

# **Horizon Europe, Cluster 5 Climate, energy, mobility**

## **Present status of the Work Program 2021–2022 preparations**

7.10.2020

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Energy and Transport



**Which programs in  
Horizon Europe  
are for me?**

**Types of European  
funding opportunities**



# Types of European funding opportunities

## Traditional Horizon Calls

- Collaborative projects for consortia from 3 countries
- Clusters (5. Climate, energy, mobility)
- Call text describes in detail what kind of research and results can get funded
- Good funding rates and grants

## Horizon Partnerships

- EU in partnership with industry
- Different funding formats: Calls are in Cluster WPs or separately
- Clean Energy Transition CET ("SET")
- Eg. Clean hydrogen, Batteries
- Also EIT Innovation Communities Programmes

## Horizon's instruments with relatively free topic

- EIC Accelerator (funding, optional equity, coaching, acceleration services)
- MSCA Marie Skłodowska-Curie actions (research exchange)
- ERC (grants for researchers)

## EUREKA programs calls

- Eureka is bottom-up, 1+1 country min.
- Eureka Cluster Calls (Penta, ITEA, Celtic-Next etc) for consortia
- Eureka GlobalStars Calls with non-Eur. Countries, Eurostars for SMEs 1+1
- One application channel, transnational decisions, national eligibility and funding

## EU funding outside Horizon

- CEF (CEF Energy), TEN-T
- LIFE+
- Pesco/PADR
- ERDF Structural funds
- Innovation Fund
- Invest EU
- etc

# The environments of European R&D

## The environment of collaborative calls

- Based on a thematic strategic goals proposed by EU and commented by the member states
- Based on strategic programming and topic definitions
- The projects will bring forward innovative solutions as European pilots
- The call topics inspire enterprises and researchers to collaboration in planning, preparing and implementing adequate objectives
- For an enterprise, a relevant role is an excellent opportunity
- Project participation gives good European presence and visibility in the market



## The environment of EU partnerships

- Based on a thematic strategic goal agreed between industry and EU
- Based on strategic programming and topic definitions
- The European Partnership membership offers a network to define goals with other members and to jointly form consortia
- The Partnership Programme Calls are the vehicle to get project funding, in the form of Horizon projects
- Project participation gives good European presence and visibility in the market



## The environment of Eureka networks

- Based on your own company competence and strategic ambition
- Based on your own national network and home market base
- The Eureka network offers a framework for consortium projects
  - Or if needed, helps you to find such a consortium
- Eureka calls enable transnational projects and give national public funding (x%)



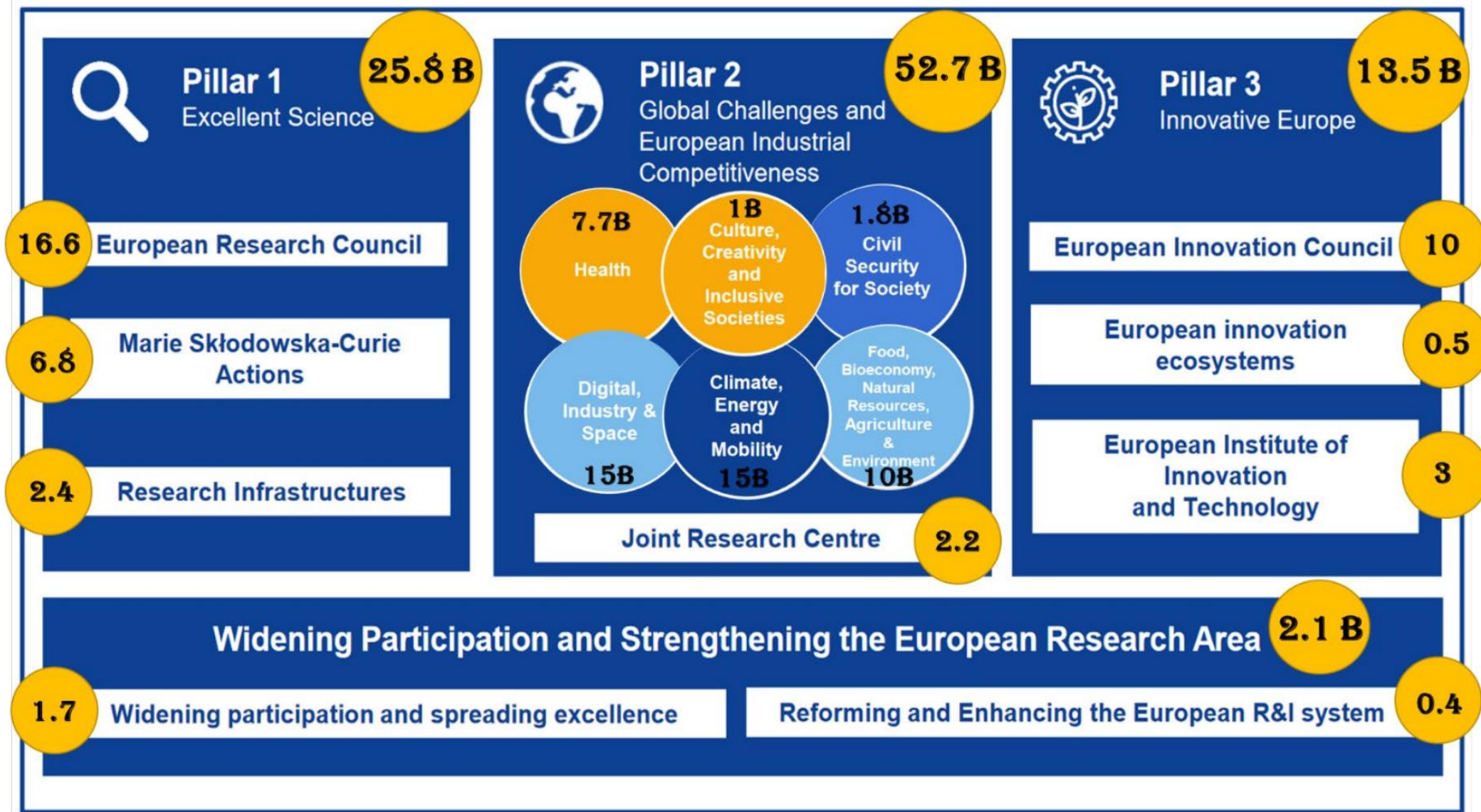


**Cluster 5  
Work Programme**

**Destinations and  
topic areas**



# PRELIMINARY HORIZON EUROPE STRUCTURE



NOTICE:  
All indicated sums are too high (-13%)

# Horizon Europe's Cluster 5 approach

CSR 17	BAT 20	CS 16	BT 5	RES 69
ESGS 21	CCUS 5	CET & EGS 2	BEE-B4P 18	IND 4
ZERT 13	AVI 5	WAT 16	THE 3	CCAM 14

MSTS 12	SAFE 7
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The number indicates number of draft topics in each area (sept.2020)

# Horizon Europe's Cluster 5 approach

Climate sciences  
and responses  
CSR

BAT 20

Communities  
and cities CS

Breakthrough  
technologies  
and climate  
solutions BT

Global leadership in  
renewable energy  
RES

Energy systems,  
grids and storage  
ESGS

Carbon  
capture, utili-  
sation, storage  
CCUS

CET &  
EGS 2

BEE-B4P  
10

Industrial facilities  
in energy transition  
IND

ZERT 13

AVT 5

WAT 16

Impact of  
transport on  
environment  
and health  
THE

CCAM 14

Multimodal and  
sustainable  
transport system  
MSTS

Safety and  
resilience SAFE

Colour describes "Destination"

1

2

3

4

5

6

10 topic areas  
Collaborative projects



# Examples of topics in the draft WP

- D3-RES-54-2021: Renewable energy incorporation in manufacturing/chemical/ petro-chemical industry
- D3-RES-64-2022: Renewable energy incorporation in SME manufacturing industry
- D3-ESGS-01-2021: Energy Sector Integration: Integrating and combining energy systems to a cost-optimised and flexible energy system of systems
- D3-ESGS-02-2022: Energy Sector Integration: Integrating and combining power, heat, gas and other sectors (industry and mobility) to a cost-optimised, flexible energy system of systems with massively integrated renewable energy sources
- D3-CCUS-03-202X: Decarbonising industry with CCS/CCUS
- D4-IND-02-2022: Development and pilot demonstration of heat upgrade technologies with supply (sink) temperature in the range 150-250°C
- D4-IND-04-2022: Industrial excess (waste) Heat-to-Power conversion based on supercritical CO<sub>2</sub> cycles



# Horizon Europe's Cluster 5 approach



Colour describes "Destination"



7 topic areas

Partnership programme projects



# Batteries: Towards a competitive European industrial battery value chain for stationary applications and e-mobility

# Batteries

➤ Co-programmed Partnership, new Partnership

## OBJECTIVES

- Short- to medium-term: support the development of a world-class European R&I ecosystem on batteries, with a view towards industrial leadership by Europe in the design and production of batteries for both stationary and mobile applications.
- Longer term: develop futuristic battery technology beyond 2030.

## SCOPE:

- Development of short to long term technologies and processes for safe and cost-efficient, application of batteries in energy storage and mobility.
- Value chain approach, from raw materials to recycling.

## EXPECTED IMPACTS

- Increase performance of battery technology, while ensuring safety and usability
- Ensure sustainability, recyclability and circularity of batteries
- Accelerated R&D and faster time-to market to maintain EU industry leadership in the field through strengthened industry – academia – policy collaboration



# Batteries

## LINKS TO OTHER PARTNERSHIPS

- Concrete boundaries discussed with 2ZERO, Waterborne, Clean Aviation, (Rail, Clean Energy Transition) – Cluster 5
- Key Digital Technologies, Made in Europe - Cluster 4
- InvestEU, EIC: Close links with the higher TRL activities for commercialisation
- European Battery Alliance, “Batteries Europe” Technology Platform

## CURRENT STATE-OF-PLAY

**November 2019-March 2020:** Stakeholders’ workshops

**20th April 2020 Proposal (final draft)** submitted to R&I

**June:** Information workshop to stakeholders (virtual)

**SRIA** will be strongly based on/linked to ETIP “Batteries Europe” SRA

**September 2020:** Final draft SRIA/roadmap

**20 draft topics published as part of the Cluster 5 Work Programme (sept.20)**

**Launch of partnership:** WP 2021/22 (in 2021)



**BUSINESS  
FINLAND**

# **Horizon Europe 2021–2027**

## **How to build a consortium?**



# How to build a consortium?

- 1 Read the call text and identify the contributions and partner types needed
- 2 Consider building a value chain, identify partner types needed
- 3 List the things you and your core partners could/would like to do
- 4 Check the max grant and how many partners does it allow
- 5 Consider the number of countries – similar shares for each! Then invite countries.
- 6 Estimate max grant share per country/partner and communicate it
- 7 Check your networks, consider current and potential clients and suppliers

How to find a missing partner?

- **Firstly utilise networks, both your own and your partners'!**
- Check Call page/Partner search
- Check EEN network
- Check H2020 brokerage platforms
- Call Business Finland
- Check Cordis for relevant earlier EU projects' and their consortiums partners



**BUSINESS  
FINLAND**

**Advice available  
from the NCP  
(National Contact Point)**

**at Business Finland  
EUTI**



# **Advice available from the NCP (National Contact Point)**

- ❖ **Communicate about upcoming calls and events**
- ❖ **Coach on the relevant topics and instruments**
- ❖ **Assist with the application process**
- ❖ **Read and comment on proposals**
- ❖ **Organize pitching training**
- ❖ **Follow Finnish participation in the programme**
- ❖ **Utilize our Brussels contacts and networks**

## **Horizon Cluster 5 delegate for Finland:**

- ❖ **Reijo Munther, Business Finland**

## **National Contact Point:**

- ❖ **To be nominated soon more people**
- ❖ **Reijo Munther, Business Finland**
- ❖ **Tom Warras, Business Finland**

