

#innovacion
#ayudascdti
#asesoramiento
#internacionalizacion



Horizon Europe

Cluster 5. Climate, Energy and Mobility

Infoday Cluster 5. Movilidad. CDTI
11 de Marzo de 2024

Juan Francisco Reyes Sánchez

Juanfrancisco.reyes@cdti.es

División de Programas de la UE, CDTI

915815562



(algunas) Políticas

2011 Libro Blanco de Transporte

2016 Unión Energética: STRIA

2017, 2018 Mobility packages

e.g 3er mobility package: fair&competitive, clean and connected

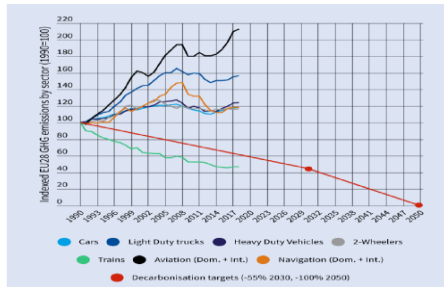
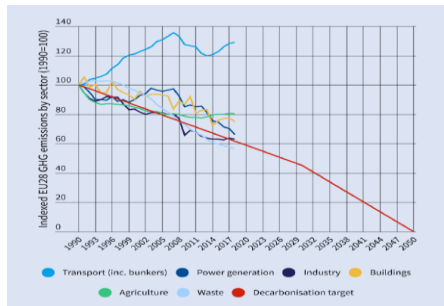
2018 Alianza de Baterías

2020 Green Deal

Sustainable Transport

- Adopt a strategy for **sustainable and smart mobility** by [2020]
- Revise the **CO2 emissions performance legislation** for light duty vehicles by June 2021
- Propose to **extend the EU's Emissions Trading System** to the maritime sector, and to reduce the free allowances for airlines by June 2021
- Support the **deployment of public charging points** with the launch of a funding call for alternative fuel infrastructure
- Consider legislative options to boost the production and supply of **sustainable alternative fuels** for the different transport modes
- Withdraw and resubmit a proposal to revise the Combined Transport Directive
- Review the **Alternative Fuels Infrastructure Directive** and the TEN-T Regulation
- Propose more **stringent air pollutant emissions standards** for combustion-engine vehicles

¿Época de cambios o cambio de época?



Digitalización,
Sostenibilidad,
Medioambiente,
Salud,
Ciudades,
Netflix movilidad,
EEUU, Asia,
COVID movilidad,
VRUs,
Impacto industrial,
ODs,
I+D+i,

....

2020 S&S Mobility Strategy



greenhouse gas emissions in transport by 2050

Reducing its dependence on fossil fuels



By 2030, there will be at least 30 million zero-emissions cars and 80 000 zero-emission lorries in operation.



By 2030, there will be at least 100 climate-neutral cities in Europe. Scheduled collective travel under 500 km should be carbon neutral by 2030 within the EU.



Zero-emission large aircraft will become ready for market by 2035.

Making alternative choices available



All large and medium-sized cities put in place their own sustainable urban mobility plans by 2030.



Traffic on high-speed rail will double by 2030. By 2050 rail freight traffic will double.



Transport by inland waterways and short sea shipping will increase by 25% by 2050.

Pricing to reflect environmental impact



The internalisation of external costs of transport at the latest by 2050 will ensure that those who use transport will bear the full costs rather than leaving others in our society to meet them.



Unleash full potential of data.



By 2030, integrated electronic ticketing facilitates seamless multimodal passenger transport. Freight transport will be paperless.



By 2030, automated mobility will be deployed on large scale.



Transport has been one of the sectors hit hardest by the COVID-19 pandemic. The EU has now an opportunity to build a mobility system that is sustainable, smart, and resilient: a system for future generations.

Building a strong and resilient Single Market:



Investment in transport infrastructure across the EU Member States;



By 2050, a fully operational, multimodal Trans-European Transport Network for sustainable and smart transport with high speed connectivity.

Creating a mobility system that is fair and just for all:



Make mobility affordable and accessible in all regions and for all passengers;



Improve the conditions for transport workers.

Ensuring the highest standards of safety and security in European transport:

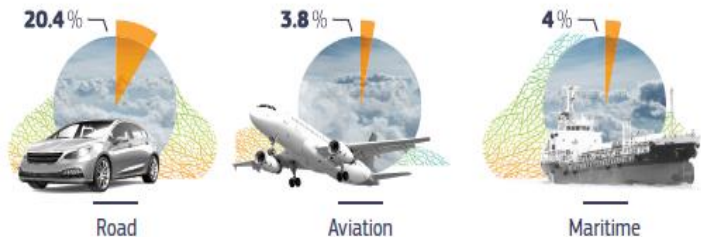


By 2050, the death toll for all modes of transport in the EU will be close to zero.

Fit for 55 (algunos impactos movilidad)

TRANSPORT NEEDS TO CUT EMISSIONS BY 90% BY 2050

Share of total EU Greenhouse Gas (GHG) emissions, per mode



TRANSPORT AND THE EMISSIONS TRADING SYSTEM (ETS): PUTTING A PRICE ON CARBON

Road

- Extension of the ETS to road transport and building fuels from 2026;
- Focus on upstream fuel suppliers (rather than households and car drivers);
- Revenues to be channelled to support vulnerable households and investments in cleaner mobility.

Aviation

- Tighter cap on the number of allowances for intra-EU flights, starting from current levels and reduced by 4.2% annually;
- Full phase-out of free allowances by 2026;
- Extra-European flights to be subject to offsetting under the international CORSIA scheme.

Maritime

- Gradual extension of the ETS to maritime starting in 2023, with a 3-year phase in period;
- Focus on large ships (above 5000 gross tonnage) accounting for 90% of CO₂ emissions;
- Intra-EU traffic and 50% of extra-EU voyages covered by the scheme

CLEANER ROAD TRANSPORT

More ambitious CO₂ emissions standards for new cars and vans to help grow the number of zero- and low-emission vehicles on European roads.

Binding requirements for the rollout of public charging and hydrogen refuelling stations for cars, vans and trucks.



Public charging and hydrogen refuelling stations will be widely available, interoperable and easy to use, including at fixed intervals along Europe's major transport corridors

National fleet based targets for charging stations for cars and vans – those could lead to approximately*:



*according to Commission Impact Assessment of vehicle uptake following the 'Fit for 55' proposals and assuming an average power output of approx. 15kW per recharging station

Fit for 55 (algunos impactos movilidad)

CLEAN TRANSPORT FUELS AND SUSTAINABLE FUEL USE

A new Renewable Energy Directive for more renewables in the transport sector

- New targets on greenhouse gas emissions of transport and use of innovative fuels;
- Strengthened criteria and certification for sustainability and greenhouse gas savings.

Targeted reduction
in transport GHG intensity



Targeted share
of renewable H2 and
synthetic fuels

2.6 % by 2030



Targeted share
of advanced biofuels

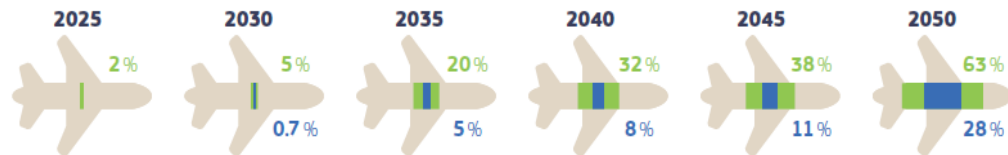
2.2 % by 2030

ReFuelEU: Accelerating aviation's decarbonisation through sustainable aviation fuels (SAF)

- Obligation on fuel suppliers to distribute **increasing levels of SAF** at all EU airports;
- Obligation on airlines to uplift SAF-blended fuel before each flight from an EU airport;
- Focus on the **most innovative and sustainable fuels**, e.g. advanced biofuels and synthetic fuels (also known as electro-fuels);
- Ensure **electricity supply for stationary commercial aircraft** at all gates by 2025 and additionally at all outfield positions by 2030.

New targets for sustainable aviation fuels (as % of fuel mix)

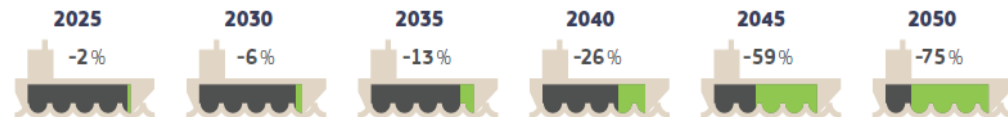
■ Sustainable aviation fuels ■ Specific sub-mandate on e-fuels



FuelEU: Accelerating maritime's decarbonisation through renewable and low-carbon fuels and technologies

- Introduction of a **fuel standard limiting the greenhouse gas intensity** of energy used on ships;
- Obligation for most polluting ships to connect to **onshore power supply or use zero-emission technologies** at berth;
- **Alignment with ETS on scope** (ships above 5,000 gross tonnage; intra-EU + 50 % extra-EU) and on reporting and verification obligations.

Maritime targets on the limits on greenhouse gas intensity of the energy used on-board compared to 2020



+ Otros (análisis, políticas,)



Net-Zero Industry Act

Creating the conditions for an EU clean-tech sector at pace with global trends

€600 billion annually
The worth of net-zero technology global market by 2030

3x
key mass-manufactured net-zero technologies expected by 2030

€100 billion
The EU net-zero ecosystem after doubling in value from 2020 to 2021

By 2050

Nearly 4x increase
in deployment of renewables

6x increase
in deployment of heat pumps

15x increase
in global electric vehicle production

Key technologies



EU Battery regulation



EDIS



WHERE DO WE WANT TO GO?

WHAT?
A European Defence Industrial Strategy (EDIS), to strengthen the competitiveness and readiness of the European Defence Technological and Industrial Base (EDTIB).

WHY?
Following Russia's unprovoked invasion of Ukraine and the ensuing emergency responses, it is now time to move to structural EU defence readiness to better protect our citizens.

WHERE DO WE STAND?
The EDTIB is a competitive global player capable of producing world class advanced systems. But its full potential is affected by years of underinvestment and fragmentation of defence demand along national lines. These trends have increased dependencies on third countries.

EU Member States need the defence industry to be capable of producing more and faster. This will require more cooperation and collective action as Europeans. EDIS proposes several tangible indicators:

- By 2030, the value of intra-EU defence trade should represent at least 35% of the value of the EU defence market.
- By 2030, at least 50% of Member States defence procurement budget should be devoted to procurement from the EDTIB, and 60% by 2035.
- By 2030, Member States should procure at least 80% of defence equipment in a collaborative manner.

EU's circular economy action plan
EU's industrial strategy
IAs...

Horizonte Europa

Climate, Energy and Mobility

Ppto (borrador dic 2020, incluye NGEU)

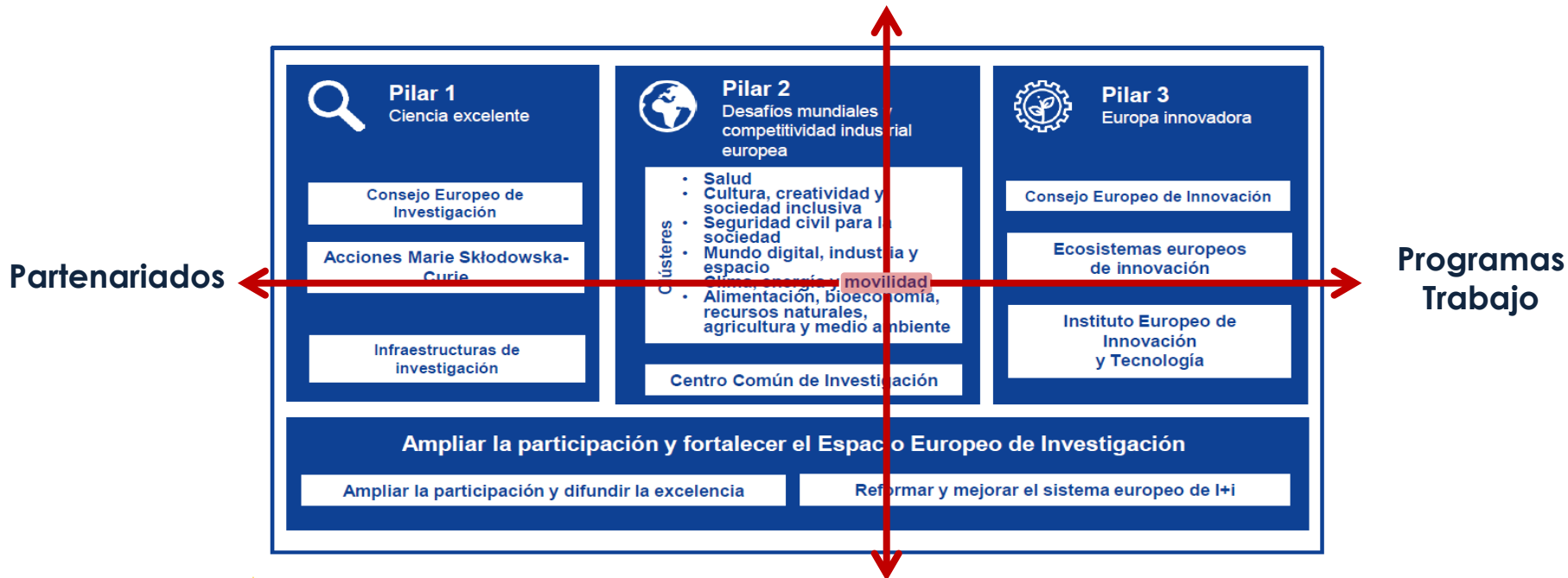
13.465

constante

15.123

corriente

Billion EUR



Relación entre políticas y resultado de los proyectos

Strategic Planning and Programming (EC)

STRATEGIC PLAN

WORK PROGRAMME

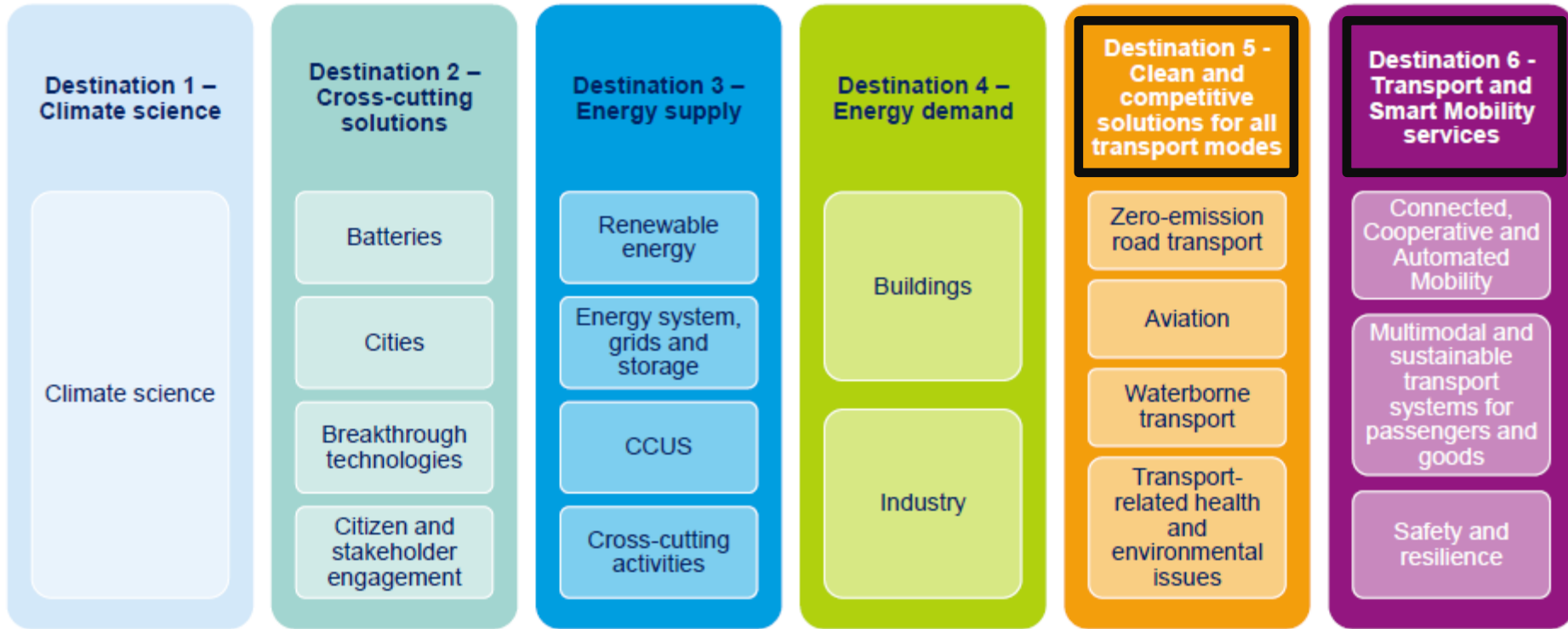
EU POLICY PRIORITIES	Overall priorities of the European Union (Green Deal, Fit for the Digital Age,...)
KEY STRATEGIC ORIENTATIONS	Set of strategic objectives within the EC policy priorities where R&I investments are expected to make a difference
IMPACT AREAS	Group of expected impacts highlighting the most important transformation to be fostered through R&I
EXPECTED IMPACTS = DESTINATIONS	Wider long term effects on society (including the environment), the economy and science , enabled by the outcomes of R&I investments (long term). It refers to the specific contribution of the project to the work programme expected impacts described in the destination. Impacts generally occur some time after the end of the project.
EXPECTED OUTCOMES = TOPICS	The expected effects, over the medium term , of projects supported under a given topic. The results of a project should contribute to these outcomes, fostered in particular by the dissemination and exploitation measures. This may include the uptake, diffusion, deployment, and/or use of the project's results by direct target groups. Outcomes generally occur during or shortly after the end of the project.
PROJECT RESULTS	What is generated during the project implementation. This may include, for example, know-how, innovative solutions, algorithms, proof of feasibility, new business models, policy recommendations, guidelines, prototypes, demonstrators, databases and datasets, trained researchers, new infrastructures, networks, etc. Most project results (inventions, scientific works, etc.) are 'Intellectual Property', which may, if appropriate, be protected by formal 'Intellectual Property Rights'

PROJECT PROPOSALS

Application process (researchers)



Cluster 5. Climate, energy and mobility. Workprogramme



Cluster 5. Climate, energy and mobility

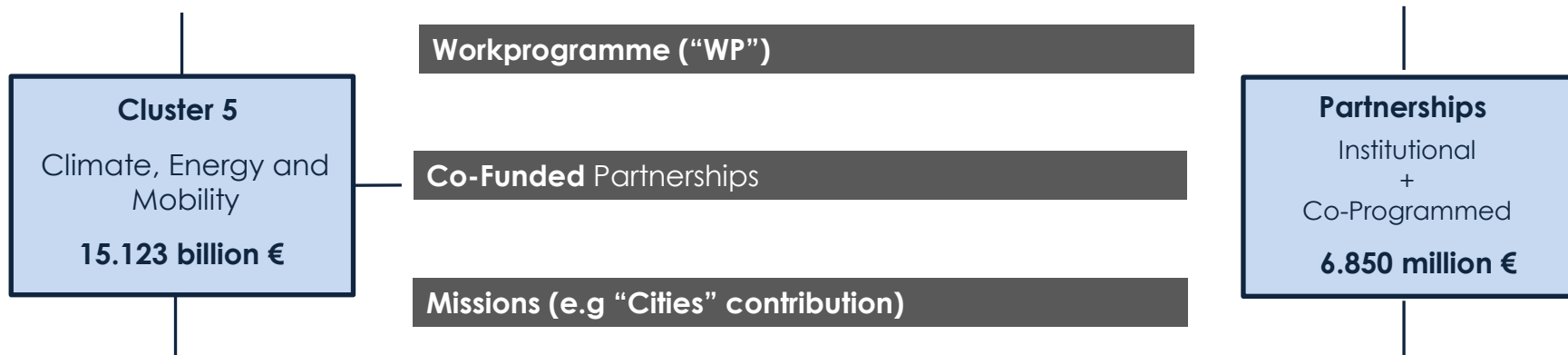
1. Institutional Partnerships HE EU Contribution (H2020 EU Contribution): Convocatorias Propias

Europe's Rail. **0.6 billion €** (0.45 billion €)

Single European Sky ATM Research **0.6 billion €** (0.58 billion €)

Clean Aviation **1.7 billion €** (1.7 billion € EU)

Clean Hydrogen **1 billion € + 200 million EUR** RePOWEREU (0.66 billion € EU)



2. Co-Programmed Partnerships (Workprogramme) (H2020 EU Contribution) Convocatorias dentro de "WP"

Toward zero-emission road transport (2ZERO). **615 million €** (750 million €)

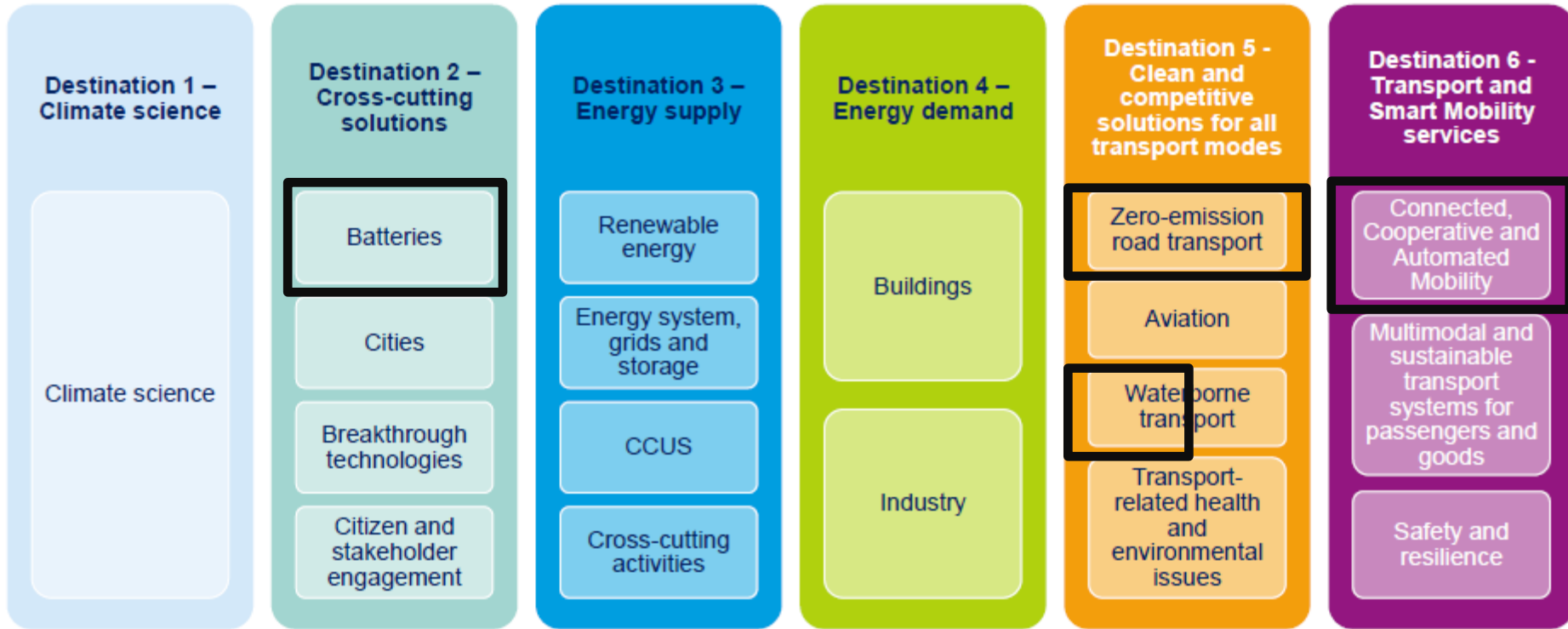
Batteries **925 million €** (N/A)

Zero-emission waterborne transport. **530 million €** (N/A)

C. C. Automated Mobility (CCAM). **500 million €** (N/A)

P. sustainable built environment (Built4People) **380 million €** (600 million €)

Cluster 5. Climate, energy and mobility. Workprogramme



Co Programmed Partnerships

Cluster 5. Climate, energy and mobility

Trabajar con últimas versiones WP 2023 / 2024 Oficial

Introducción

WP Cluster 5

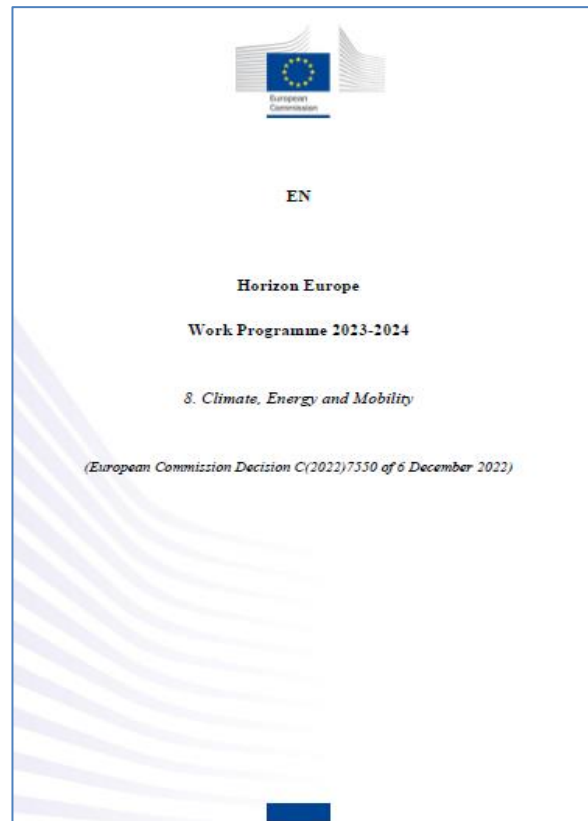
Anexos generales

+ Legislación, Strategic Programme 2021/2024

+ Out of H. Europe: Policy,

Presentaciones Infoday COM Cluster 5 17 Octubre 2023

<https://research-innovation-community.ec.europa.eu/events/4MjD45QEP6eLsP9j3MCEOc/overview>



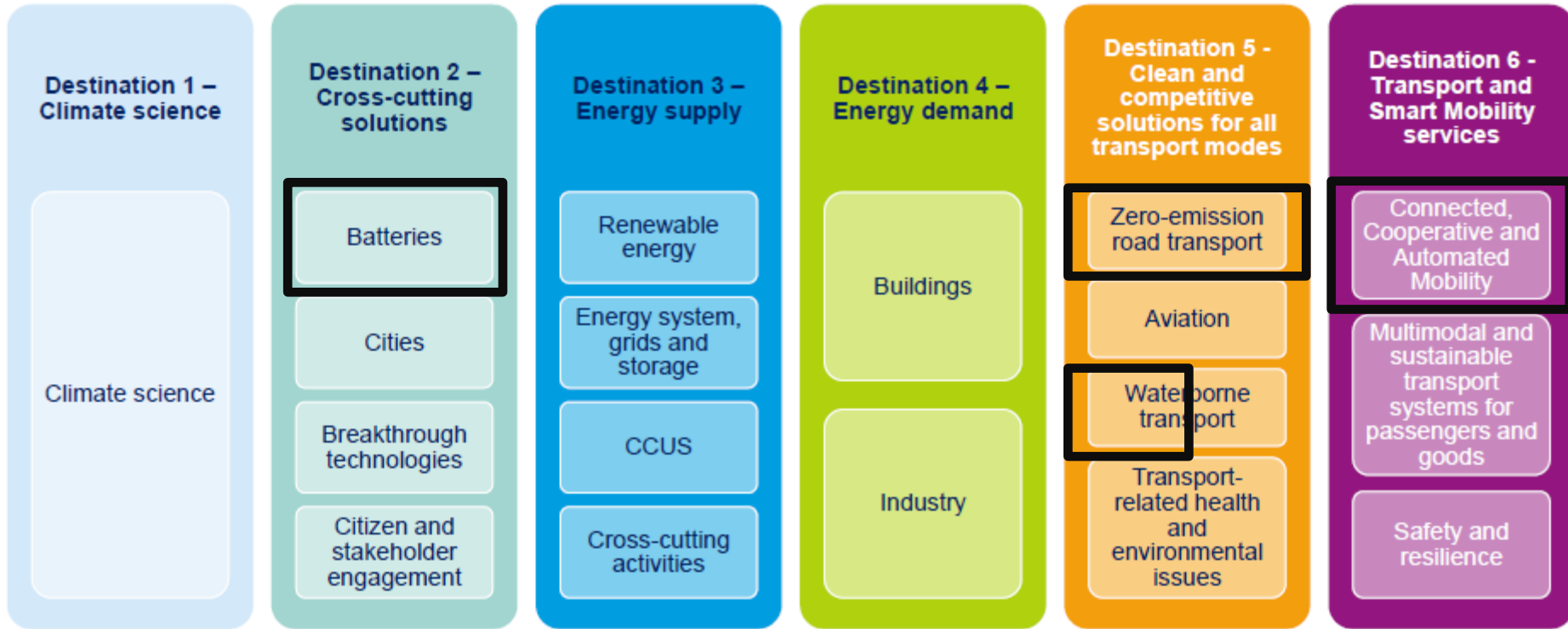
Summary. WP 2023 / 2024. Mobility. Budget

Modificaciones WP 2024	Budget (Million EUR)			N° Topics		
	2023	2024	Total general	2023	2024	Total general
DESTINATION 2	119	101	220	8	7	15
Batteries	119	101	220	8	7	15
DESTINATION 5	217	202,05	419,05	19	18	37
2ZERO	59,5	77	136,5	6	6	12
Aviation	54	57	111	4	4	8
Cross-cutting	0,5		0,5	1	0	1
Transport-related health and environment	10	7	17	1	1	2
Waterborne transport	93	61,05	154,05	7	7	14
DESTINATION 6	108,5	122,5	231	13	12	25
CCAM	50	52	102	5	5	10
Cross-cutting	1,5		1,5	1	0	1
Multimodal transport, infrastructure and logistics	31	48	79	4	4	8
Safety and resilience	26	22,5	48,5	3	3	6
Total general	444,5	425,5	870	40	37	77

Summary. WP 2023 / 2024. Mobility. Calls

Destination	Area	Call	Call opening	Call deadline
2	Batteries	HORIZON-CL5-2023-D2-01	13/12/2022	18/04/2023
		HORIZON-CL5-2023-D2-02	04/05/2023	05/09/2023
	Batteries	HORIZON-CL5-2024-D2-01	07/12/2023	18/04/2024
		HORIZON-CL5-2024-D2-02	07/05/2024	05/09/2024
5	2ZERO	HORIZON-CL5-2023-D5-01	13/12/2022	20/04/2023
	Aviation			
	Waterborne transport			
	Transport health and environment			
	Cross cutting	HORIZON-CL5-2024-D5-01	07/12/2023	18/04/2024
	2ZERO			
	Aviation			
	Waterborne transport			
Transport-related health and environment				
6	CCAM	HORIZON-CL5-2023-D6-01	04/05/2023	05/09/2023
	Mult transport, infrastructure and logistics			
	Safety and resilience			
	Cross cutting	HORIZON-CL5-2024-D6-01	07/05/2024	05/09/2024
	CCAM			
	Multimodal transport, infrastructure and logistics			
Safety and resilience				

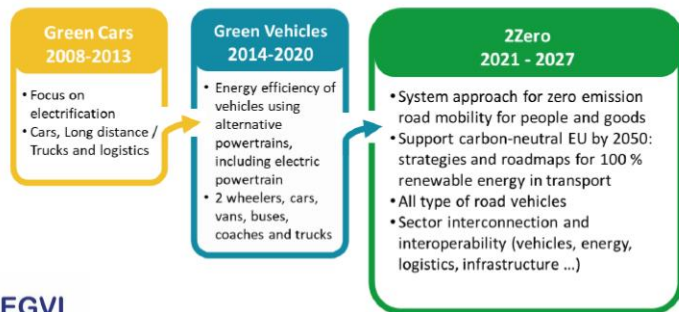
Cluster 5. Climate, energy and mobility. Workprogramme



Co Programmed Partnerships

2ZERO. Topics

Evolución



Battery Electric

Fuel cell electric vehicles



BEV

- Vehicle integration of innovative battery technologies
- Vehicle architecture
- Battery management systems and thermal system
- Battery packs and modules
- Power electronic and charging solutions
- Advanced electric motors
- Integration of BEV into the grid

FCEV

- Electrification of heavy duty vehicles
- Integration of fuel cell systems into vehicles, focusing on heavy duty vehicles
- Synergy of electronics and vehicles architecture with electric vehicles
- Integration of hydrogen components (tank, sensors,...)

2Zero 4 pillars

Vehicle technologies and vehicle propulsion solutions for BEV and FCEV

Innovative concepts, solutions and services for the zero emission mobility of people and goods

Integration of the battery electric vehicle into the energy system and related charging infrastructure

LCA and circular economy approaches for sustainable and innovative road mobility solutions

2ZERO. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D5-01-01	Smart, low-cost pervasive stationary slow charging and bi-directional solutions synergic with the grid for EV mass deployment (2ZERO Partnership)	IA	15,00	7-8	2	7-8	
HORIZON-CL5-2024-D5-01-02	Integration and testing of next generation post 1200V electric powertrains (2ZERO Partnership)	RIA	15,00	4-6	3	5	
HORIZON-CL5-2024-D5-01-03	Advanced battery system integration for next generation vehicles (2ZERO Partnership)	RIA	10,00	5	2	5	
HORIZON-CL5-2024-D5-01-04	Integrated flexible multipoint megawatt charging systems for electric truck mass deployment (2ZERO Partnership) (2024)	IA	17,00	7-8,5	2	8	
HORIZON-CL5-2024-D5-01-05	Advanced digital development tools to accelerate the development of software defined vehicles that enable zero-emission mobility (2ZERO Partnership)	RIA	10,00	4-5	2	4-5	
HORIZON-CL5-2024-D5-01-06	New designs, shapes, functionalities of Light Commercial Vehicles (2ZERO Partnership)	IA	10,00	10	1	7-8	

Aviation. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D5-01-07	Accelerating climate neutral aviation, minimising non-CO2 emissions	RIA	17,00	4-5	4	2-4	
HORIZON-CL5-2024-D5-01-08	Competitiveness and digital transformation in aviation – advancing further composite aerostructures	RIA	16,00	3-5	4	2-4	LS
HORIZON-CL5-2024-D5-01-09	Impact monitoring of EU Aviation R&I	RIA	8,00	8	1		
HORIZON-CL5-2024-D5-01-10	Towards a flying testbed for European leadership in aviation	RIA	16,00	16	1	4-5	

T. health and env. & Cross-cutting. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D5-01-18	Assessment of air pollutant emissions from low-carbon fuels in the heavy-duty, aviation, and maritime sectors	RIA	7,00	3,5	2	5-6	

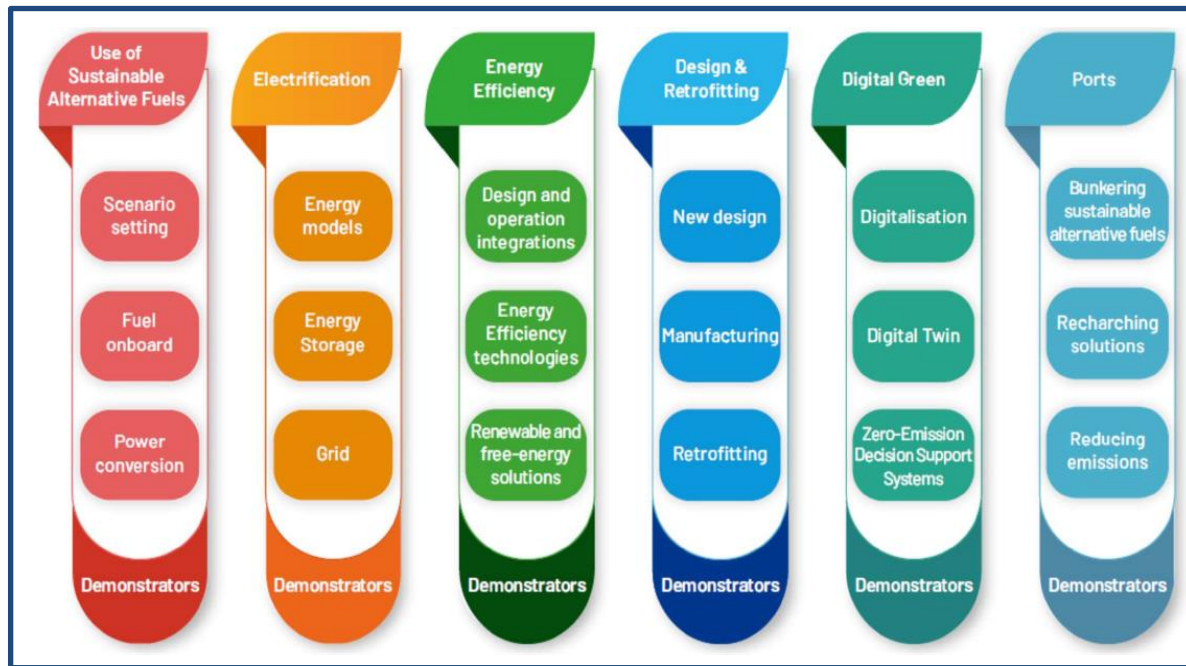
ZEWT. SRIA

Operational objectives of the Partnership:

Elimination of **GHG emissions**
(both for retrofitting as well as new build)

Eliminating **air pollution**

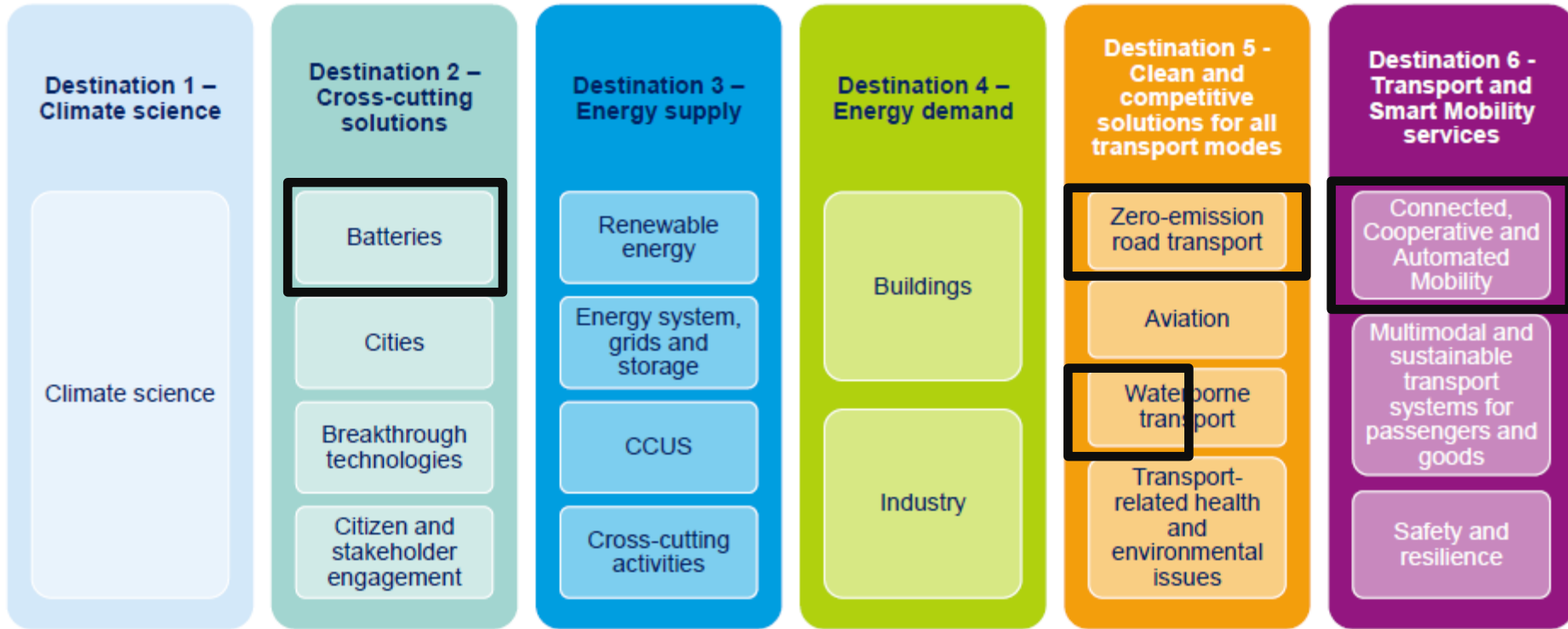
Eliminating **water pollution:**



Waterborne (including ZEWT). WP 2024

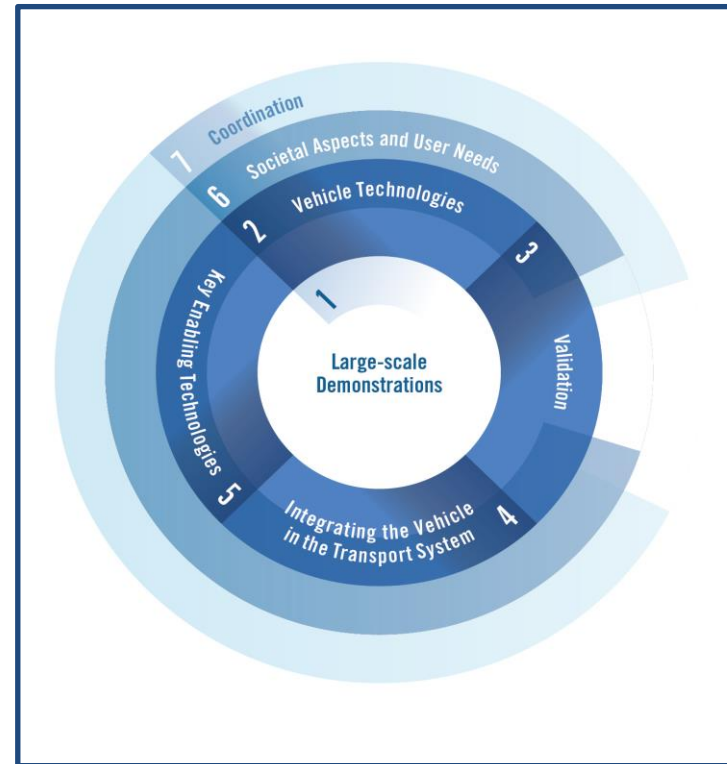
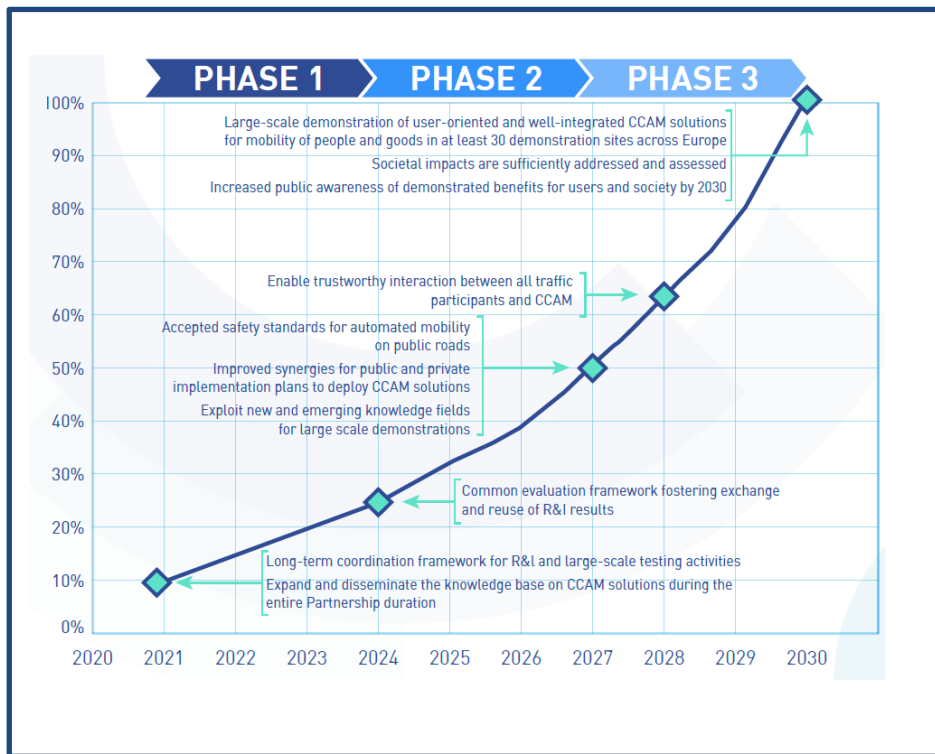
Topic code	Topic title	ToA	Budget	Budget project	N° Proj	TRL	LS
HORIZON-CL5-2024-D5-01-11	Achieving high voltage, low weight, efficient electric powertrains for sustainable waterborne transport (ZEWT Partnership)	RIA	15,00	7,5	2	5	
HORIZON-CL5-2024-D5-01-12	Combining state-of-the-art emission reduction and efficiency improvement technologies in ship design and retrofitting for contributing to the "Fit for 55" package objective by 2030 (ZEWT Partnership)	IA	15,00	7,5	2	7	
HORIZON-CL5-2024-D5-01-13	Demonstration of Technologies to minimise underwater noise generated by waterborne transport (ZEWT Partnership)	IA	6,00	6	1	6-8	
HORIZON-CL5-2024-D5-01-14	Demonstrating efficient fully DC electric grids within waterborne transport for large ship applications (ZEWT Partnership)	IA	15,00	7,5	2	6-8	
HORIZON-CL5-2024-D5-01-15	Advanced digitalisation and modelling utilizing operational and other data to support zero emission waterborne transport (ZEWT Partnership)	IA	7,70	7,7	1	6-7	
HORIZON-CL5-2024-D5-01-16	Structuring the Waterborne transport sector , including through changed business and industrial models in order to achieve commercial zero-emission waterborne transport (ZEWT Partnership)	CSA	0,85	0,85	1		LS
HORIZON-CL5-2024-D5-01-17	Coordinating and supporting the combined activities of member and associated states towards the objectives of the Zero Emission Waterborne Transport partnership so as to increase synergies and impact (ZEWT Partnership)	CSA	1,50	1,5	1		LS

Cluster 5. Climate, energy and mobility. Workprogramme



Co Programmed Partnerships

CCAM. SRIA



CCAM. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D6-01-01	Centralized, reliable, cyber-secure & upgradable in-vehicle electronic control architectures for CCAM connected to the cloud-edge continuum (CCAM Partnership)	RIA	12,00	6	2	5	
HORIZON-CL5-2024-D6-01-02	Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system (CCAM Partnership)	RIA	14,00	14	1	5	
HORIZON-CL5-2024-D6-01-03	Orchestration of heterogeneous actors in mixed traffic within the CCAM ecosystem (CCAM Partnership)	IA	12,00	6	2	6-7	
HORIZON-CL5-2024-D6-01-04	AI for advanced and collective perception and decision making for CCAM applications	RIA	10,00	5	2	5	
HORIZON-CL5-2024-D6-01-05	Robust Knowledge and Know-How transfer for Key-Deployment Pathways and implementation of the EU-CEM (CCAM Partnership)	CSA	4,00	4	1		LS

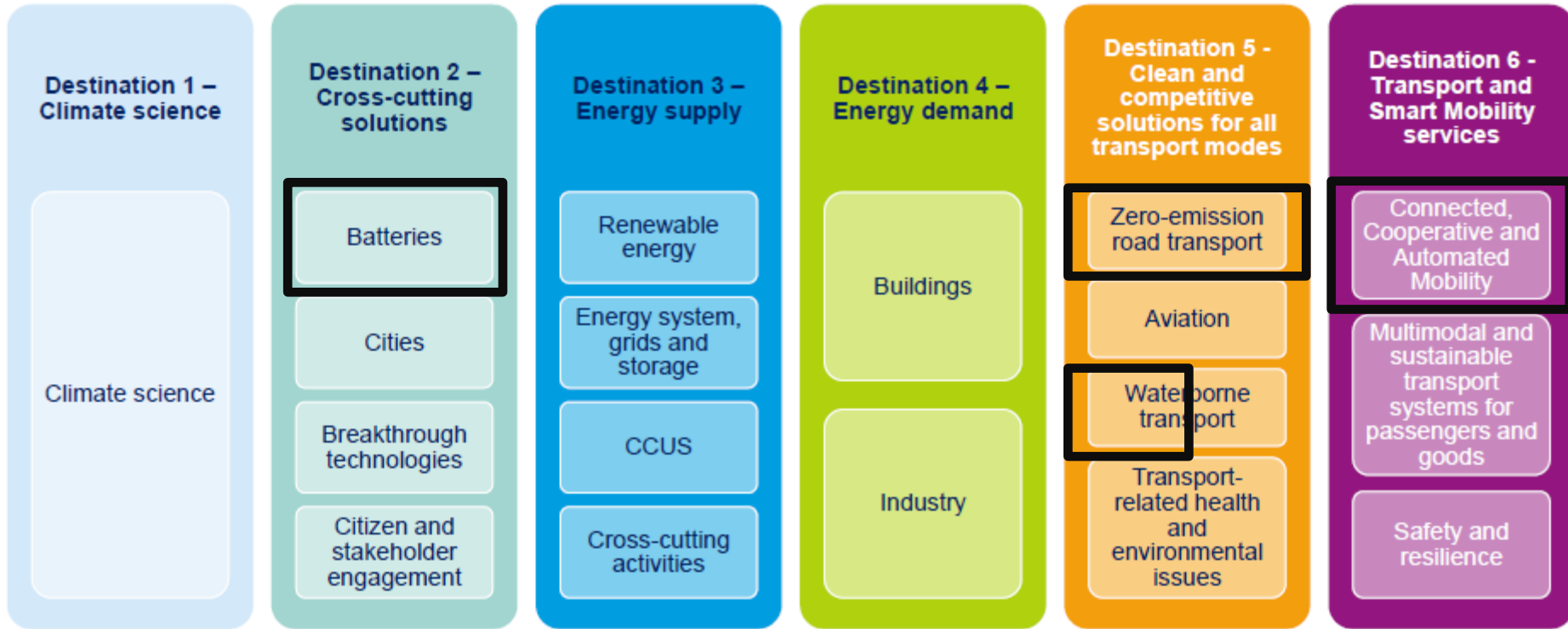
Multi. transport, infrastructure and logistics. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D6-01-06	Optimising multimodal network and traffic management , harnessing data from infrastructures, mobility of passengers and freight transport	RIA	10,00	4-5	2	5	
HORIZON-CL5-2024-D6-01-07	Scaling up logistics innovations supporting freight transport decarbonisation in an affordable way	IA	20,00	10	2	7	
HORIZON-CL5-2024-D6-01-08	Improved transport infrastructure performance – Innovative digital tools and solutions to monitor and improve the management and operation of transport infrastructure	IA	15,00	5	3	7	
HORIZON-CL5-2024-D6-01-09	Policies and governance shaping the future transport and mobility systems	RIA	3,00	3	1		LS

Safety & Resilience. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D6-01-10	Ensuring the safety, resilience and security of waterborne digital systems	RIA	8,50	4	2	5-6	
HORIZON-CL5-2024-D6-01-11	Effects of disruptive changes in transport : towards resilient, safe and energy efficient mobility	RIA	7,00	3-3,5	2		LS
HORIZON-CL5-2024-D6-01-12	A new framework to improve traffic safety in the EU , with reduced energy dependency of transport and use of private cars	RIA	7,00	3,5	2		LS

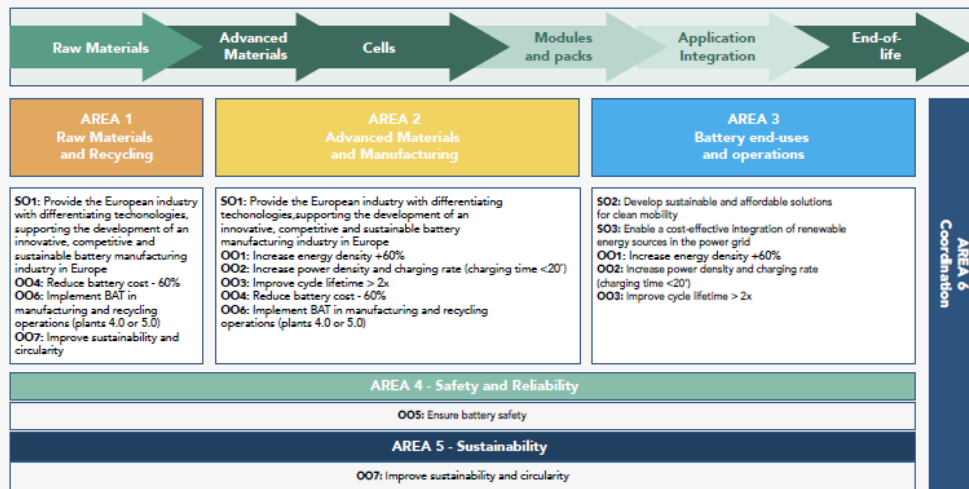
Cluster 5. Climate, energy and mobility. Workprogramme



Co Programmed Partnerships

Batteries. SRIA

Figure 13 | R&I areas in line with the specific and technical objectives of the partnership.



For the battery applications sectors with a **dedicated partnership** (such as road, waterborne, airborne and rail transports) the dedicated application-oriented partnership will take the lead on the downstream R&I segments activities specific to its sector, especially for the integration of batteries in their specific applications.



Batteries. WP 2024

Topic code	Topic title	ToA	Budget	Budget project	Nº Proj	TRL	LS
HORIZON-CL5-2024-D2-01-01	Advanced sustainable and safe pre-processing technologies for End-of-Life (EoL) battery recycling (Batt4EU Partnership)	RIA	21,00	7	3	5	
HORIZON-CL5-2024-D2-01-02	Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership)	IA	21,00	7,5	3	6-7	LS
HORIZON-CL5-2024-D2-01-03	Development of technical and business solutions to optimise the circularity, resilience, and sustainability of the European battery value chain (Batt4EU Partnership)	RIA	5,00	5	1	5	
HORIZON-CL5-2024-D2-02-01	Sustainable high-throughput production processes for stable lithium metal anodes for next generation batteries (Batt4EU Partnership)	IA	8,00	8	8	6-7	
HORIZON-CL5-2024-D2-02-02	Post-Li-ion technologies and relevant manufacturing techniques for mobility applications (Generation 5) (Batt4EU Partnership)	RIA	15,00	5	5	4	
HORIZON-CL5-2024-D2-02-03	Size & weight reduction of cell and packaging of batteries system , integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design approach (Batt4EU Partnership)	IA	16,00	8	8	6-7	
HORIZON-CL5-2024-D2-02-04	Accelerated multi-physical and virtual testing for battery aging, reliability and safety evaluation (Batt4EU Partnership)	IA	15,00	7,5	7,5	6	

Cluster 5. Resultados preliminares (NO OFICIAL)

D5 y D6 (Movilidad)

Cluster 5. Mobility Results

Destination 5 - Clean and Competitive Solutions for All Transport Modes

Destination 6 - Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods

HORIZON-CL5-2021-D5-01

HORIZON-CL5-2021-D6-01

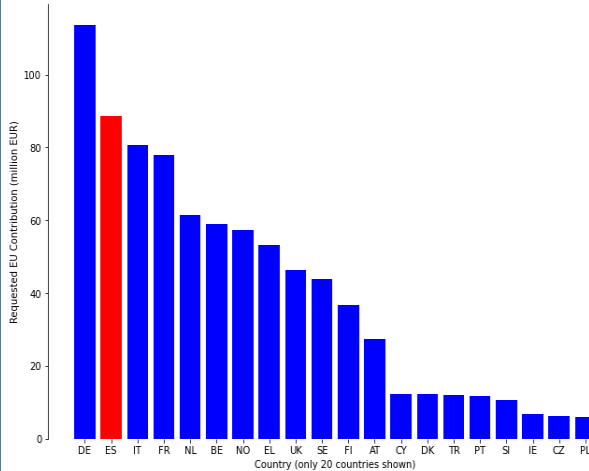
HORIZON-CL5-2022-D5-01

HORIZON-CL5-2022-D6-01

HORIZON-CL5-2022-D6-02

Liderazgo Proyectos

ES	20
DE	15
BE	15
EL	14

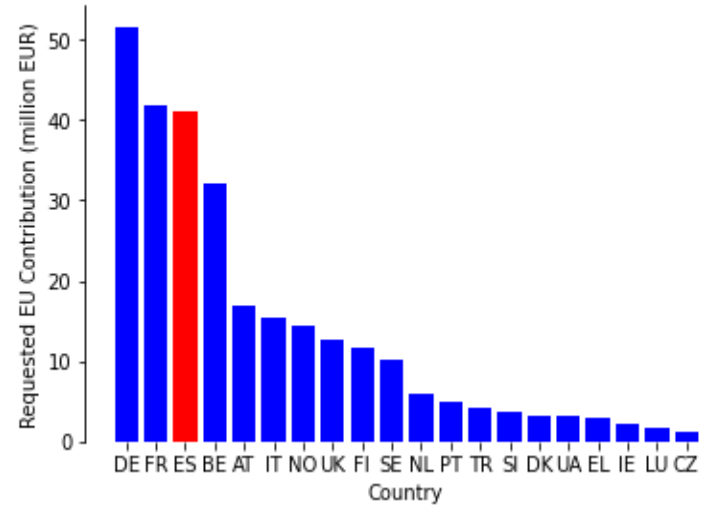


Baterías

Destination 2 - Cross-sectoral Solutions for the Climate Transition Batteries

HORIZON-CL5-2022-D2-01

HORIZON-CL5-2021-D2-01



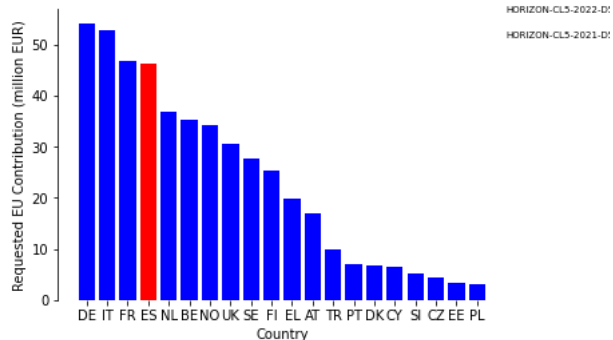
GOBIERNO DE ESPAÑA

MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

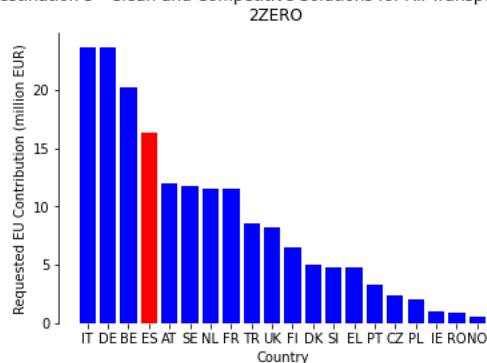


Cluster 5. Resultados preliminares (NO OFICIAL)

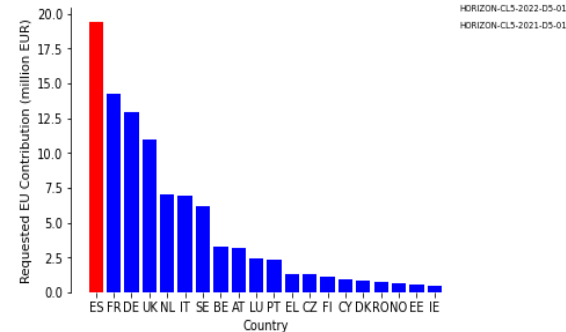
Destination 5 - Clean and Competitive Solutions for All Transport Modes



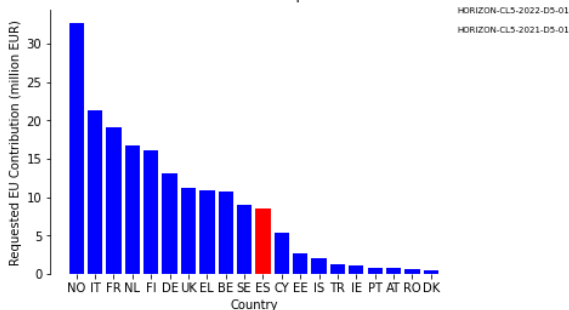
Destination 5 - Clean and Competitive Solutions for All Transport Modes



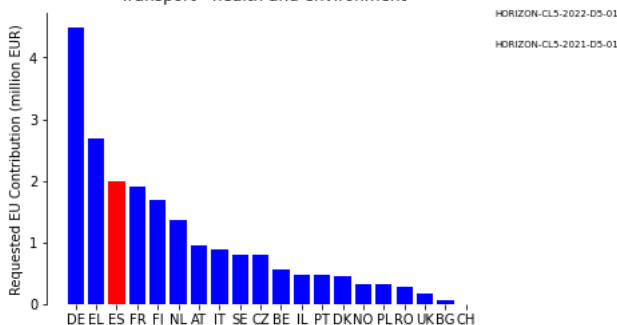
Destination 5 - Clean and Competitive Solutions for All Transport Modes
Aviation



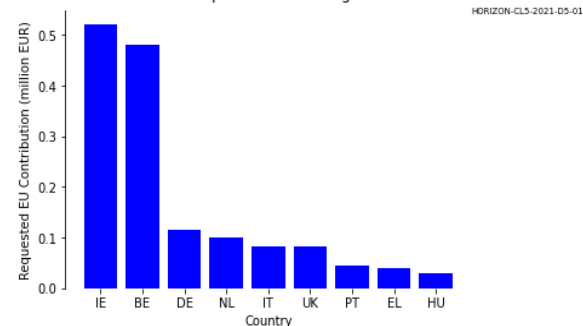
Destination 5 - Clean and Competitive Solutions for All Transport Modes
Waterborne transport



Destination 5 - Clean and Competitive Solutions for All Transport Modes
Transport - health and environment



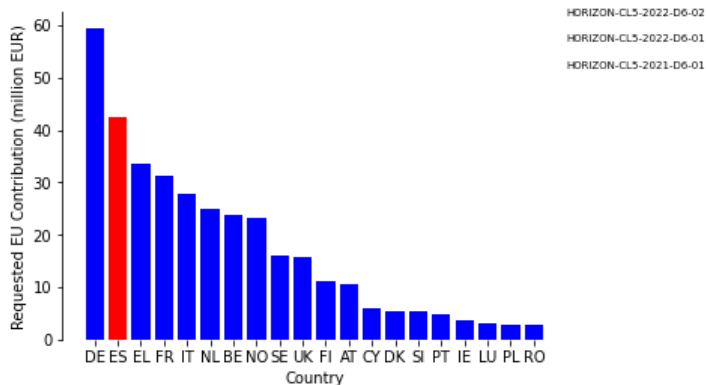
Destination 5 - Clean and Competitive Solutions for All Transport Modes
Transport - cross-cutting



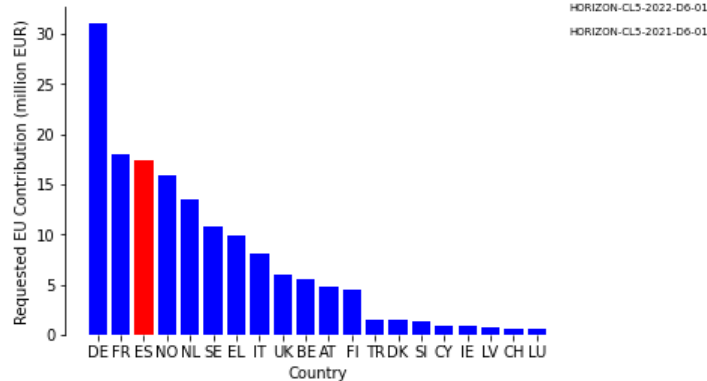
Notas: Resultados de evaluación propuestas anteriores G. Agreements. UK EU Contribution en G. Agreements deberá ser nula / Representado solo 20 mayores países con Req. EU Contribution

Cluster 5. Resultados preliminares (NO OFICIAL)

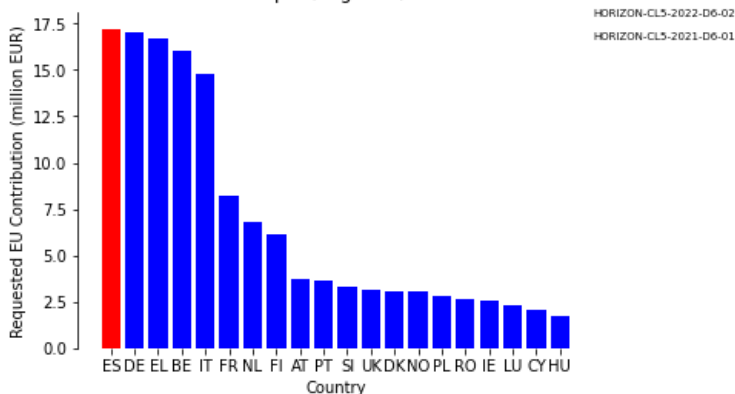
Destination 6 - Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods



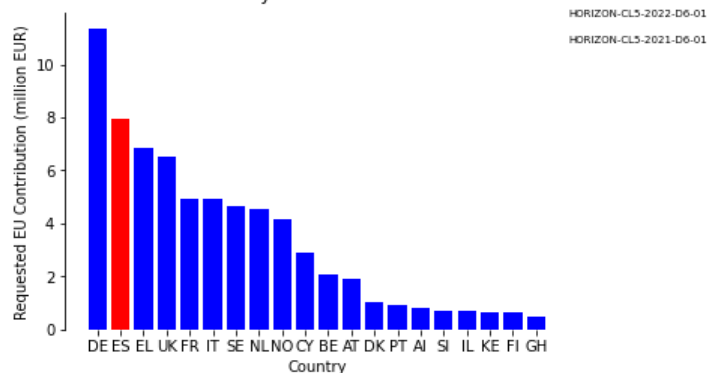
Destination 6 - Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods
CCAM



Destination 6 - Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods
Multimodal transport, logistics, infrastructure

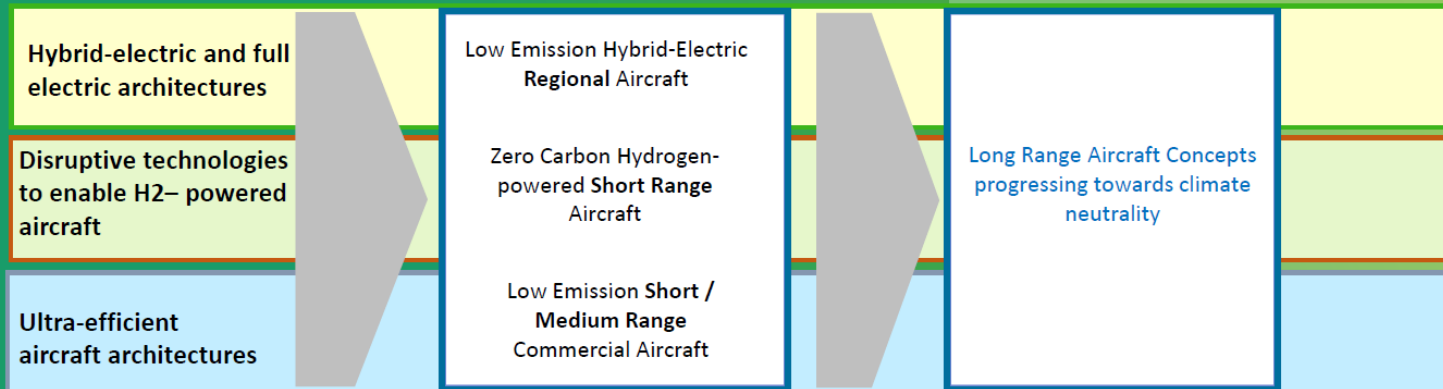


Destination 6 - Safe, Resilient Transport and Smart Mobility Services for Passengers and Goods
Safety and resilience



Notas: Resultados de evaluación propuestas anteriores G. Agreements. UK EU Contribution en G. Agreements deberá ser nula / Representado solo 20 mayores países con Req. EU Contribution

CLEAN AVIATION – LINCHPIN IN EUROPE’S R&I FOR THE TRANSITION



Flight demonstration in Clean Aviation JU and Impact by 2035

Development of disruptive technology options

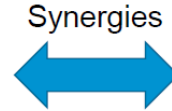
Not legally binding



THE PROGRAMME SETUP IN A NUTSHELL

EU Funding
1.7bn€¹

Private Funding
>2.4bn€



Other EU Partnerships
& Programmes and
National/Regional R&I

2022

2025/2026

2028

2030

PHASE I:
Develop concepts, technology options and trade studies

PHASE II:
Accelerate technology maturation through integrated demonstration

~45% of total budget
Large 'big bang' 1st Call Q1/2022
CEI for additional members in 2023
Further (modest) complementary 2nd Call Q1/2023
Configuration of PHASE II to emerge by Q4/2024

~55% of total budget
Large Call ~Q1/2025 (projects to launch w/in 2025)
CEI may be considered for demo prep/build phase
Further (modest) Calls 2026 up to max. 2027 (TBD)
Target maturity to enable EIS 2035: TRL6 ~2028?



¹ Revision possible in case of additional associations to Horizon Europe

SESAR 3 JU a new instrument to implement the vision



Accelerate through research & innovation the delivery of an inclusive, resilient & sustainable Digital European Sky



50+ founding members representing entire aviation value chain (incl. new entrants)



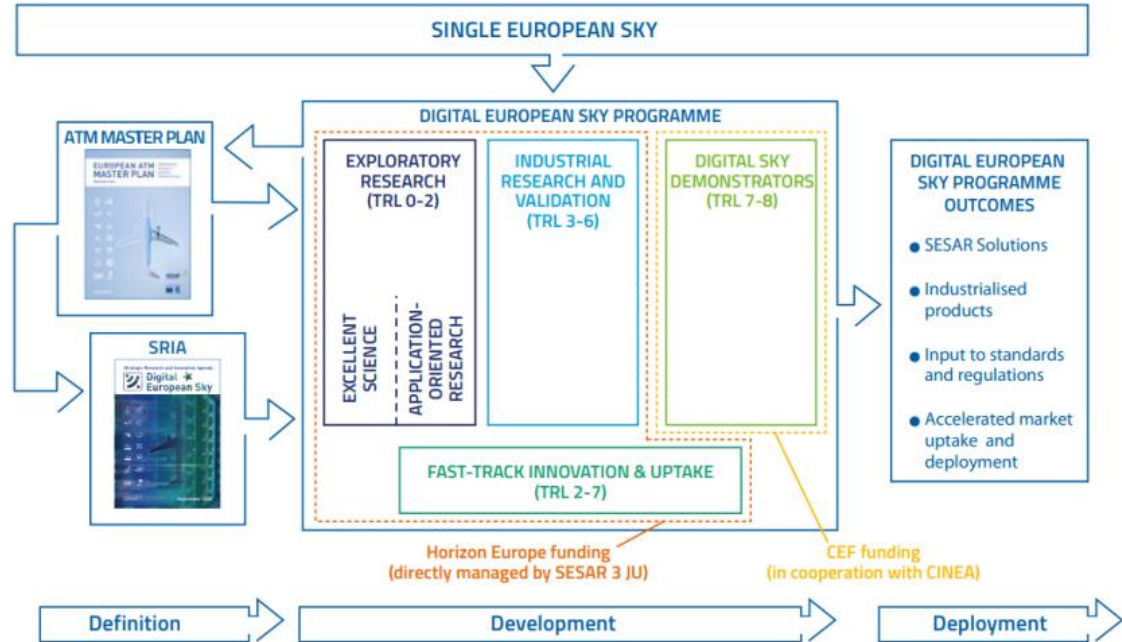
- Horizon Europe - EUR 600 million
- Eurocontrol – up to EUR 500 million (in-kind & financial contributions)
- Industry - EUR 500 million minimum (in-kind & financial contributions)

Additional funds via Connecting Europe Facility (in coordination with CINEA) to the value of at least EUR 200 million.



5

The SESAR 3 JU innovation pipeline is part of the broader SESAR project (covering definition) and of the Single European Sky initiative





DELIVER AN INTEGRATED EUROPEAN RAILWAY NETWORK BY DESIGN



DEVELOP A UNIFIED OPERATIONAL CONCEPT AND A FUNCTIONAL SYSTEM ARCHITECTURE FOR INTEGRATED EUROPEAN RAIL TRAFFIC AND CCS/AUTOMATION



DELIVER A SUSTAINABLE AND RESILIENT RAIL SYSTEM



DELIVER A COMPETITIVE, GREEN RAIL FREIGHT FULLY INTEGRATED INTO THE LOGISTICS VALUE CHAIN



DEVELOP A STRONG AND GLOBALLY COMPETITIVE EUROPEAN RAIL INDUSTRY

EUROPE'S RAIL: ONE INTEGRATED R&I PROGRAMME

SYSTEM PILLAR

OPERATIONAL CONCEPTS

FUNCTIONAL SYSTEM ARCHITECTURE

A SINGLE COORDINATING BODY FOR THE WHOLE SECTOR EVOLUTION

OPEN INTERFACES TO OTHER TRANSPORT MODES AND BUSINESSES

SYSTEM REQUIREMENT SPECIFICATIONS

INNOVATION PILLAR

TECHNOLOGICAL AND OPERATIONAL SOLUTIONS FOR SERVICES OF FUTURE

FLAGSHIP PROJECTS

LARGE-SCALE DEMONSTRATIONS

EXPLORATORY AND FUNDAMENTAL R&I

1

EUROPEAN RAIL TRAFFIC AND MOBILITY MANAGEMENT

Manage and improve rail traffic at EU level

Adjust rail traffic management in function of the mobility demand

2

DIGITALISATION & AUTOMATION IN TRAIN OPERATIONS

ATO implementation

Digital train operations

3

SUSTAINABLE AND DIGITAL ASSETS

Integrated assets testing & life-cycle framework

Zero-emission, silent rail system

4

COMPETITIVE, DIGITAL, GREEN RAIL FREIGHT

New digital customer interaction & innovative rail freight services

Multimodal and rail freight innovation integration

5

REGIONAL RAIL SERVICES IN LOW DENSITY AREAS

New system approach to regional rail services in low density areas

DEPLOYMENT GROUP

FUTURE SOLUTIONS DEPLOYED IN A COORDINATED AND CONSISTENT WAY AT EUROPEAN LEVEL, TAKING INTO ACCOUNT ALTERNATIVE ROLLOUT SCENARIOS, BEHAVIOURAL AND ORGANISATIONAL CHANGES, SYNERGIES WITH OTHER MODES OF TRANSPORT

Lump sum – main differences with standard MGA



The grant agreement will set out the lump sum (Max contribution: co-funding) corresponding to the **full accomplishment of the work committed in Annex 1**.

The lump sum for the grant is set out at its signature.



Eventos importantes

Moving forward together: what's next for EU mobility & transport?

21 Febrero, Bruselas:

https://transport.ec.europa.eu/main-events/moving-forward-together-whats-next-eu-mobility-transport_en#:~:text=Academic%20conference%3A%20Moving%20forward%20together,of%20EU%20transport%20and%20mobility

R&I Days, 20-21 March, Bruselas

<https://projects.research-and-innovation.ec.europa.eu/en/events/upcoming-events/research-innovation-days>

TRA Transport Research Arena, 15 – 18 Abril, Dublin: <https://traconference.eu>

ILA, 5-9 June, Berlin

<https://www.ila-berlin.de/en>

Help for ES entities. Cluster 5. Climate, energy and mobility

Clima.

Lydia González, lydia.gonzalez@cdti.es

 @LydiaGlezF_CDTI

Juan Carlos García, juancarlos.garcia@cdti.es

 @JCGarcia_CDTI



Energía.

 @HE_Energia_CDTI

María Luisa Revilla, luisa.revilla@cdti.es (misión ciudades)


Cristina Garrido, cristina.garrido@cdti.es

Movilidad.

 @HE_Movil_CDTI

Juan Francisco Reyes, juanfrancisco.reyes@cdti.es (aeronáutica/aviación)

Julio Dolado, julio.dolado@cdti.es (resto áreas movilidad, baterías)

 (común): 91.581.55.62