MARITIME

(ES) Essential Elements of European Escort (4E)

(Established in November 2021)

For Public Release

PROJECT DESCRIPTION

The PESCO 4E Project aims to identify, define and develop within a collaborative approach, essential elements of any surface vessel that may be built in Europe from 2030 to 2045.

The project will be built around 5 pillars:

i. Combat system,

ii. Communication and information system,

iii. Platform management system,

iv. Navigation system,

v. System of Systems.

The PESCO 4E project is aligned with the EPC2S Focus Area, identifying a set of opportunities for collaboration on technologies, standards, and activities whose declination will be eventually at system and sub-system level. Project members will select those elements on which they have interest in joining efforts, deepening cooperation, and obtaining technological superiority to ensure dominance at sea.

The project 4E aims to anticipate the challenges of an ever-evolving integrated, digitalized, operational naval environment focus on interoperability, interchangeability and collaborative features.

Considering the EU's objectives for reaching net-zero emissions by 2050 and with a view to enhancing the energy resilience of the armed forces, the project 4E will also focus on sustainability, with a view to allowing the defence sector to further contribute to the European Green Deal initiative. This 4E project should have direct implications for the European Defence industry which needs to turn greener to reduce its environmental impact while strengthening Europe's strategic autonomy.

OBJECTIVES/PRODUCTS

The 4E project aims to lay the foundations for the ships that, between 2030 and 2045, should replace the surface naval vessels that today form the backbone of European navies.

The project aims to develop capable and resilient naval elements, with a more cost-effective, interoperable, and standardized approach. The purpose is to reduce fragmentation and to improve the coherence of the capability landscape in the EU maritime domain.

These elements will be intelligently interconnected and will provide a unique set of capabilities, far superior to those of individual systems. Therefore, the elements defined for each pillar will need to be integrated into a System of Systems that will be the logical and cognitive core of the new generation of European Smart Ships.

This will contribute to the development of the fundamentals of the digital ship, creating clear added value through a deeper integration of all technologies working together.

It will allow EU navies to remain at the forefront of technology, to operate with technological superiority, and to increase the strategic autonomy of the Union.

ES, EL, IT, PT, SE, NL

DE

IDEATION
INCUBATION
EXECUTION
CLOSING

Contribution to the more binding commitments
Yes

Capability Perspective

EU CDP priority
Naval Manoeuvrability

CARD references
European Patrol Class Surface Ships (EPC2S) Focus Area

Operational Viewpoint

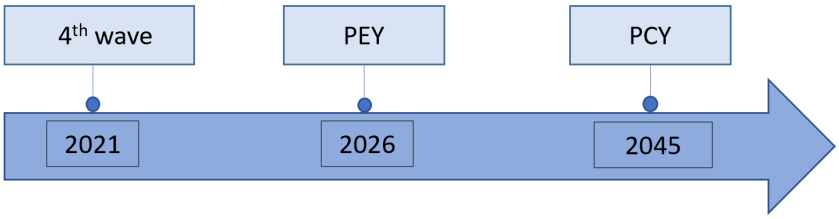
HICG
Maritime Engagement incl. anti-submarine warfare

EDA support

Yes
Ad hoc Cat.B support

INDICATORS

Project Execution Year (PEY) and Project Completion Year (PCY):



DELIVERABLES ACHIEVED

- Outline Description
- Project Initiating Document (PID) (JUN 2024)

CRITERIA FOR SUCCESS

- The project will be considered successful if, upon completion, it contributes to the development of the logical and cognitive core of the new generation of European smart ships (pillar 5), focusing on the technologies, standards, and systems to be integrated. In essence, the aim is to lay the foundations for the digital ship of the near future.
- The project will be considered successful if, upon completion, it is able to harmonize the design, requirements, and specifications of at least 8-10 systems within 4E scope (pillars 1, 3, 4 and 5), and the development of their prototypes up to TRL 8-9, ready to be integrated on board future EU naval vessels. Development of essential elements and solutions to be successfully integrated into the next generation of naval vessels.