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Le programme européen pour la recherche et l'innovation



Webinaire d'information Cluster 5 – Destination 5

Les appels à projets 2022 sur le transport maritime et fluvial (ZEWT)

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Agnieszka ZAPLATKA, Policy Officer Waterborne Transport, EC



30 Novembre 2021

Merci de bien vouloir veiller à couper vos micros et caméras, et à laisser le contrôle aux présentateurs



Les questions peuvent être posées par chat

Ce webinaire sera enregistré

La présentation et l'enregistrement de ce webinaire seront disponibles sur le site <https://www.horizon-europe.gouv.fr/>

- General introduction to Horizon Europe & Cluster 5
- Introduction to the waterborne topic
- Presentation of specific 2022-call waterborne topics
- Q&A

1. Horizon Europe and Cluster 5

Climate, Energy and Mobility

Horizon Europe 2021-2027

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

25 Md€



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

53.5 Md€



Pillar III INNOVATIVE EUROPE

European Innovation
Council

European Innovation
Ecosystems

European Institute of
Innovation & Technology^{*}

13.6 Md€

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

3.4 Md€

Fusion

Fission

Joint
Research
Center

**Budget
total**

95,5 Md€
(en € courants)

Cluster 5
15,1 Md€

Pas de ventilation
officielle à l'échelle du
cluster

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

<https://www.horizon-europe.gouv.fr/lancement-d-horizon-europe-24506>

Cluster 5 – Les destinations

Destination 1 – Climate science

Climate science

Destination 2 – Cross-cutting solutions

Batteries

Cities

Breakthrough
technologies

Citizen and
stakeholder
engagement

Destination 3 – Energy supply

Renewable
energy

Energy system,
grids and
storage

CCUS

Cross-cutting
activities

Destination 4 – Energy demand

Buildings

Industry

PCN Transport

Destination 5 - Clean and competitive solutions for all transport modes

Zero-emission
road transport

Aviation

Waterborne
transport

Transport-
related health
and
environmental
issues

Destination 6 - Transport and Smart Mobility services

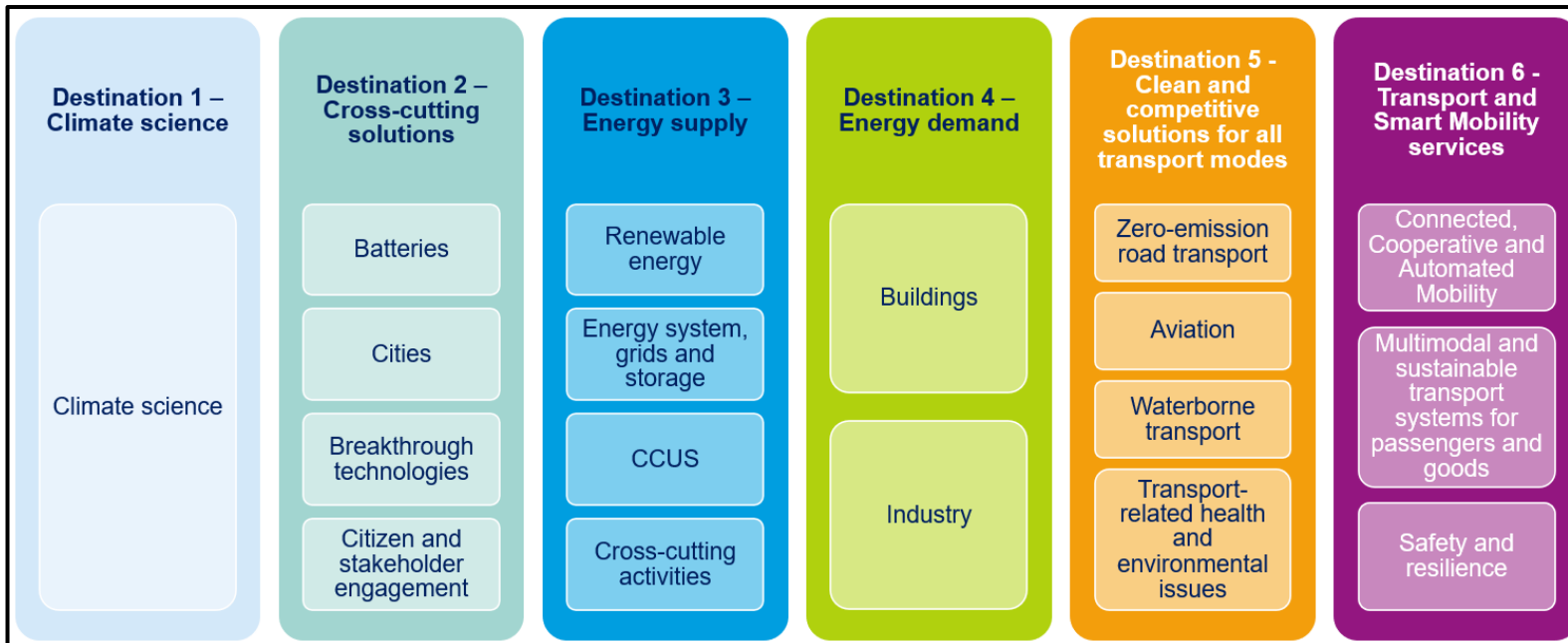
Connected,
Cooperative and
Automated
Mobility

Multimodal and
sustainable
transport
systems for
passengers and
goods

Safety and
resilience

Programme de travail 2021/2022 du cluster 5 ici

Cluster 5 – Les destinations



Cluster 5
3 Md€
pour 2021/2022

Programme de travail 2021/2022 du cluster 5 ici

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Cluster 5
3 Md€
pour 2021/2022

↓
Dest. 5
253 M€
pour 2022

Programme de travail 2021/2022 du cluster 5 ici

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Cluster 5
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pour 2021/2022

↓
Dest. 5
253 M€
pour 2022

↓
ZEW
74 M€
pour 2022

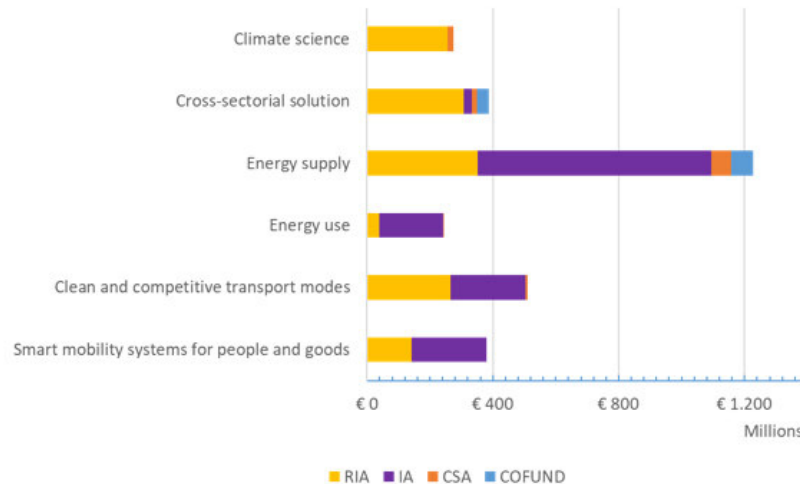
Programme de travail 2021/2022 du cluster 5 ici

Cluster 5 – Les budgets

Programme 2021/2022 et budgets

	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)



Appels à projets call ZEWT juin-sept 2021

Topic	Number of proposals received	Number of expected grants
HORIZON-CL5-2021-D5-01-07	3	2
HORIZON-CL5-2021-D5-01-08	3	1
HORIZON-CL5-2021-D5-01-09	1	1
HORIZON-CL5-2021-D5-01-10	12	4
HORIZON-CL5-2021-D5-01-11	3	2
HORIZON-CL5-2021-D5-01-12	2	1
HORIZON-CL5-2021-D5-01-13	7	1
HORIZON-CL5-2021-D5-01-14	1	1
total	32	13

2. Introduction to the waterborne topic



Webinar on Horizon Europe Waterborne Transport call 2022

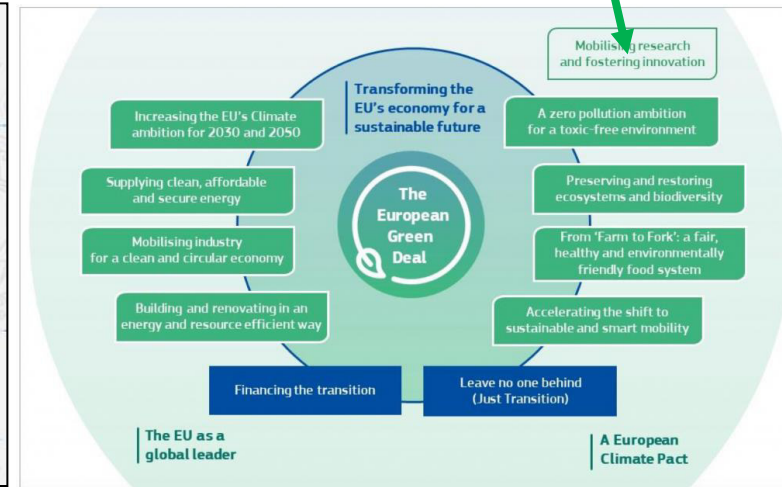
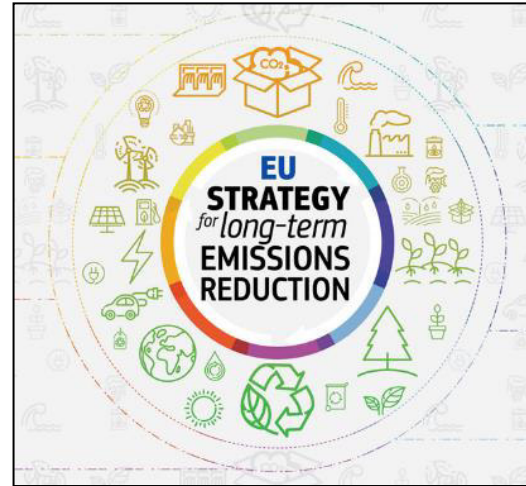
Zero-Emission Waterborne Transport Partnership and
collaborative R&I

Agnieszka Zaplatka

C3 Low Emission Future Industries

DG Research and Innovation

Context



By 2030; 55% less EU GHG emissions, zero emission ships market ready.

By 2050 at least 90% less transport emissions.

Basket of measures:

- Mix of legislative and non legislative measures to support positive choices (eg, Innovation fund, CEF, Horizon, ETS, ETD, AFIR, FuelEU Maritime....)
- **Mobilising Research and Innovation- Horizon Europe Zero Emission Waterborne Transport Partnership.**

Waterborne Transport in HE

Basic principles

- ZEWT topics must be in line with SRIA as adopted
- Collaborative R&I topics to reflect Commission policy priorities
- Perspective of real achievements by 2030 in line with EU policy framework
- Marketability and strong messages that R&I is the game changer (in combination with standards and regulations)
- Continuity from H2020 and the first HE work programme for maximum impact
- Synergies and co-operation with other HE partnerships and instruments (Missions)

Zero-emission waterborne transport partnership

New in Horizon Europe, a Co-programmed with the objectives of:

Using R&I to develop and demonstrate zero-emission solutions for all main ship types and services by 2030 which will enable zero-emission waterborne transport by 2050.

Eliminating **GHG emissions** from new ships and retrofitted existing ships by means of sustainable alternative climate-neutral fuels, renewable energies, electrification and energy efficiency.

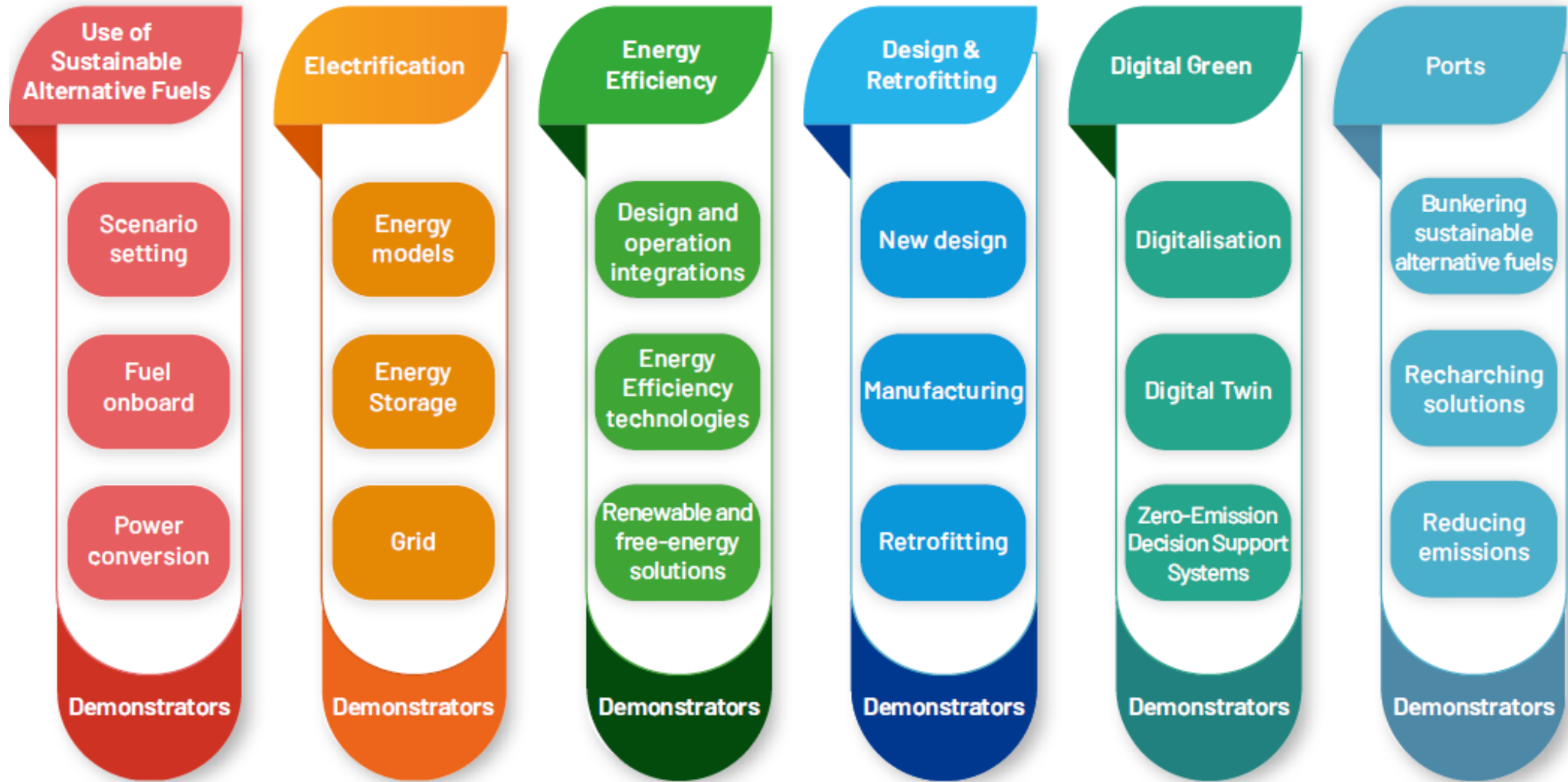
Cutting coastal and inland pollution to air by at least 50% compared to current levels

Elimination of pollution to water (including harmful underwater noise) from ships



R&I areas (Strategic Research and Innovation Agenda)

https://www.waterborne.eu/images/210601_SRIA_Zero_Emission_Waterborne_Transport_1.2_final_web_low.pdf



Foundation

Memorandum of Understanding between:

- **Commission (DG's RTD, MOVE & CLIMA)**
- **Waterborne TP (European Technology Platform)**

Commitments:

- **Horizon Europe €530 million.**
- **Partners other than EU, €3.3 billion** (R&I and other activities aligned with partnership)

Waterborne TP- over 100 members from:

- **Industry**
- **Research organisations**
- **Associations**



Destination 5 – Waterborne Transport

Strategic Policy Framework

- *Aligned with :*
 - *European Green Deal,*
 - *The European Smart and Sustainable Mobility Strategy*
 - *Fit for 55 package*

To:

Accelerate the transition towards zero emission waterborne transport whilst exploiting opportunities from digitalisation and increasing the competitiveness of the European Waterborne transport sector within global markets.

Implementing the Strategic Research and Innovation Agenda of the Zero Emission Waterborne Transport partnership to demonstrate by 2030, deployable zero émission solutions that would be suitable for all main ship types.

<https://www.waterborne.eu/partnership/partnership>

Destination 5 – Waterborne

Expected impacts:

- **Accelerate deployment of climate neutral fuels** and increase the **electrification** of shipping.
- Increased energy **efficiency** and use of **renewable energies such as wind** to drastically lower fuel consumption.
- Enable the **innovative port infrastructure** necessary needed for zero-emission waterborne transport (inland and maritime).
- Enable **clean, climate-neutral, climate-resilient inland waterway vessels**, underpinning green fleet renewal and supporting.
- Technologies to **achieve climate neutrality and to eliminate harmful pollution to air and water**.
- Smart, efficient, secure, safe integration of waterborne transport into logistic chains through digitalisation, automation, resilient and efficient connectivity.
- Enable safe, efficient, fully **automated and connected** waterborne transport.
- European **growth, jobs and global competitiveness** within global markets underpinned by sustainable green and digital innovation.

Waterborne Transport in HE

Work Programme 2021-2022, Cluster 5, Destination 5, waterborne

- Indicative budget 2021 (EU contribution): 93.5 MEUR (8 topics, [ZEWT: 100%](#))
- Indicative budget 2022 (EU contribution): 96.0 MEUR (6 topics, [ZEWT: 77%](#))

*2022 call opens on 2 December 2021
Deadline: 26 April 2022*

Waterborne Transport in HE

Reminder - Work Programme 2021-2022, Areas covered

ZEWT headings	Sub-Headings		Budget (MEUR)	% of total
Climate action	Climate-neutral and sustainable fuels		30.5	16%
	Electrification		45	24%
	Energy efficiency		78	41%
	Fuel supply infrastructures	CSA, counted under fuels		
	Inland navigation			
Air pollution	All pollutants	Methane slip topic	7	4%
Water pollution	All pollutants			
	(Underwater) Noise			
Commission priorities outside/in addition to ZEWT	Transport efficiency and logistics / automation		15	8%
	Industrial competitiveness		7	4%
	Digital	Digital Twin topic	7	4%
			189.5	100%

HORIZON-CL5-2022-D5-01-01: Exploiting electrical energy storage systems and better optimising large battery electric power within fully battery electric and hybrid ships (ZEWT Partnership)

Total indicative budget: EUR 16 mln (2 projects), IA, TRL 7

Focus on:

- Contribute to 2 full scale vessel demonstrators, hybrid and fully electric, by 2027
- Large battery systems on-board integration on number of ship types
- maximise the operational flexibility of different ships under electric-driven zero-emission operations
- address one of two cases:
 - The hybrid arrangement for zero local pollution (long and complete discharge cycles), or
 - The full electric arrangement, plug-in charging (charging strategy and battery size adapted to route).

HORIZON-CL5-2022-D5-01-02: Innovative energy storage systems on-board vessels (ZEWT Partnership)

Total indicative budget: EUR 15 mln (3 projects), RIA, TRL 5

Focus on:

- contribute to at least 2 full scale on-board demonstrators for two different electrical energy storage solutions by 2027
- potential for innovative energy storage systems other than batteries (e.g. super-/ultra-capacitors, superconductivity magnetic energy storage, flywheels, flow batteries, etc.) for waterborne applications,
- low TRL solutions for waterborne transport, preliminary integration, safety studies and the potential combination with other disruptive technologies
- integration on-board of innovative energy storage systems
- cost competitiveness of the innovative solutions when compared with batteries

HORIZON-CL5-2022-D5-01-03: Exploiting renewable energy for shipping, in particular focusing on the potential of wind energy (ZEWT Partnership)

Total indicative budget: EUR 18 mln (2 projects), RIA, TRL 5

Focus on:

- enabling the wide adoption of automated wind technologies for long distance maritime transport
- Large scale testing and preferably large scale demonstration prove the viability of renewable solutions (efficiency gains of >15% power generation or >25% propulsion)
- energy efficiency strategies and architectures for the power management in large ships
- both retrofitting existing ships and new purpose built designs, incl. regulatory issues
- Wind and other renewables such as solar electric systems should be considered for different ship types

HORIZON-CL5-2022-D5-01-04: Transformation of the existing fleet towards greener operations through retrofitting (ZEWT Partnership)

Total indicative budget: EUR 25 mln (5 projects), IA, TRL 7-8

Focus on:

- Demonstrated retrofitting solutions for sea-going and/or inland navigation vessels in operation
- Retrofit solutions to reduce GHG emissions that are developed and ready to deploy (target by 35%)
- Establishment of an up-to-date catalogue of suitable solutions for a wide variety of ship types and operation scenarios
- Address significant reduction of at least one or more from: air emissions, water pollution, GHG emissions
- The design for technically and economically efficient retrofitting of the ship
- No secondary emissions to air or water and no significant increase of fuel consumption

HORIZON-CL5-2022-D5-01-05: Seamless safe logistics through an autonomous waterborne freight feeder loop service

Total indicative budget: EUR 15 mln (1 project), RIA, TRL 5

Focus on:

- Preferably demonstrate the solution at full scale with all technology building blocks in a real world scenario
- Develop an autonomous waterborne freight feeder loop service for inland or maritime transport suitable for specific commercial applications and which can provide an integrated, reliable, resilient, predictable fully automated service with a preference for zero GHG and pollutant emissions as well as supporting safer navigation
- Address the necessary safety, regulatory and legal rules needed to deploy such services
- Address requirements for telemetry, its architecture, infrastructure monitoring and security needed for controlling the system's water-side and shore-side assets

HORIZON-CL5-2022-D5-01-06: Computational tools for shipbuilding

Total indicative budget: EUR 7mIn (1 project), IA, TRL 7-8

Focus on:

- Achieving a competitive advantage for European shipbuilders within global markets, particularly for complex high added value vessels
- Benefit the wider European shipbuilding sector and address the necessary skills development to enable full exploitation of the advanced computation tools
- New concepts for a reliable and cost efficient roll-out of advanced platforms and tools are expected to be developed and demonstrated

Links, Contacts and Dates:

Dates:

30th November, Cluster 5 Program Committee Workshop on orientations for WP 2023-24
3rd December, Cluster 5 Program Committee meeting
9th December Partnership board meeting
3rd February – Info Day WP 2022
7th February Waterborne Transport workshop- *Horizon 2020 & future orientations.*

Contacts:

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Info@waterborne.eu
+3222302791

Governing Board Co Chairs:

Ms Ingrid Marie Anderson, Maersk
Jane Amilhat, DG RTD, Head of Unit Low Emission Future Industries.

EC operational contacts:

Agnieszka.ZAPLATKA@ec.europa.eu, peter.crawley@ec.europa.eu, rtd-clean-waterborne@ec.europa.eu

Links:

https://www.waterborne.eu/images/210601_SRIA_Zero_Emission_Waterborne_Transport_1.2_final_web_low.pdf
<https://www.waterborne.eu/partnership/partnership>
<https://www.waterborne.eu/>



Thank you



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Slide xx: **element concerned**, source: **e.g. Fotolia.com**; Slide xx: **element concerned**, source: **e.g. iStock.com**



Prochains évènements

- 7 Décembre 2021, webinaire organisé par le pôle ASTECH sur le thème des opportunités pour le secteur de l'aviation dans Horizon Europe, inscription [ici](#)
- Webinaire organisé par votre PCN Transport en janvier 2022 – Appels à projets 2022 sur le thème de l'aviation (dont Clean Aviation), informations détaillées à venir prochainement

Un site dédié à Horizon Europe

- <https://www.horizon-europe.gouv.fr/transports>
- Webinaires organisés par le MESRI pour le lancement de Horizon Europe [ici](#)
- Ressources juridiques et financières : <https://www.horizon-europe.gouv.fr/ressources-juridiques-et-financieres-24384>

pcn-transport@recherche.gouv.fr

- Pour toutes vos questions sur la thématique « transport »
- Pour vous inscrire à notre liste de diffusion