



#HorizonEU

**THE EU
RESEARCH & INNOVATION
PROGRAMME**

2021 – 2027

*Research and
Innovation*

Horizon Europe Programme



HORIZON EUROPE

EURATOM

SPECIFIC PROGRAMME: EUROPEAN DEFENCE FUND

*Exclusive focus on
defence research
& development*

Research
actions

Development
actions

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

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

Joint Research Centre



Pillar III INNOVATIVE EUROPE

European Innovation
Council

European Innovation
Ecosystems

European Institute of
Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

Fusion

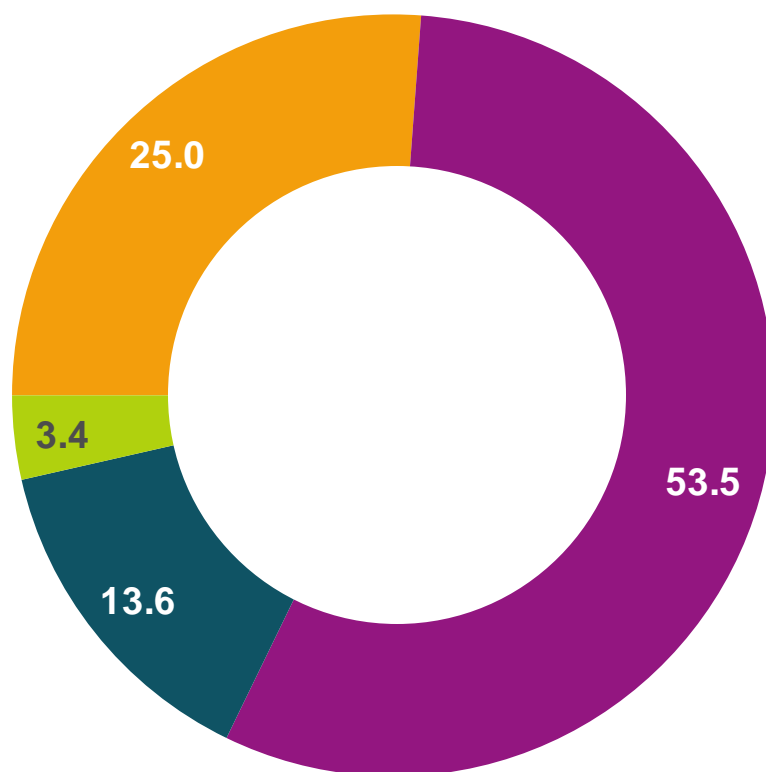
Fission

Joint
Research
Center

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

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

Lessons Learnt

from Horizon 2020 Interim Evaluation



Support breakthrough innovation



Create more impact through mission-orientation and citizens' involvement



Rationalise partnerships' landscape



Reinforce openness



Strengthen international cooperation



Encourage participation



Key Novelties

in Horizon Europe

European Innovation Council

EU Missions

New approach to partnerships

Open science policy

Extended association possibilities

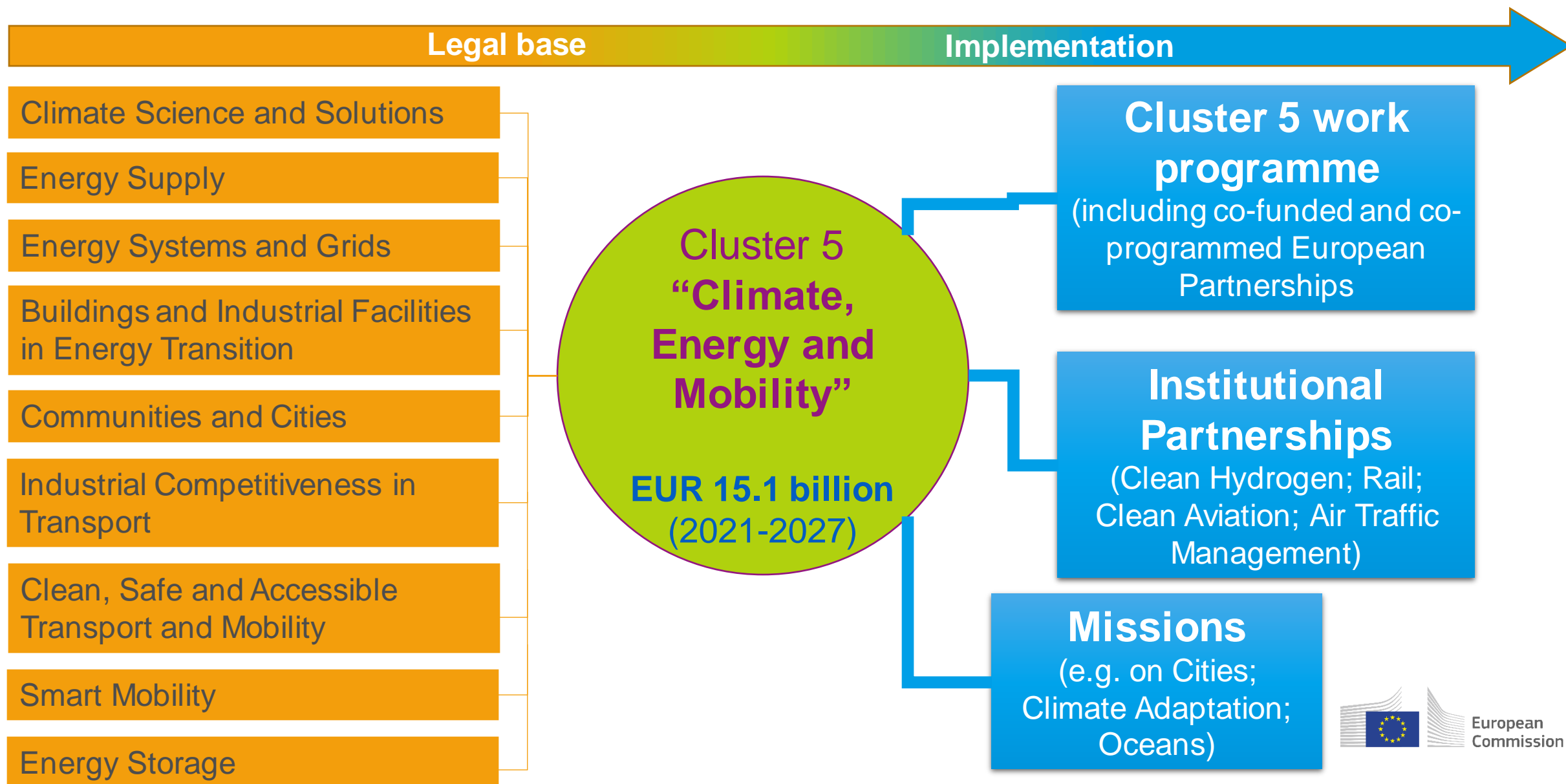
Spreading Excellence

CLIMATE, ENERGY AND MOBILITY

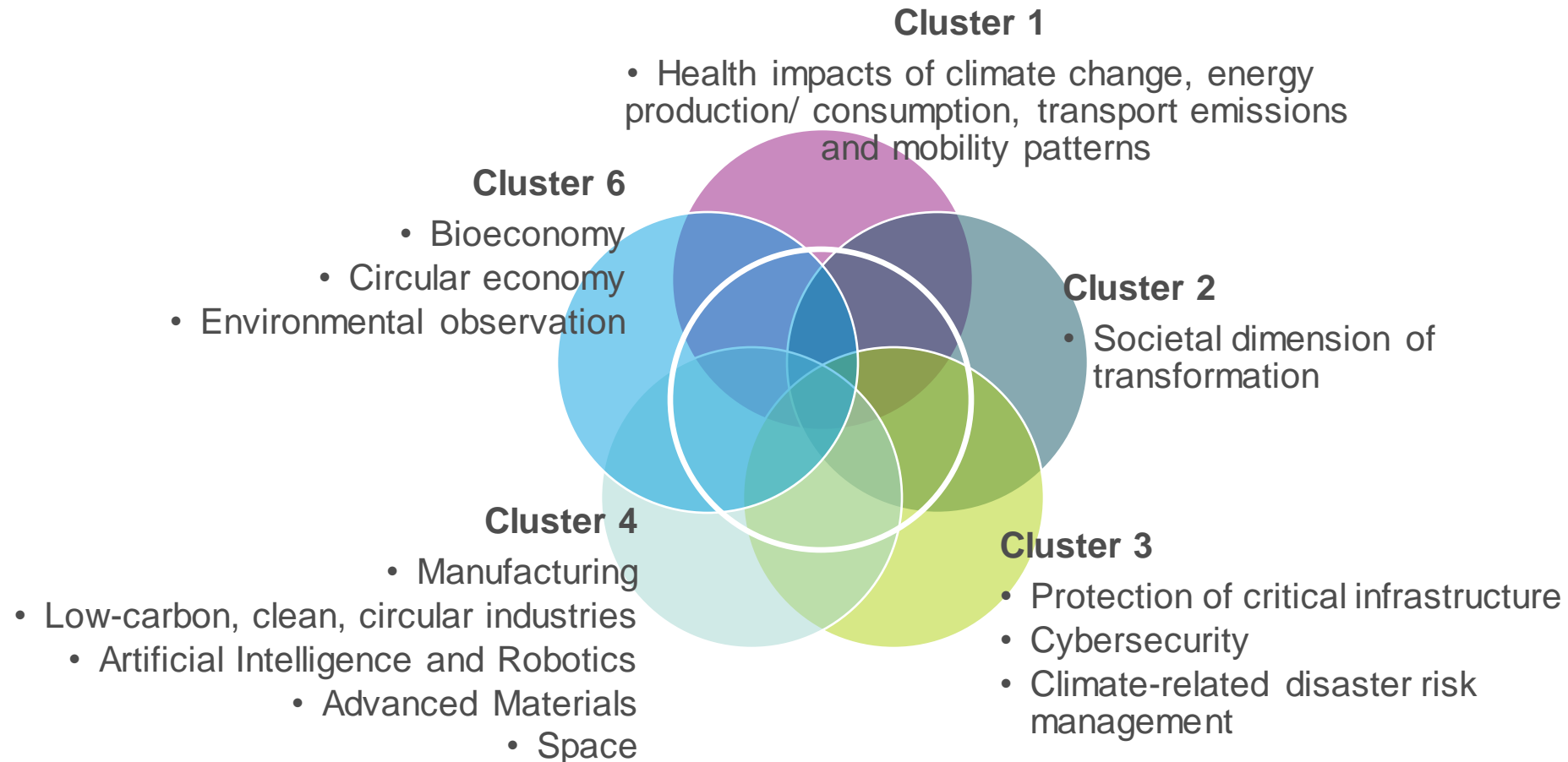
Cluster 5



Cluster 5 - overview



Cluster 5 – Links to other clusters



Cluster 5 Partnerships

Institutional Partnerships

- Transforming Europe's rail system
- Integrated Air Traffic Management
- Clean Aviation
- Clean Hydrogen

Co-funded Partnerships

- Driving urban transitions to a sustainable future (DUT)
- Clean Energy Transition

Co-programmed Partnerships

- Built4People | People-centric sustainable built environment
- Towards zero-emission road transport (2ZERO)
- Batteries: Towards a competitive European industrial battery value chain for stationary applications and e-mobility
- Zero-emission waterborne transport
- Connected, Cooperative and Automated Mobility (CCAM)

CLIMATE, ENERGY AND MOBILITY

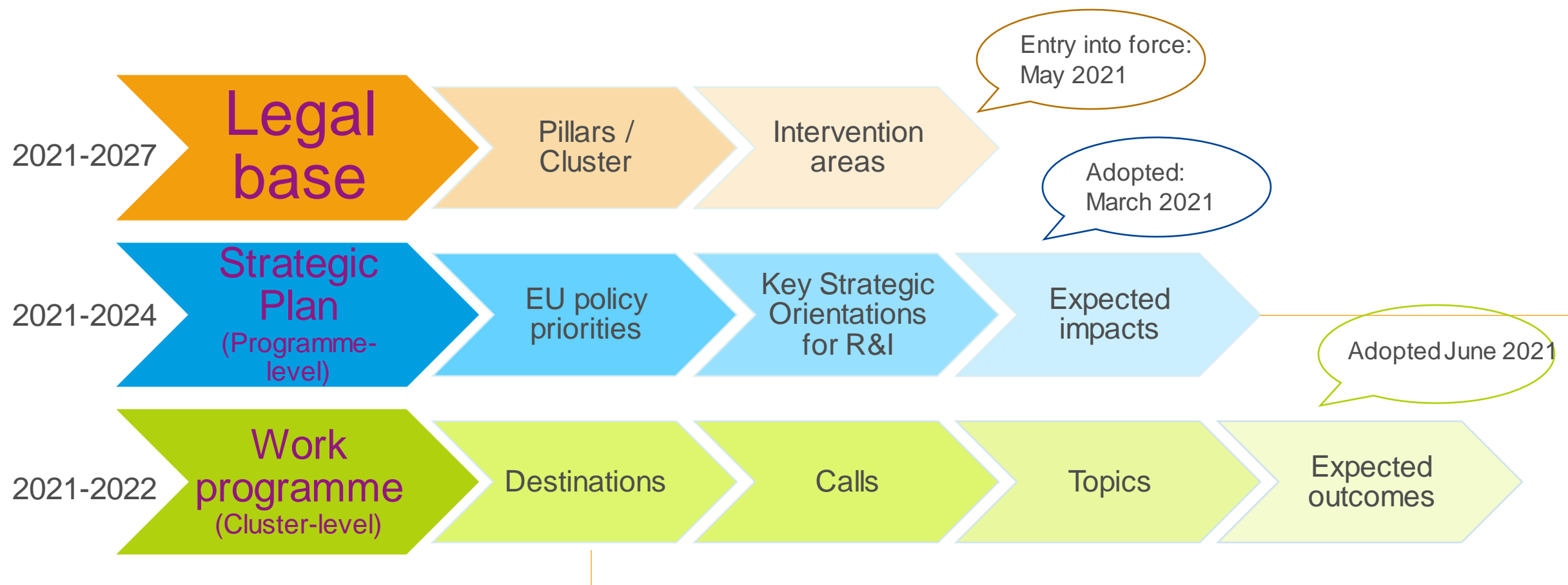


Cluster 5

Work programme 2021-2022



Programme intervention logic



EU Policy priorities

European Green Deal

- Climate Action; Clean Energy; Sustainable Mobility; Eliminating pollution; Building and renovating; Biodiversity; Sustainable Industry

A Europe fit for the digital age

- Artificial Intelligence; European data strategy; European Industrial Strategy; Cybersecurity

An economy that works for the people

- Internal market; Jobs, Growth and investment

Promoting our European way of life

- European Security Union; European Health Union

A stronger Europe in the world

- International partnerships; Trade policy; EU Foreign policy

A new push for European Democracy

- Strategic foresight; Future of Europe

Recent Commission initiatives:

Climate Action

- EU Climate Law (EU climate neutral by 2050)
- 2030 Climate Target Plan (55% GHG reduction by 2030)
- Make sectoral legislation 'fit for 55'
- EU Climate Adaptation Strategy
- Zero Pollution Action Plan

Energy

- EU Strategy for Energy System Integration
- Hydrogen strategy
- Renovation wave for Europe
- Offshore renewable energy

Mobility

- Sustainable and Smart Mobility Strategy

Research and Innovation

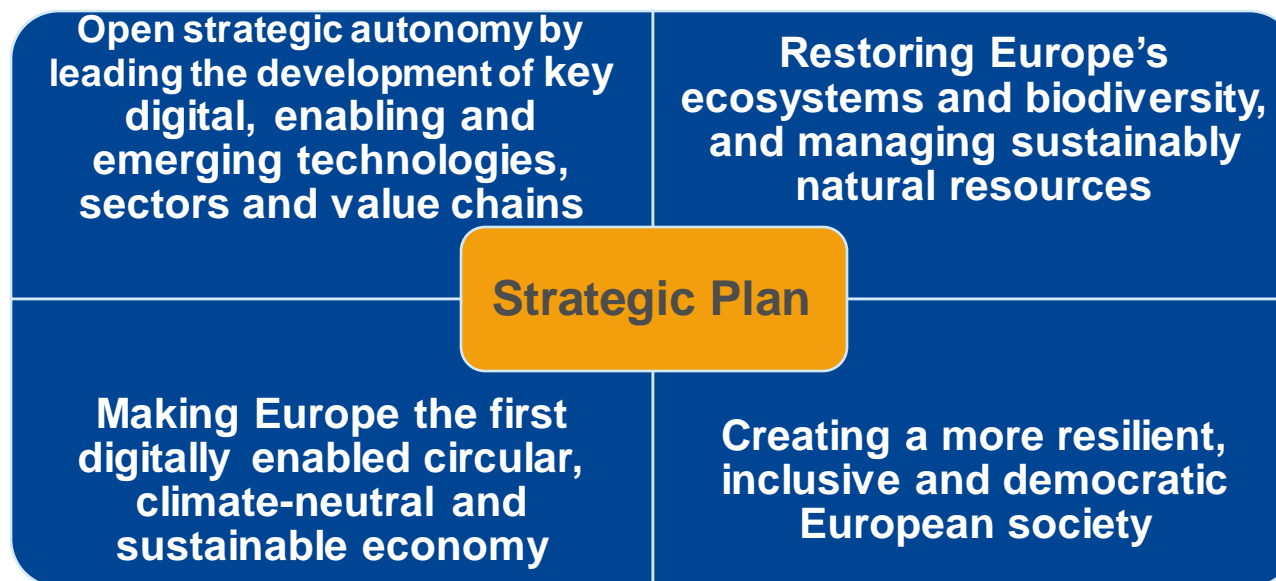
- A new European Research Area

Cluster 5 – Expected impacts

Transition to a climate-neutral and resilient society and economy enabled through **advanced climate science**, pathways and responses to climate change (mitigation and adaptation)

Clean and sustainable transition of the energy and transport sectors towards climate neutrality facilitated by innovative **cross-cutting solutions**

Efficient and sustainable **use of energy**, accessible for all is ensured through a clean energy system and a just transition

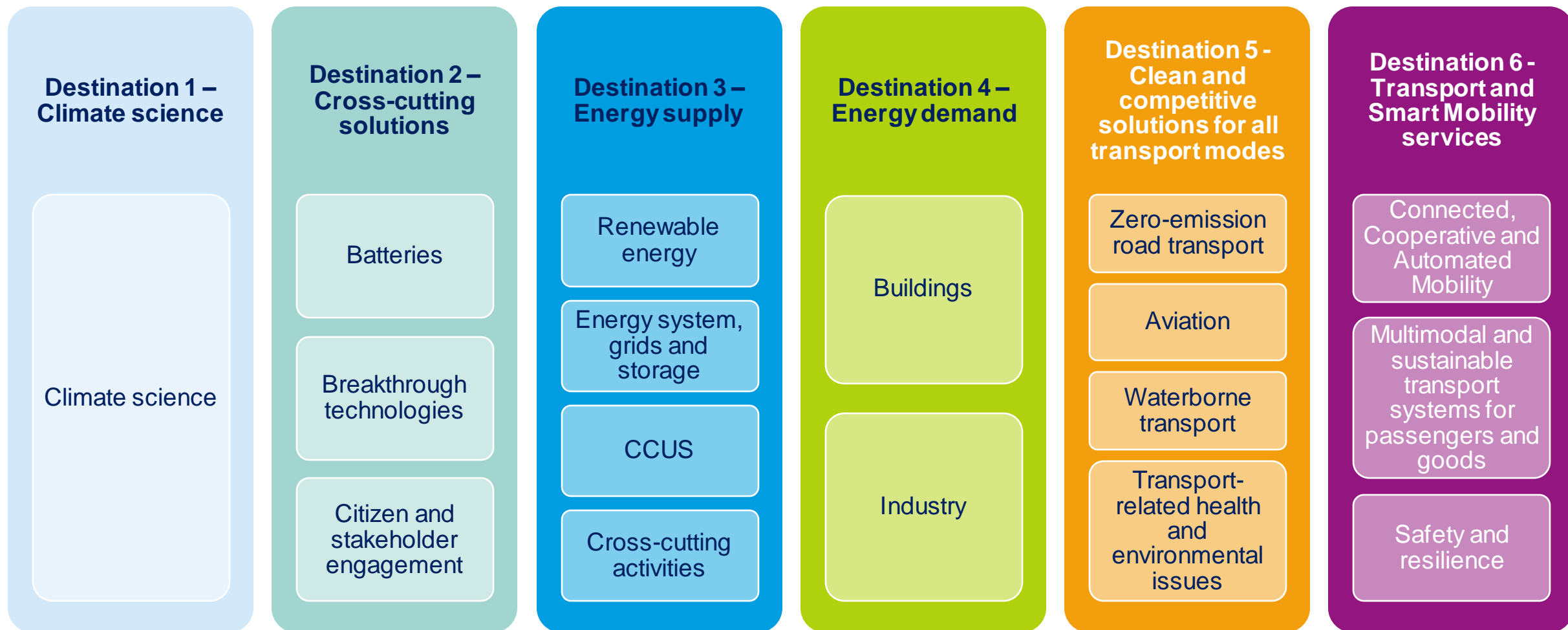


More efficient, clean, sustainable, secure and competitive **energy supply** through new solutions for smart grids and energy systems based on more performant renewable energy solutions

Safe, seamless, smart, inclusive, resilient, climate neutral and sustainable **mobility systems** for people and goods

Towards **climate-neutral and environmental friendly mobility** through clean solutions across all transport modes while increasing global **competitiveness** of the EU transport sector

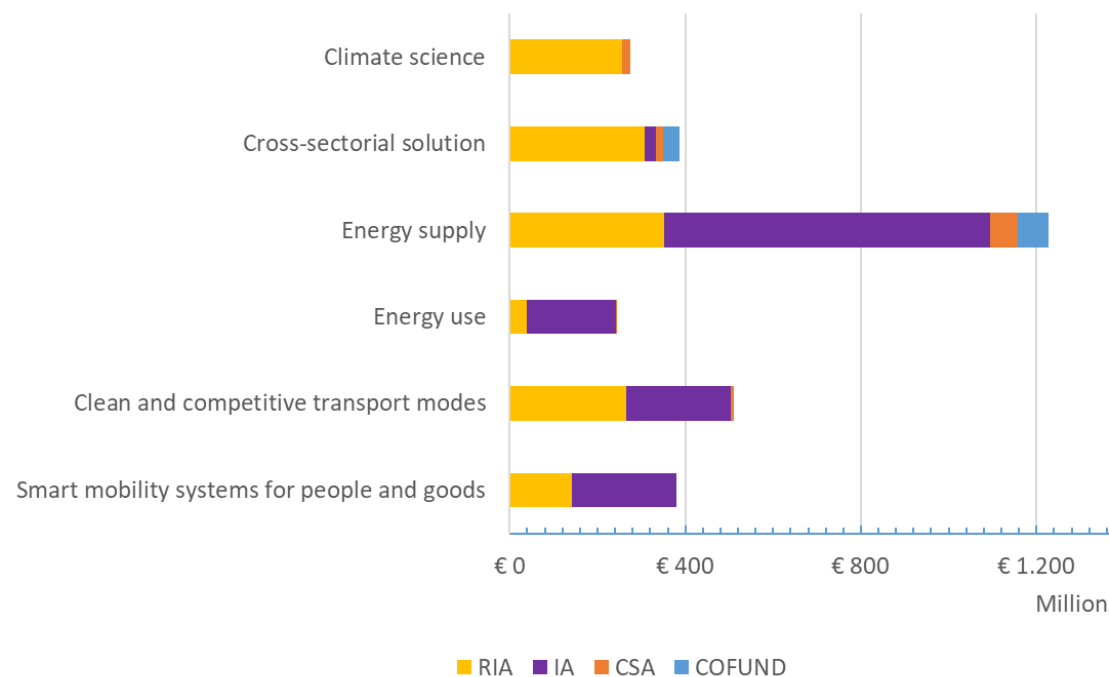
Cluster 5 Work programme - overview



Cluster 5 Work programme - overview

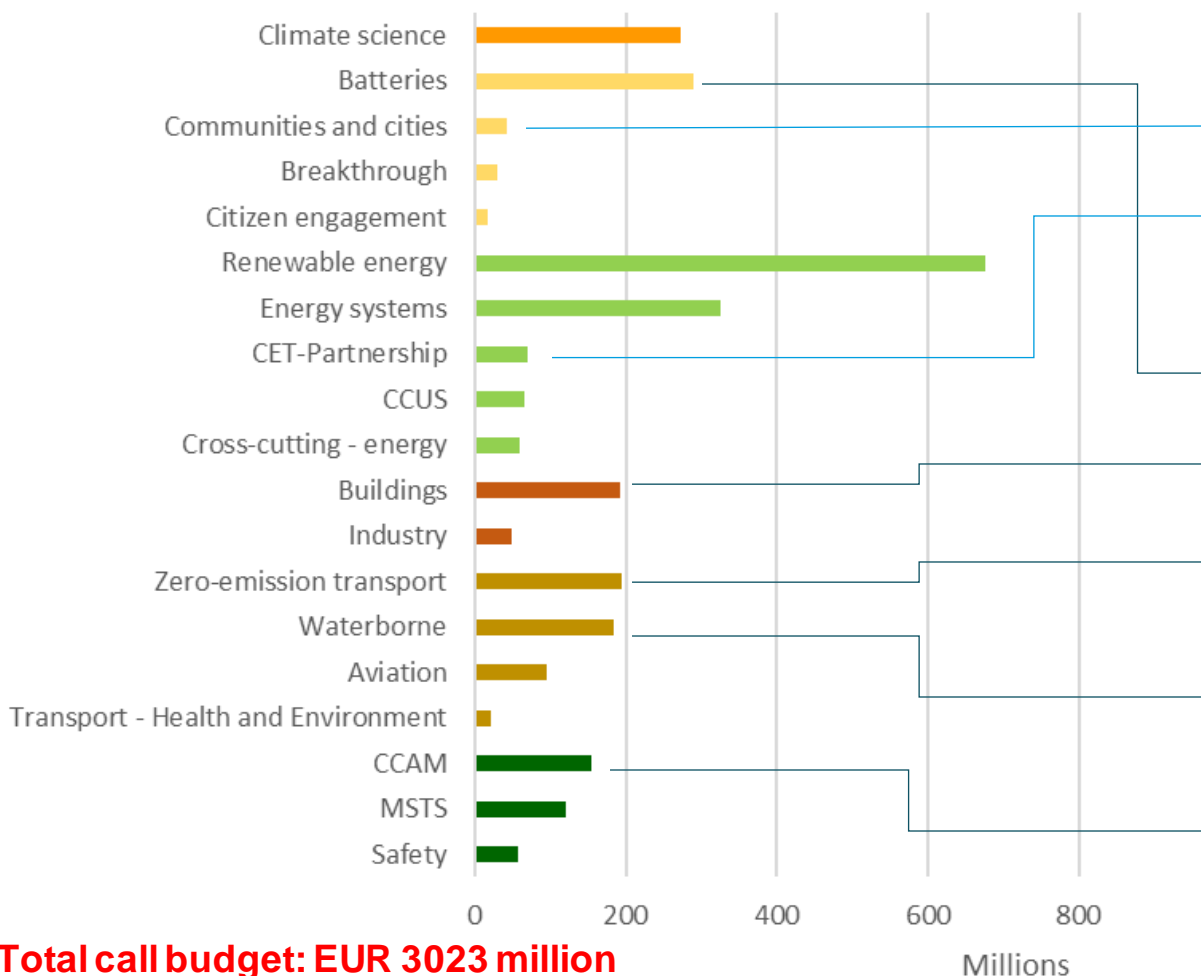
	Budget (Mio €)	Share of total	Number of topics	Share of total
Climate science	274.0	9%	17	9%
Cross-sectorial solution	387.5	13%	25	13%
Energy supply	1226.3	40%	67	36%
Energy use	244.0	8%	18	10%
Clean and competitive transport modes	511.0	17%	31	17%
Smart mobility systems for people and goods	380.0	13%	28	15%
TOTAL	3022.8		186	

EU contribution per Destination and type of action
(2021-2022, in Mio EUR)



Cluster 5 Work programme - budgets

EU contribution per thematic area
(2021-2022, in Mio EUR)



57 out 186 topics (31% of all) implement European Partnerships (2021-2022)

Co-funded Partnerships:

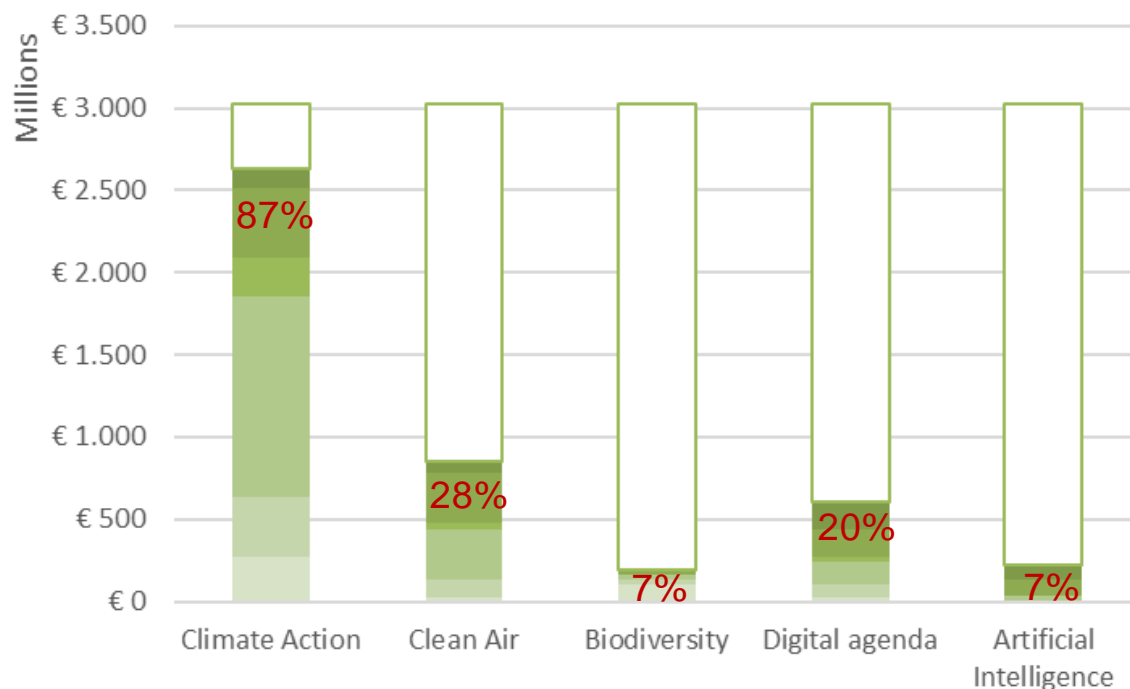
- **Driving Urban Transition:** 1 topic (37 M€ for 2021-2022)
- **Clean Energy Transition:** 1 topic (70 M€ for 2021-2022)

Co-programmed Partnerships:

- **Batteries:** 17 topics (EUR 293 million)
- **Built4People:** 8 topics (EUR 124 million)
- **Towards Zero-Emission Road Transport:** 7 topics (EUR 197 million)
- **Zero-Emission Waterborne Transport:** 12 topics (EUR 167.5 million)
- **Connected, Cooperative and Automated Mobility:** 11 topics (EUR 162 million)

Cross-cutting priorities

Contribution of **cluster 5** topics to cross-cutting policy priorities
(percentage of total call budget; WP 2021-2022)



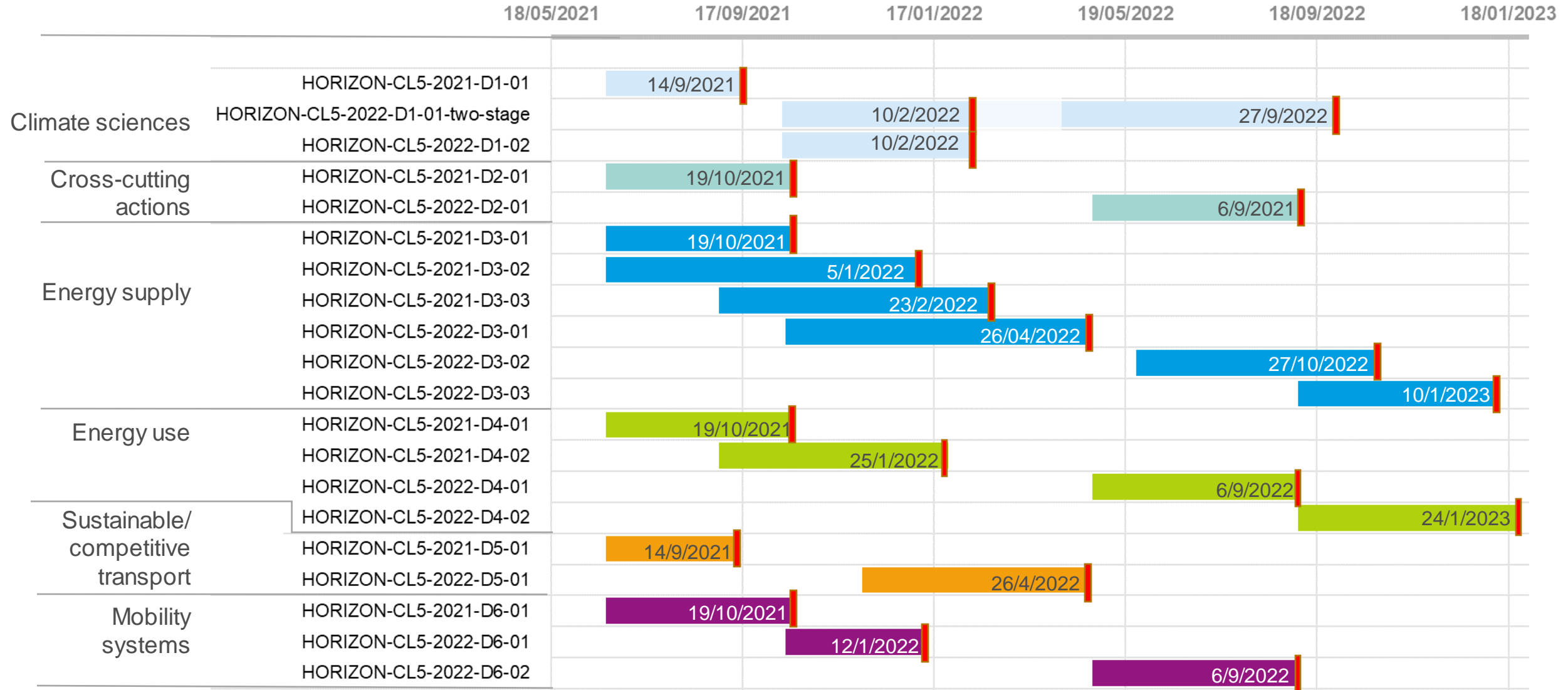
Budget share dedicated to **climate action** in other HE parts:

- Cluster 1: 300 M€ (17%)
- Cluster 2: 30 M€ (7%)
- Cluster 3: 40 M€ (10%)
- Cluster 4: 1235 M€ (41%)
- **Cluster 5: 2630 M€ (87%)**
- Cluster 6: 1345 M€ (72%)

Budget share dedicated to **digital agenda** in other HE parts:

- Cluster 1: 600 M€ (34%)
- Cluster 2: 95 M€ (22%)
- Cluster 3: 220 M€ (54%)
- Cluster 4: 1840 M€ (61%)
- **Cluster 5: 605 M€ (20%)**
- Cluster 6: 375 M€ (20%)

Cluster 5 call structure



Important websites

Information event on cluster 5 – Horizon Europe Info Days

https://ec.europa.eu/info/research-and-innovation/events/upcoming-events/horizon-europe-info-days/cluster-5_en

Funding & Tender Portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon>



EUROPEAN UNION

EU MISSIONS



Concrete solutions for our greatest challenges



#MissionClimate #EUmissions #HorizonEU



What are EU missions?

- EU missions are **addressing** the greatest challenges facing our world like fighting cancer, adapting to climate change, protecting our oceans, living in greener cities and ensuring soil health and food.
- Missions are solutions-oriented





Icons

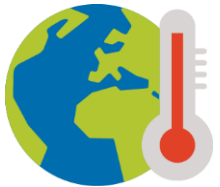
Adaptation to
Climate Change

Cancer

Climate-neutral
and Smart Cities

Restore our
Ocean and Waters

Soil Deal
for Europe





Timeline

- **Horizon Europe** Work Programme (WP) for 2021 under discussion with Member States (MS)
- MS approval expected in October 2021
- Publication of WP foreseen by end December 2021
- Opening of First calls in January 2022 and closing by mid April 2022.
- Signature of First grants and start of projects by end 2022

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EUROPEAN UNION



Thank you!

#MissionClimate

EUmissions

#HorizonEU

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