



**APPROACH**

# **ADVANCED PHOTONIC PROCESSES FOR NOVEL SOLAR ENERGY HARVESTING TECHNOLOGIES**

## **EU AND NATIONAL INNOVATIONS GRANT OFFERS**

**A N D R E A N O G O V Á**





# Presentation structure

- 1) Public funding in EU according to TRL?
- 2) How should I select an appropriate call for proposals?
- 3) Where can I get more information?
- 4) How should I start with project preparation?

**GA**

**TRL**

**RIA**

**IA**

**CSA**

**SDG**

**EIC**

**CA**

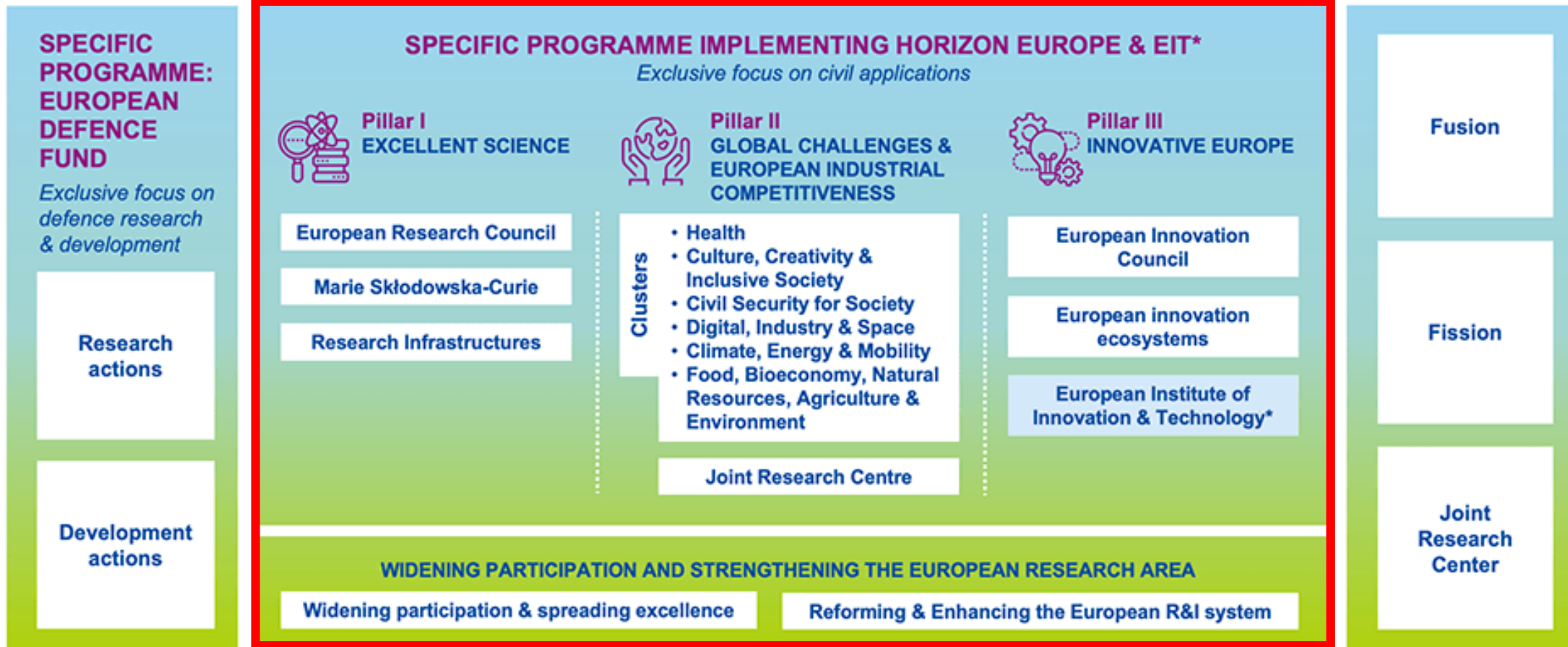


# What is Horizon Europe?

- 9th Framework Programme for Research and Innovation (2021 – 2027)
- Budget of €95.5 billion
- It tackles climate change ([European Green Deal](#)), helps to achieve the [UN's Sustainable Development Goals](#) and boosts the EU's competitiveness and growth.
- The programme facilitates intersectoral collaboration and **strengthens the impact of research** and innovation in developing, supporting and implementing EU policies while **tackling global challenges**.
- It supports **creating and better dispersing of excellent knowledge and technologies**.
- It **creates jobs**, fully engages the EU's talent pool, **boosts economic growth**, promotes **industrial competitiveness** and **optimises investment impact** within a strengthened European Research Area.
- Legal entities from the EU and associated countries can participate.

# HORIZON EUROPE

# EURATOM

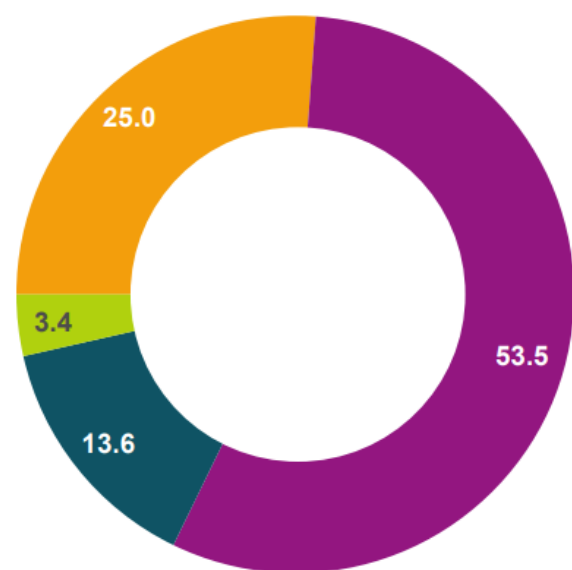


\* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

# Budget breakdown

## Horizon Europe Budget: €95.5 billion (2021-2027)

(including €5.4 billion from NGEU – Next Generation Europe – programme of EU for Recovery from COVID-19 crisis)



### Political agreement December 2020

€ billion in current prices

- Excellent Science
- Global challenges and European ind. comp.
- Innovative Europe
- Widening Part and ERA

**25,0 %**  
Basic research

**67,1 %**  
Innovations

# Pillar I – Excellent Science

The goal of this pillar is reinforcing and extending the **excellence of European Union's science base**. Projects can **focus on any topic** („bottom-up“ principle).

It consists of:

- [European Research Council](#) (€16 billion)

ERC grants are designed to support outstanding researchers under several schemes according to the phase of their carrier development.

- [Marie Skłodowska-Curie Actions](#) (€6.6 billion)

MSCA grants are designed for doctoral and postdoctoral training, equipping researchers with new knowledge and skills through mobility across borders and exposure to different sectors and disciplines.

- [Research Infrastructures](#) (€2.4 billion)

This part supports cooperation between and development of European research infrastructures including e-infrastructures.

# Pillar II – Global Challenges & European Industrial Competitiveness

This pillar supports research projects carried out (mostly) by **international and interdisciplinary consortia**.

Projects will have to address **concrete pre-determined topics** (“top-down” principle).

Calls for proposals are structured into following clusters:

- [Cluster 1: Health](#) (€8.2 billion)
- [Cluster 2: Culture, Creativity & Inclusive Societies](#) (€2.2 billion)
- [Cluster 3: Civil Security for Society](#) (€1.6 billion)
- [Cluster 4: Digital, Industry & Space](#) (€15.4 billion)
- [Cluster 5: Climate, Energy & Mobility](#) (€15.1 billion)
- [Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture & Environment](#) (€8.9 billion)
- [Joint Research Centre: Non-nuclear direct actions](#) (€1.9 billion)

# Pillar III – Innovative Europe

The goal of this pillar is **to stimulate market-creating breakthroughs** and ecosystems conducive to **innovation**.

It consists of:

- [European Innovation Council](#) (€10 billion)  
Support to innovations with breakthrough and market creating potential
- [European Innovation Ecosystems](#) (€0.5 billion)  
Connecting with regional and national innovation actors
- [European Institute of Innovation and Technology](#) (€3 billion)  
Bringing key actors (research, education and business) together around a common goal for nurturing innovation



# Widening Participation and Strengthening the European Research Area



## Widening Participation and Spreading Excellence (€2.96 billion)

- **widening countries** - the goal is to increase participation in HE
- Teaming, Twinning and ERA Chairs projects
- Contribution of the European Union to the COST programme (European Cooperation in Scientific and Technical Research)
- Marie Skłodowska-Curie Postdoctoral Fellowships as ERA Fellowships. Funding high-quality but unsuccessful
- A new “hop-on” mechanism – a way for participants from widening countries to join approved projects carried out by international consortia

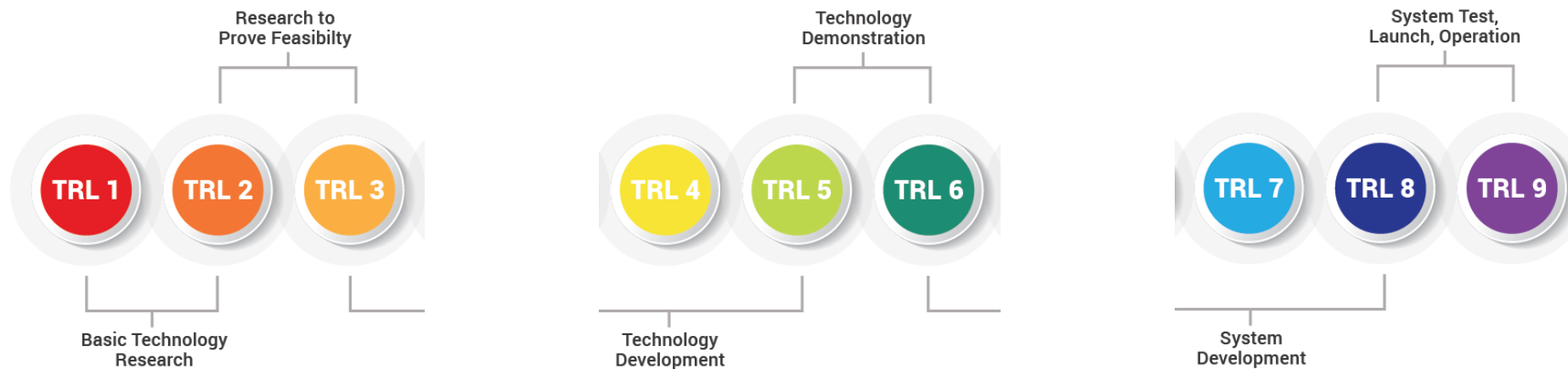
## Reforming and enhancing the European research and innovation system (€0.44 billion)

- This part will support projects and activities focused on e.g. Open science, Citizen science, Responsible Research & Innovation, Gender equality and similar.



# 1) Public Funding on European level according to TRL

## TRL



# What is your desired career path?

## ACADEMICIAN

Your goal is to establish your own research group and become full time professor in the future.

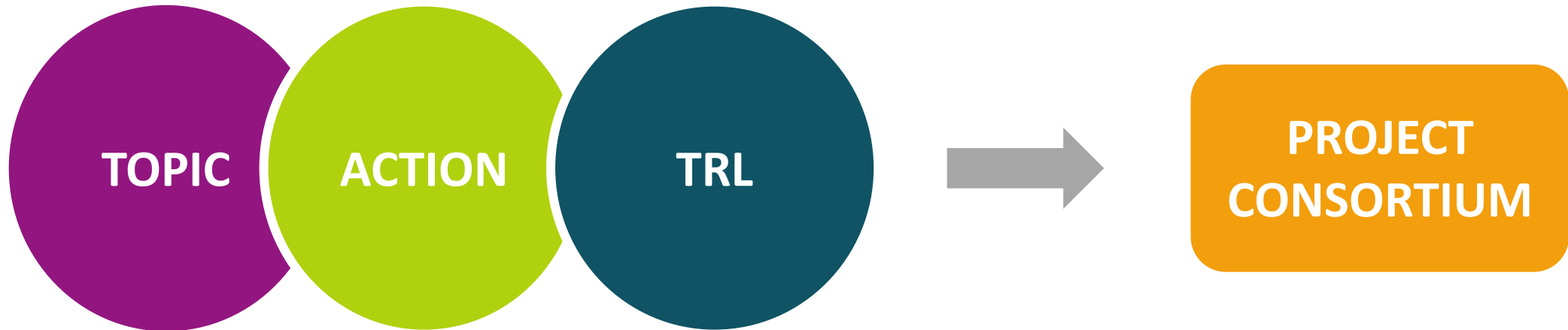
- Ph.D./Post-doc: Mobilities  
[Erasmus+](#), [MSCA Postdoctoral fellowship](#)
- Post-doc/Senior  
[HEU ERCs](#), [EIC Pathfinder](#) + [Pillar II calls](#) + networking ([HEU COST Actions](#), [MSCA Staff exchanges](#), [MSCA Doctoral networks](#))

## INNOVATOR, INVENTOR

Your goal is to become an inventor and innovator. In the future you would like to develop a company/product.

- Ph.D./Post-doc: Mobilities  
[Erasmus+](#), [MSCA Postdoctoral fellowship](#)
- Post-doc/Senior:  
HEU RIA/IA Actions - [Pillar II](#) and [Pillar III](#)

## 2) How should I select an appropriate call for proposals?



# Framework programmes planning process

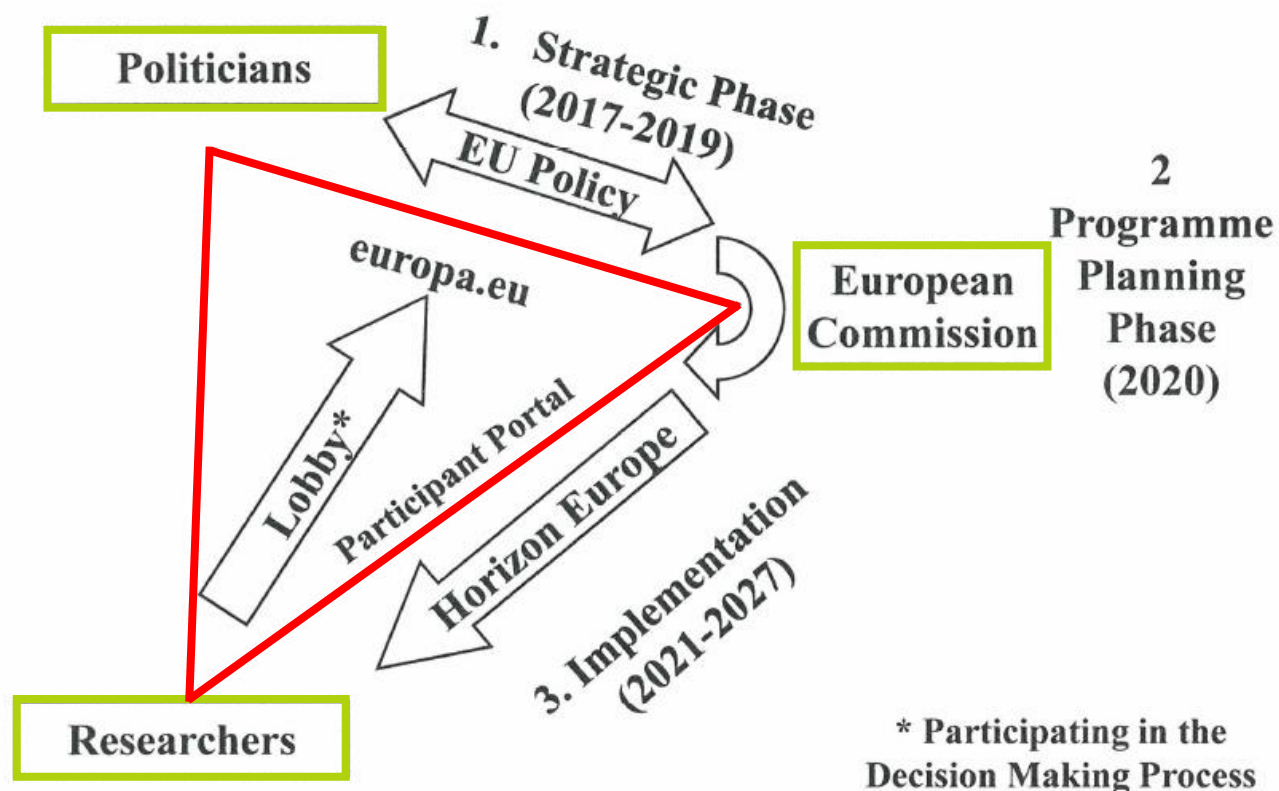
HE Programme (2021 – 2027)

HE Strategic Plan (2021 – 2024)

HE Work programmes:

2021 – 2022

2023 – 2024 etc.



# Topic (Pillar II + III)

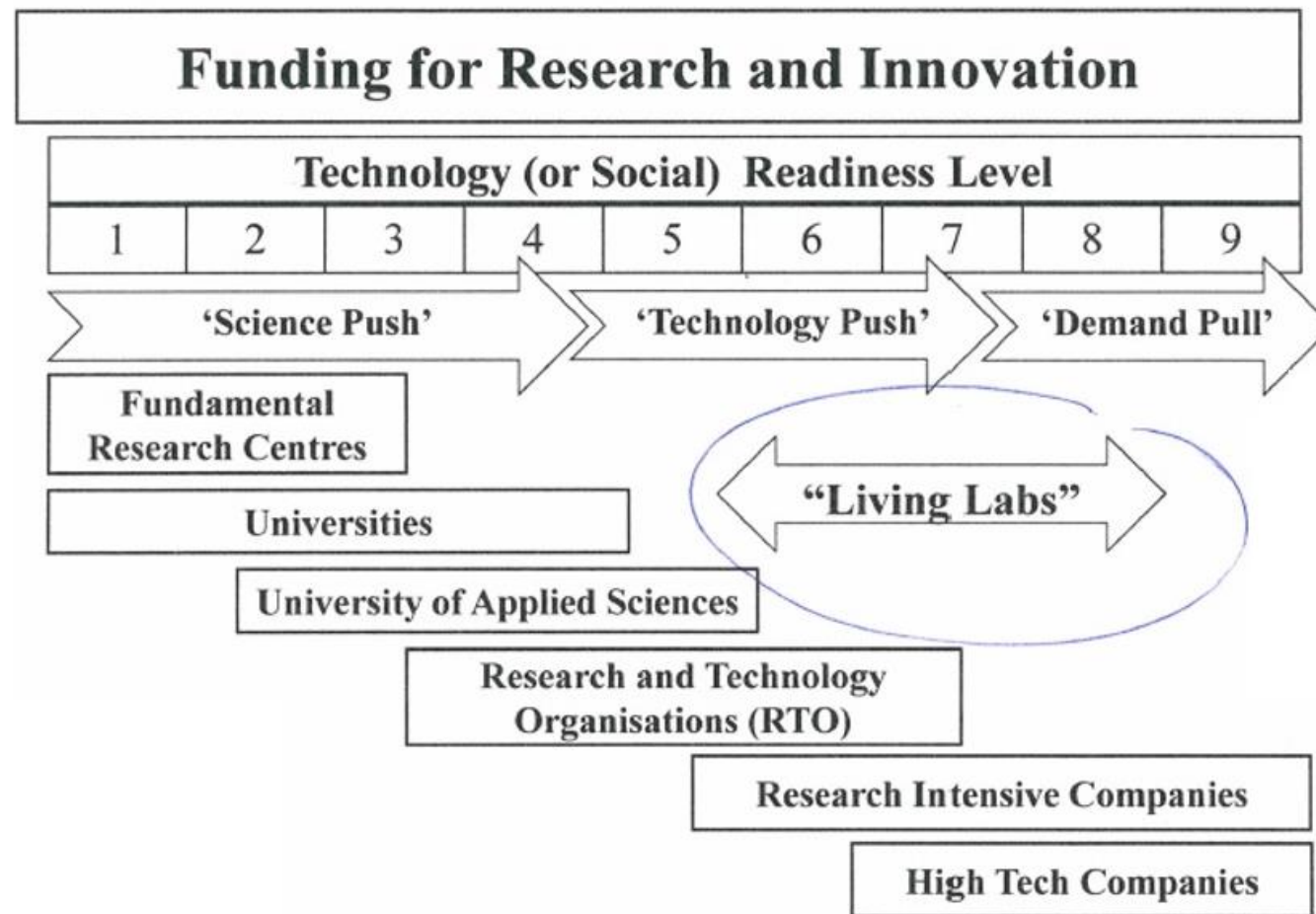
Work programme  
 Call for proposals  
 Expected outcome  
 Scope  
 Budget  
 + Action  
 + TRL

<p style="text-align: center;"><i>Horizon Europe - Work Programme 2021-2022 Climate, Energy and Mobility</i></p> <p style="text-align: center;">EN</p> <p style="text-align: center;">Annex 8</p> <p style="text-align: center;">Horizon Europe</p> <p style="text-align: center;">Work Programme <u>2021-2022</u></p> <p style="text-align: center;">8. <i>Climate, Energy and Mobility</i></p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p style="text-align: center; margin: 0;"><b>DISCLAIMER</b></p> <p style="font-size: 8px; margin: 0;">This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission. The information transmitted is intended only for the Member State or entity to which it is addressed for discussions and may contain confidential and/or privileged material.</p> </div> <p style="text-align: center; font-size: 8px;">Part 8 - Page 1 of 449</p>	<p style="text-align: center;"><i>Horizon Europe - Work Programme 2021-2022 Climate, Energy and Mobility</i></p> <p><b>Table of contents</b></p> <p><b>Introduction</b> ..... 15</p> <p><b>Destination 1 – Climate sciences and responses for the transformation towards climate neutrality</b>..... 20</p> <p><b>Call - Climate sciences and responses</b> ..... 22</p> <p>Conditions for the Call ..... 22</p> <p>HORIZON-CLS-2021-D1-01-01: Improved understanding of greenhouse gas fluxes and radiative forcers, including carbon dioxide removal technologies ..... 23</p> <p>HORIZON-CLS-2021-D1-01-02: Modelling the role of the circular economy for climate change mitigation ..... 25</p> <p>HORIZON-CLS-2021-D1-01-03: Maximising the impact and synergy of European climate change research and innovation ..... 26</p> <p>HORIZON-CLS-2021-D1-01-04: Enhanced integrated assessment in pursuit of global climate goals ..... 31</p> <p>HORIZON-CLS-2021-D1-01-05: Better understanding of the interactions between climate change impacts and risks, mitigation and adaptation options ..... 32</p> <p>HORIZON-CLS-2021-D1-01-06: Supporting and standardising climate services ..... 35</p> <p>HORIZON-CLS-2021-D1-01-07: Improved economic methods for decision-making on climate and environmental policies ..... 37</p> <p>HORIZON-CLS-2021-D1-01-08: Restoration of natural wetlands, peatlands and floodplains as a strategy for fast mitigation benefits, pathways, trade-offs and co-benefits ..... 39</p> <p>HORIZON-CLS-2021-D1-01-09: The contribution of forest management to climate action: pathways, trade-offs and co-benefits ..... 41</p> <p><b>Call - Climate sciences and responses</b> ..... 43</p> <p>Conditions for the Call ..... 43</p> <p>HORIZON-CLS-2022-D1-01-01-two-stage: Carbon Dioxide Removal approaches ..... 44</p> <p>HORIZON-CLS-2022-D1-01-02-two-stage: Socio-economic risks of climate change in Europe ..... 46</p> <p>HORIZON-CLS-2022-D1-01-03-two-stage: Social science for land-use strategies in the context of climate change and biodiversity challenges ..... 49</p> <p><b>Call - Climate sciences and responses</b> ..... 52</p> <p>Conditions for the Call ..... 52</p> <p>HORIZON-CLS-2022-D1-02-01: Verification and reconciliation of estimates of climate forcers ..... 53</p> <p>HORIZON-CLS-2022-D1-02-02: Development of high-resolution Earth system models for global and regional climate change projections ..... 54</p> <p>HORIZON-CLS-2022-D1-02-03: Improvement of Integrated Assessment Models in support of climate policies ..... 57</p> <p style="text-align: center; font-size: 8px;">Part 8 - Page 2 of 449</p>	<p style="text-align: center;"><i>Horizon Europe - Work Programme 2021-2022 Climate, Energy and Mobility</i></p> <p>Projects funded under this topic should ensure coordination between their activities.</p> <p><b>HORIZON-CLS-2021-D1-01-04: Enhanced integrated assessment in pursuit of global climate goals</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; padding: 2px;">Specific conditions</th> </tr> <tr> <td style="width: 20%; padding: 2px;"><i>Expected EU contribution per project</i></td> <td style="padding: 2px;">The EU estimates that an EU contribution of around <u>EUR 5.00 million</u> would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.</td> </tr> <tr> <td style="padding: 2px;"><i>Indicative budget</i></td> <td style="padding: 2px;">The total indicative budget for the topic is <u>EUR 15.00 million</u>.</td> </tr> <tr> <td style="padding: 2px;"><i>Type of Action</i></td> <td style="padding: 2px;">Research and Innovation Actions</td> </tr> </table> <p><b>Expected Outcome:</b> Under the Paris Agreement, Parties to the UNFCCC have to pursue policies and measures to reduce their greenhouse gas emissions, including by preparing and implementing successive Nationally Determined Contributions (NDCs) towards the Agreement's objectives. By 2025, countries are expected to produce new NDCs covering the post-2030 period, informed during the 2022-23 period by the 6<sup>th</sup> Assessment Report of the IPCC and the Paris Agreement Global Stocktake.</p> <p>Project results are expected to contribute to all of the following expected outcomes:</p> <ul style="list-style-type: none"> <li>• Provision of information for the preparation of climate policies and national planning for the post-2030 period, in light of the Paris Agreement goals and the need to reduce global net greenhouse emissions to zero by 2050.</li> <li>• Enhanced international cooperation among the modelling community and other relevant stakeholders to expand the provision of robust in-country advice to decision-makers around the world.</li> <li>• Enhanced mutual learning among the modelling, social science and policy communities to ensure coherence between different tools used to inform climate action, and consistency with the best available and open science.</li> </ul> <p><b>Scope:</b></p> <ul style="list-style-type: none"> <li>• Ensure that Integrated Assessment Models enable the assessment of Paris Agreement-compatible mitigation policies to which policymakers around the world have access.</li> <li>• Deliver advice and insights that can inform climate action and sustainable development policy design, including biodiversity preservation, at global and national level, based on the best available science.</li> </ul> <p style="text-align: center; font-size: 8px;">Part 8 - Page 31 of 449</p>	Specific conditions		<i>Expected EU contribution per project</i>	The EU estimates that an EU contribution of around <u>EUR 5.00 million</u> would allow these outcomes to be addressed appropriately. 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# Action

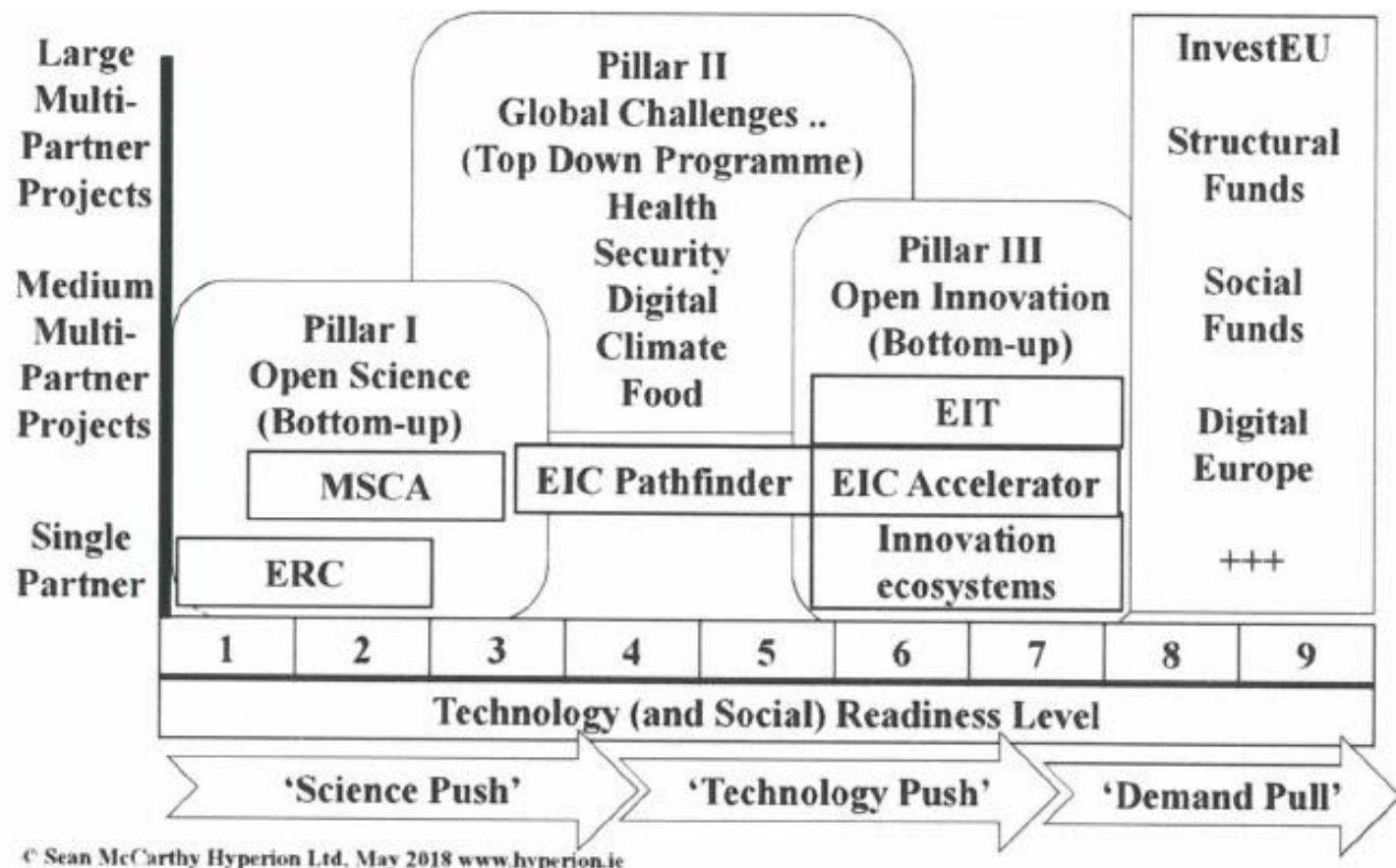
Type of Grant	Minimum partners	Typical consortium	Funding Rate [%]	Activities
Research and Innovation Actions (RIA)	3	8 – 15?	100	Applied research and Innovations
Innovation Actions (IA)	3	8 – 15?	70	Innovations
Coordination and Support Actions (CSA)	3	Networks (>20?)	100	Networking, „Soft“ activities
ERC Grants	1	1 (Synergy 3)	100	Basic research
Marie Curie Grants	1 (PF)	1 – 10 (DN)	100	Basic research (PF) Networking, community building

Each Action (RIA, IA, CSA) calls for different type of consortium according to the targeted TRL level.





So how do I select an appropriate call?



# 3) Where can I get more information?

## Search Funding & Tenders

## CORDIS Projects & Results

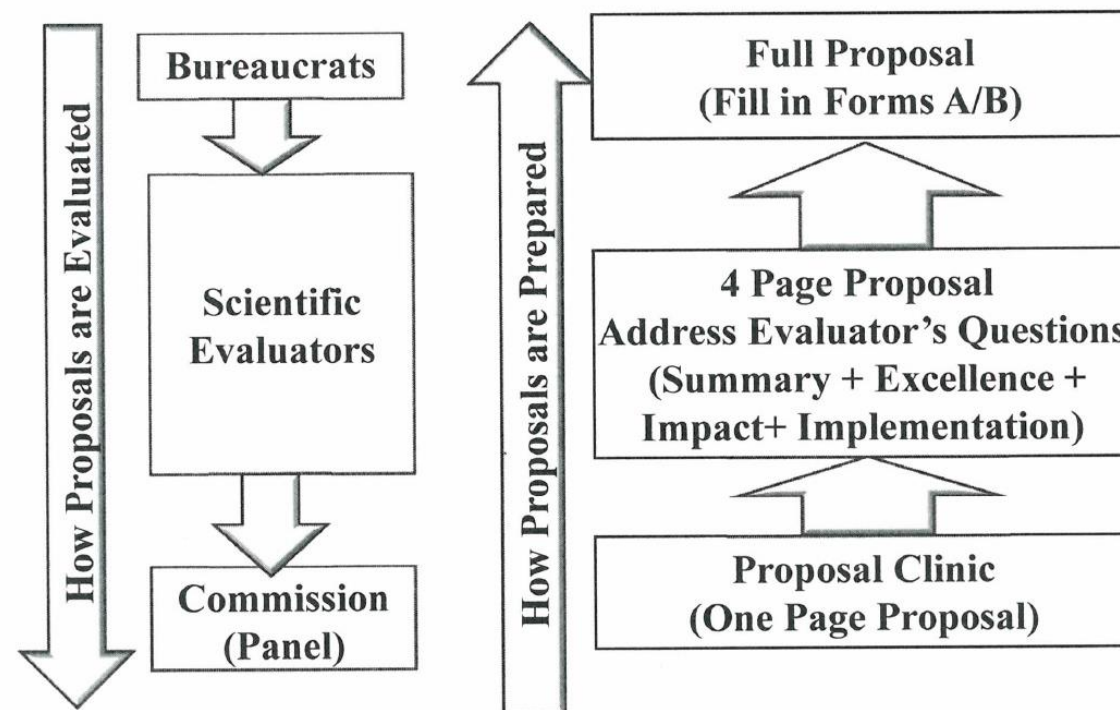
Acronym	Title	ID	Last update
ENIW	Services to enhance innovation management capacities of SMEs in England, Northern Ireland and Wales	744153	12 April 2021
CAPABLE	Composite integrated photonic platform by femtosecond laser micromachining	742745	12 April 2021
QoLRO	Measuring Quality of Life in the general population and Roma minority in Romania: Implications for health policies and economic evaluations	748612	12 April 2021
PEEI	POLE EUROPE ENTREPRISE INNOVATION (MARTINIQUE ET ILES DE GUADELOUPE)	743798	12 April 2021

## 4) How should I start with project preparation?

a) Find your call/topic

b) Find your partners (OR become one)

c) Find your results/products



## Homework (15 min.)

[Call I](#) / [Call II](#) / [Call III](#) – try to answer questions mentioned further (not all of them are applicable for all calls):

- Am I an eligible applicant?
- When is the deadline?
- What is the maximum budget per project?
- How many projects will be supported under this call?
- What is the expected duration of the project?
- What is the targeted TRL? What are the expected results?
- What is the problem to be solved?
- What type of partners do you need?



**APPROACH**

# THANK YOU

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