial Intelligence, photonics and quantum technologies	<ul style="list-style-type: none">▪ Key Digital Technologies▪ Smart Networks and Services▪ EuroHPC (no Impact Assessment)
Partnership Area 3: European leadership in Metrology including an integrated Metrology system	<ul style="list-style-type: none">▪ European Metrology
Partnership Area 4: Accelerate competitiveness, safety and environmental performance of EU air traffic, aviation, transport and rail	<ul style="list-style-type: none">▪ Transforming Europe's rail system▪ Integrated Air Traffic Management▪ Clean Aviation
Partnership Area 5: Sustainable, inclusive and circular bio-based solutions	<ul style="list-style-type: none">▪ Circular bio-based Europe: sustainable innovation for new local value from waste and biomass
Partnership Area 6: Hydrogen and sustainable energy storage technologies with lower environmental footprint and less energy-intensive production	<ul style="list-style-type: none">▪ Clean Hydrogen
Partnership Area 7: Clean, connected, cooperative, autonomous and automated solutions for future mobility demands of people and goods	<ul style="list-style-type: none">▪ Safe and Automated Road Transport
Partnership Area 8: Innovative and R&D intensive small and medium-sized enterprises	<ul style="list-style-type: none">▪ Innovative SMEs



Consiglio Nazionale delle Ricerche



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, proactive 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)



Consiglio Nazionale delle Ricerche

If you are an innovative researcher with an idea for the next breakthrough technology, you should apply to the **"Pathfinder"**.

If you are a start-up, SME, entrepreneur with a business plan to develop and scale up a high-risk innovation, then the **"Accelerator"** is the right way forward for you.



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)



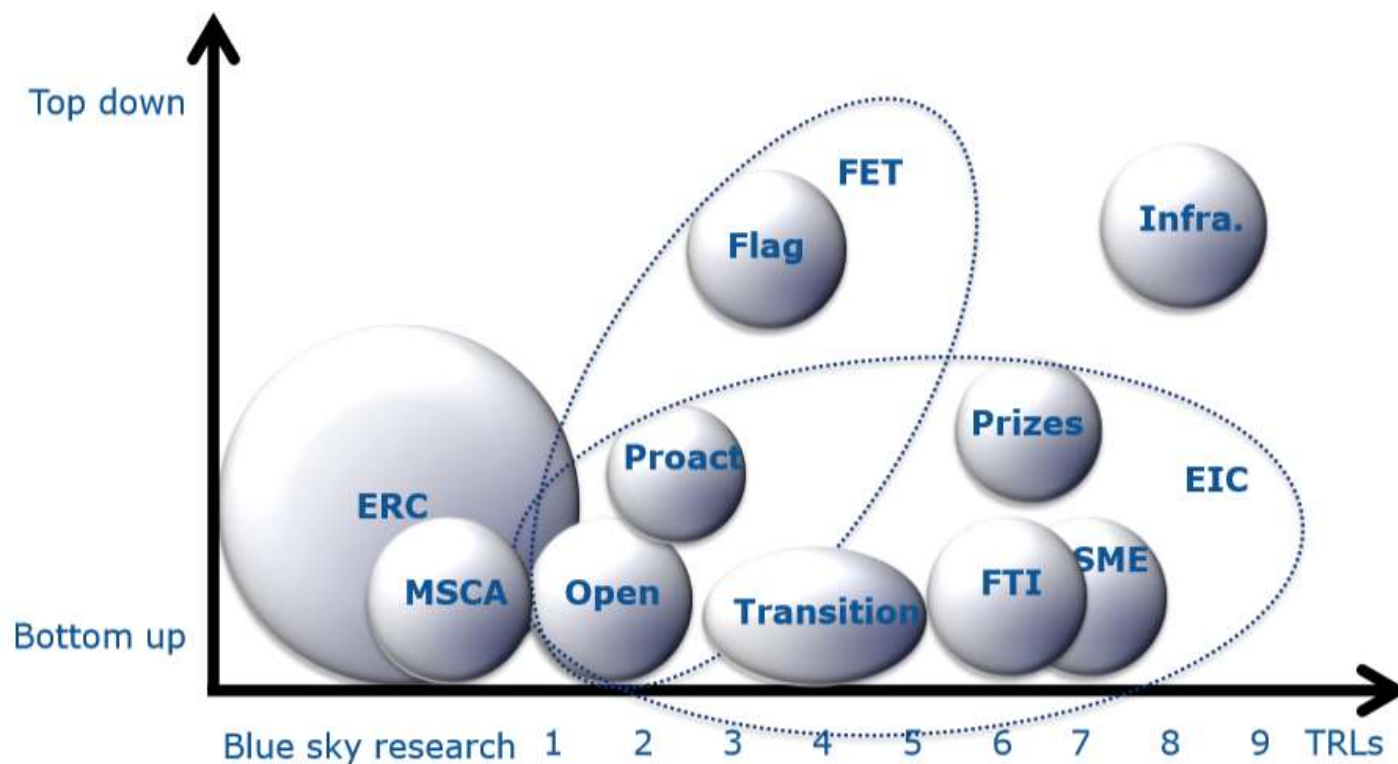
ACCELERATOR: Start-ups, SMEs and entrepreneurs

- ▶ 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)



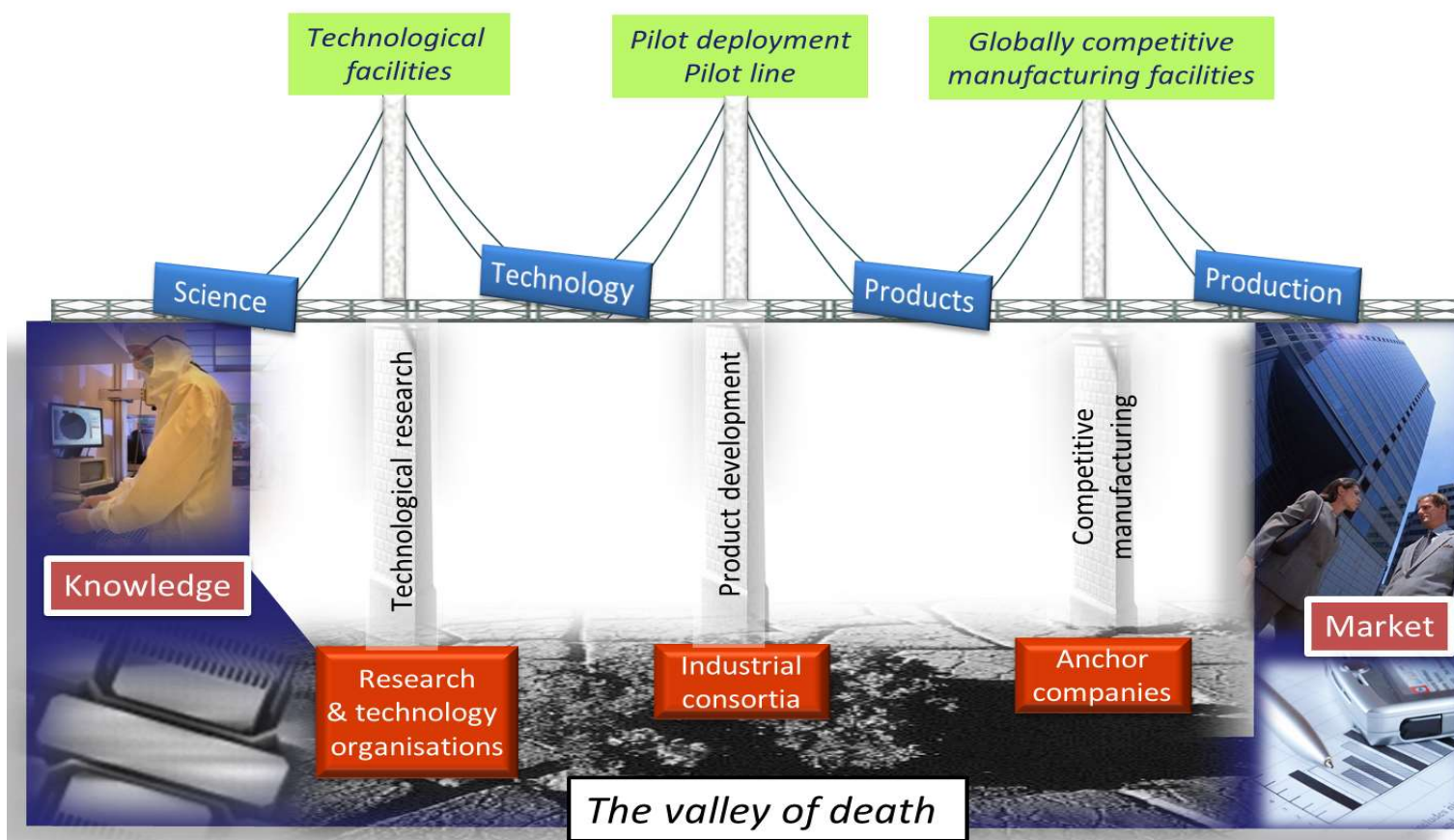
Consiglio Nazionale delle Ricerche

EIC covering the whole innovation chain





Consiglio Nazionale delle Ricerche



The technological research pillar based on technological facilities supported by research technology organisation;

The product development pillar based on pilot lines and demonstrator supported by industrial consortia

The competitive manufacturing pillar based on globally competitive manufacturing facilities.



Consiglio Nazionale delle Ricerche

Maggiori Novità secondo la EC



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Strengthen international cooperation



Reinforce openness



Rationalise the funding landscape



European Innovation Council

R&I Missions

More impact

Extended openness to association and international cooperation

Open science policy

More Openness

New approach to Partnerships



Consiglio Nazionale delle Ricerche

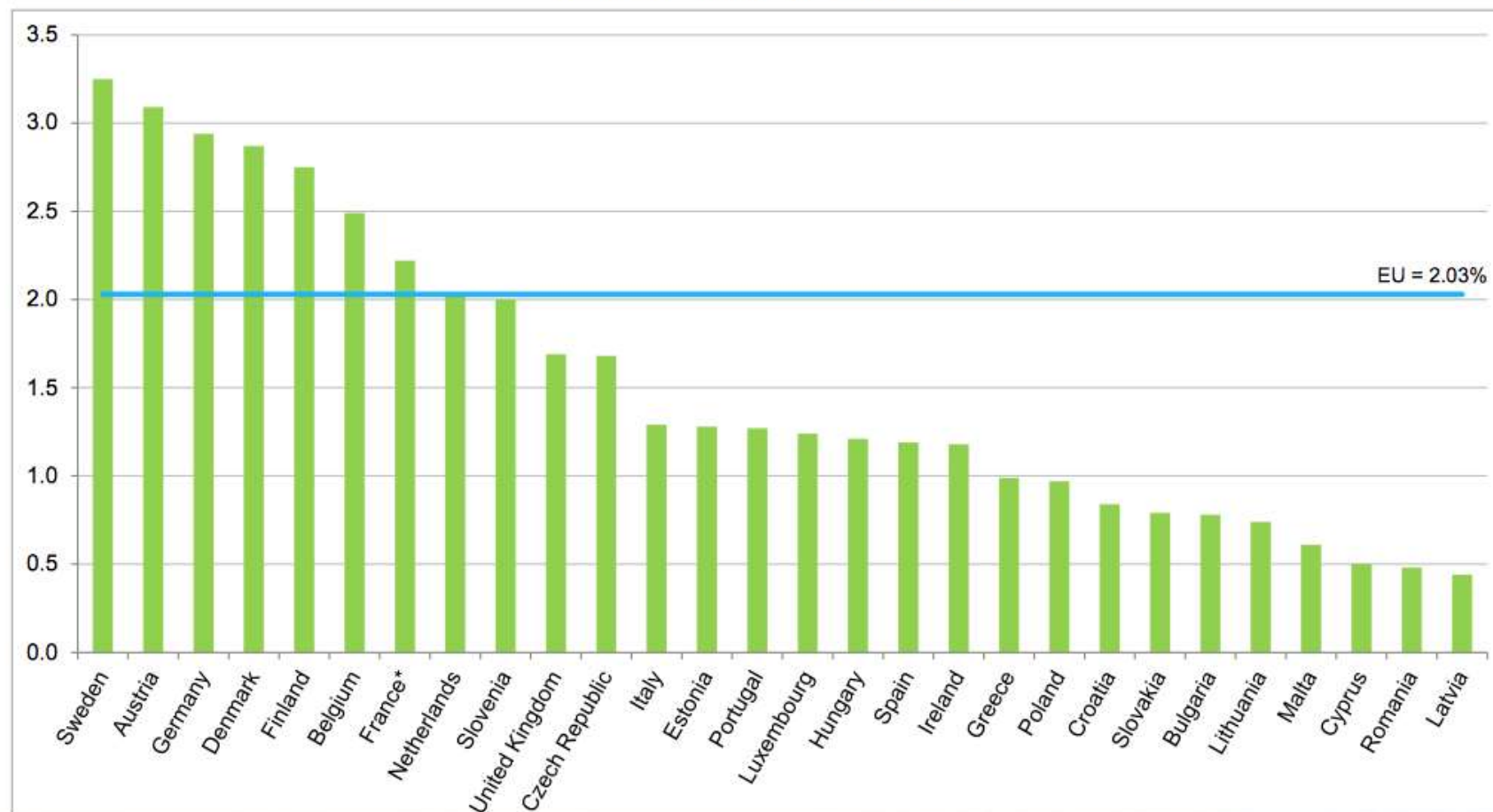
VERSO HORIZON EUROPE





Consiglio Nazionale delle Ricerche

R&D intensity in the EU Member States, 2016
(R&D expenditure as % of GDP)



Source: Eurostat



Consiglio Nazionale delle Ricerche

THANK YOU, AND...
LET'S WORK TOGETHER !!!

