PESCO PROJECTS' PROGRESS REPORT

PESCO Secretariat documentation for public release

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1. Introduction

In the wake of the European Council conclusions of 6 March, 20 March, and 26 June 2025[1] as well as the publication of the White Paper for European Defence - Readiness 2030 on 19 March 2025,[2] the EU and its Member States have firmly agreed **to decisively ramp up the EU's overall defence readiness**, **reduce strategic dependencies**, **address critical capability gaps** and strengthen the **European Defence Technological and Industrial Base (EDTIB)** and its **competitiveness**. To this end, a first list of priority areas for action at EU level has been identified: **air and missile defence**; **artillery systems**, including **deep strike capabilities**; **missiles and ammunition**; **drones and anti-drone systems**; **strategic enablers**; **military mobility**; **and cyber**, **artificial intelligence**, **and electronic warfare**.[3] In the context of SAFE, this list has been further expanded to include ground combat and maritime capabilities. **PESCO is a key framework to translate Member States' political ambitions into concrete action**. Ongoing PESCO projects can be further leveraged to support these political objectives. Looking ahead, it is also essential, that future projects prioritise the agreed capability areas, while also seeking synergies or building on existing projects.

Accordingly, this year's report not only takes stock of **the progress and deliverables** achieved during the first phase of PESCO (2017-2025) but also places particular **emphasis on projects that can contribute meaningfully to the EU's ambition to strengthen its defence readiness by 2030**. To support further progress, it also identifies challenges related to those projects that are not advancing as expected, indicating where further efforts are needed to unblock progress or, where appropriate, to consider closure.

The PESCO Projects' Progress Report has been prepared by the European Defence Agency (EDA) in accordance with Article 5 (3) of the Council Decision (CFSP) 2017/2315 establishing Permanent Structured Cooperation (PESCO). The Council Decision (CFSP) 2018/909 mandates the PESCO Secretariat to keep the Council informed about the progress of the projects on an annual basis.

2. Overview of PESCO projects' progress and deliverables

The majority of the **66 ongoing PESCO projects** have seen progress over the past year.[4] Almost half of the projects have now **entered the execution phase**, with many already producing results and others on track to achieve their respective objectives. The expected output of the ongoing projects is diverse, with **deliverables achieved across all domains**.

Notably, in the cyber and space domains, the **Cyber and Information Domain Coordination Centre** (CIDCC), which has reached Initial Operational Capability (IOC), provides a bridge towards establishing an EU capability for cyber defence cooperation, while the **Common Hub for Governmental Imagery** (CoHGI) has advanced efforts in developing a federated platform for the secure sharing of governmental

[1] European Council conclusions on European defence, 6 March 2025 - Consilium; 20 March 2025 – Consilium; 26 June 2025 – Consilium.
[2] Joint White Paper for European Defence – Readiness 2030.
[3] Of note, several pMS have subsequently requested to add ground combat and maritime capabilities to the list.
[4] 52 projects reported various levels of advancement, two are closed, and four are nearing closure with successful outcomes.

imagery. Concerning strategic enablers and force multipliers, the **Network of Logistics Hubs in Europe and Support to Operations** (NetLogHubs) is facilitating cross-border solutions for seamless military transport and connection. In the air and maritime domains, **Air Power** and **Essential Elements for European Escort** (4E) are moving forward in defining the technological components necessary for future air and naval superiority. Meanwhile, in the land domain, **Integrated Unmanned Ground Systems 2** (iUGS2), building upon its successful predecessor project (iUGS), aims to develop an unmanned asset for ground-based combat support.

The value of PESCO as a framework for defence cooperation is confirmed by the increasing participation across its projects, including growing interest from third States. Since the last progress report, numerous projects **have welcomed new participants**. Some projects have **expanded their scope** to pursue additional objectives beyond their original plans. For example, some projects took advantage of industry's expertise, paving the way for potential future procurement. Others benefited from synergies with related areas of activities within the EU, as well as within NATO framework, as a concrete expression of the complementarity between the two organisations and of the EU's contribution to the transatlantic security.

The sixth wave of projects is the latest effort by the PESCO pMS to bolster cooperation and develop defence capabilities within the PESCO framework, with some projects having the potential to make important contributions to the priorities agreed by EU Leaders on 6 March 2025. In total, **11 new projects in five domains have been approved** in May 2025. The projects are diverse, ranging from wider operational requirements such as **air and missile defence**, and **cyber** doctrine, to more focused tactical applications such as individual soldier systems and medical treatment facilities. The pMS have committed to bridging gaps in strategic enablers by introducing unmanned aerial solutions, increasing interoperability by standardising equipment, and bolstering efforts to protect critical seabed infrastructure. With foresight in mind, the projects also address the future implications of quantum technology in defence, directed energy weapons, and the sustained access to ammunition.

3. Advancing EU defence readiness through PESCO projects

In light of the increasingly volatile and deteriorating security environment, most notably driven by the unprovoked and unjustified Russia's war of aggression against Ukraine, the EU and its Member States have intensified their efforts to urgently ramp-up the European defence readiness and address the most pressing capability gaps and shortfalls. In **November 2024**, **Defence Ministers took a decisive step by signing Letters of Intent (LoIs)** in four critical areas: **integrated air and missile defence**, **electronic warfare**, **loitering munitions**, **and a new generation combat surface vessel**.

Within this evolving security context, PESCO projects – both ongoing and in the pipeline – are uniquely positioned to offer concrete pathways to **operationalise political commitments**, **deliver tangible capability outcomes**, and **complement EU-wide instruments** aimed at enhancing defence readiness and resilience and ensuring that Europe becomes better equipped, more sovereign and responsible for its own defence. The following overview outlines the progress of PESCO projects, simultaneously highlighting how they may contribute to the implementation of the EUCO Conclusions and the White Paper for European Defence – Readiness 2030; the contributions of PESCO projects in the fields of ground combat and maritime capabilities are also highlighted in this report.

Air and Missile Defence

Russia's ongoing war of aggression against war Ukraine, as well as conflicts in other regions, demonstrate that robust air and missile defence is a prerequisite for efficient protection of civilian areas, infrastructure, and military assets. Establishing an integrated air and missile defence system is a complex endeavour, requiring international initiatives in all operational domains, and is therefore not feasible without broad political commitment and military cooperation. In this field, the fifth wave project **Integrated Multi-Layer Air and Missile Defence System** (IMLAMD) can contribute with a concept for the future development of such a system. Additionally, **Timely Warning and Interception with Space-Based TheatER Surveillance** (TWISTER), which has recently seen increased participation by pMS, seeks to detect and counter hyper-velocity threats through a combination of space-based early warning and interceptor capabilities.

To declare the intention to develop comprehensive missile defence architecture in the long term (among other short- and medium-term objectives), 18 Member States (to date) signed an LoI on "Integrated Air & Missile Defence" (IAMD). The recently launched PESCO project **Quantum Enablers for Strategic Advantage** (QUEST), seeking to develop quantum technologies for defence applications, has established links with the LoI on IAMD and may add value to the initiative.

Ammunition and Missiles

Creating strategic stockpiles of ammunition and missiles is identified as a prioritised line of action. Simultaneously, PESCO projects continue progressing in their efforts to develop new and innovative missile concepts and designs, with a particular focus on operational autonomy: **EU Beyond Line of Sight Land Battlefield Missile Systems** (EU BLOS) is expected to lead to the development of a medium-range missile systems family, while **Future Short-Range Air to Air Missile** (FSRM) is harmonising requirements and creating a concept for a Short-Range Air to Air Missile (SRAAM), with the intent to counter future generation airborne threats.

A future area to be possibly explored in the PESCO framework is the LoI on "Loitering Munitions", which has thus far been signed by 17 Member States. The LoI underscores a commitment to deepen cooperation in the development of loitering munition capabilities.

Artillery Systems

Lessons from Russia's war of aggression against Ukraine also underline the necessity to focus on artillery systems for ground-based defence. To ensure readiness and enable credible deterrence, the pMS seek to acquire sufficient quantities of artillery ammunition and delivery systems. In addition, to contend in the modern artillery battlespace, reactive counter-battery systems are vital to effectively neutralise enemy artillery capabilities. **Counter Battery Sensors** (CoBaS) has reported continued progress to harmonise requirements for a counter battery system, which will rely on a collection of target acquisition means, command and control (C2), and effectors.

Drones and Counter-drone Systems

The proliferation of drones and counter-drone systems as a fundamental component in contemporary warfare requires the creation of a comprehensive unmanned fleet with autonomous capabilities, alongside systems that can counter drone swarms and drone-based EW attacks. **European MALE RPAS**

(Eurodrone) is continuing to assess common tactical applications of the Eurodrone, and **Next Generation Small RPAS** (NGSR), which intends to develop future-oriented tactical UAS, entered the incubation phase over the past year as part of its lifecycle progression.

In terms of counter-drone systems, **Counter Unmanned Aerial System** (C-UAS), which has entered its closing phase, is focused on the development of a modular C2 system with effectors to detect and intercept small UAS. Additionally, the sixth wave project **Directed Energy Systems** (DES) intends to develop a directed energy weapon for air defence, including to counter unmanned aerial systems.

Military Mobility

An EU-wide network that enables rapid movement of resources without legislative or infrastructural impediments is essential. Notable initiatives, such as **Military Mobility**, which is anticipated to reach FOC in 2026, and the Network of Logistic Hubs in Europe and Support to Operations (NetLogHubs), which is expanding its network of logistic hubs across the EU, have both reported progress, representing key PESCO contributions to address logistics and mobility gridlocks.

AI, Quantum, Cyber and Electronic Warfare (EW)

Electromagnetic spectrum dominance is pivotal in establishing C2 superiority, maintaining situational awareness, and enhancing cyber operations. With EW playing a vital role for intelligence and secure communications, efforts should partially focus on collaborative development of advanced EW and ISR systems, including communications jamming capabilities. The **Electromagnetic Warfare Capability and Interoperability Programme for Future JISR Cooperation** entered the **closing phase** by successfully delivering a feasibility study on EW capabilities and gaps that need to be addressed from a European perspective. Moreover, **Arctic Command & Control Effector and Sensor System** (ACCESS), currently in the **execution phase**, seeks to facilitate the development of a next-generation, scalable, and multifunctional EW transceiver system by promoting collaboration and knowledge sharing among pMS.

The EU's preparedness and resilience rely on integrating cyber and C4ISR systems, with a focus on agility, resilience, and interoperability. Key goals include a unified military cloud and cyberspace picture, requiring coordinated efforts by the pMS, technology, and training to enhance cyber defence. Various projects are ongoing in this regard: **Cyber Threats and Incident Response Information Sharing Platform** (CTISP), **Cyber and Information Domain Coordination Centre** (CIDCC), and **Cyber Ranges Federations** (CRF), have all evolved in efforts to evaluate, consolidate, and deploy cyber capabilities on a multilateral basis. With deployability and interoperability in focus, **Strategic Command and Control System for CSDP Missions and Operations** (EUMILCOM) has reported progress in developing a scalable C2 system intended for several operations and force compositions.

An LoI on "Electronic Warfare" has thus far been signed by 14 Member States, with the purpose to improve capabilities by jointly purchasing equipment, establishing data-sharing platforms, developing a common doctrine, and cooperating in training, exercises, and facility development. The recently launched **European Joint European Electromagnetic Warfare Convergence Initiative** (JEEWCI) project has identified links with this LoI.

Strategic Enablers and Protection

Strategic enablers, such as **strategic airlift** and **air-to-air refuelling**, will continue to form the foundation for interoperability and operational autonomy. The mid- to long-term priorities for air transport include strengthening airlift capabilities, enhancing sustainability and resilience, and expanding air-to-air refuelling capacities, with a focus on unmanned systems. This will involve collaborative development of multi-role aircraft and unmanned systems, as well as common standards and procedures to enhance interoperability. To this end, the **Strategic Airlift for Outsized Cargo** (SATOC) and **Future Medium Tactical Cargo** (FMTC) projects have made progress in the effort to reduce dependencies on external airlift enablers, while **European Defence Airlift Training Academy** (EDA-TA) has advanced efforts to harmonise transport pilot training. With regard to aerial refuelling, the recently launched **Future (unmanned) Air-to-Air Refuelling Capability** project aims to investigate the potential to improve existing Air-to-Air Refuelling (AAR) capabilities, and also develop and procure new unmanned AAR systems.

Maritime Surface and Underwater Capabilities

As witnessed in the numerous incidents involving undersea cables and pipelines in the Baltic Sea, hybrid actions against seabed infrastructure have significantly increased over the last few years, while the introduction of new systems is poised to change naval warfare. Additionally, insurgent acts against commercial vessels threaten freedom of navigation, such as Houthi attacks on maritime shipping, disrupting global trade routes. In view of these types of threats, the pMS require capabilities to protect vital infrastructure and to ensure preparedness against current and future maritime threats.

Various PESCO projects are advancing in this regard. The **Critical Seabed Infrastructure Protection** (CSIP) project, which has recently grown in terms of pMS participation, focuses on delivering an underwater network, which will enable the underwater situational awareness through a system of systems architecture, composed by a combination of sensors deployed on the seabed as well as mobile systems. The solution will be active in different time horizons, starting with an initial capability in the short term by leveraging existing solutions, and progressively enhanced through dedicated development of capabilities in the medium to long term. The **European Patrol Corvette** (EPC), which successfully completed the harmonisation of requirements phase and moved to the procurement phase in the framework of OCCAR, will deliver the first ships in the early 2030s. The EPC will deliver a noteworthy capability for Europe, which will reduce overall costs and will support better standardisation and interoperability among the pMS. Furthermore, the PESCO project Essential Elements for European Escort (4E), which is following a systems-to-hull approach, has a close link to the “European Combat Vessel” LoI signed by seven Member States. Other projects, such as the **Medium size Semi-Autonomous Surface Vehicle** (M-SASV), **Anti-Torpedo Torpedo** (ATT), **Upgrade of Maritime Surveillance** (UMS), **Harbour and Maritime Surveillance and Protection** (HAMSPRO), and **Deployable Modular Underwater Intervention Capability Package** (DIVEPACK) are all promising and have reported progress over the past year.

Ground Combat Capabilities

An emphasis must also be placed on Ground Combat Systems, a line of effort that has continued under the **Integrated Unmanned Ground System** (iUGS) project, which successfully delivered a prototype and will serve as a foundation for the above mentioned iUGS2 follow-up project. Further development in this generally fragmented area is encouraged through existing collaborative frameworks, such as the

Armoured Infantry Fighting Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle (AIFV / AAV / LAV) project – a joint effort intending to develop a next generation infantry fighting vehicle.

Enhancing ground combat capabilities requires a comprehensive approach that goes beyond just developing and procuring armoured land platforms. Investing in joint training and simulation centers, such as cross-border networks of modern simulation technologies, can provide a significant boost to operational effectiveness. The **Main Battle Tank Simulation and Testing Center** (MBT-SIMTEC) project, which offers a platform for joint training and simulation, has moved forward with the establishment of a clear roadmap and the identification of critical infrastructure components, including constructive simulation software and systems slated for upgrade.

4. Lessons identified/learned from the first phase of PESCO

The first phase of PESCO (2017-2025) has generated 83 projects across seven operational domains. Overall, the Council has acknowledged that the projects have contributed to the EU capability landscape at large and had a positive impact on strengthening the EDTIB. As the PESCO initiative moves forward in its second phase, the pMS and the Secretariat should build on the lessons identified/learned from past efforts to shape the future of projects.

The demanding nature of **intergovernmental capability development** requires sustained efforts over **several years, with achievements progressively materialising as projects mature**. At the end of the first phase of PESCO, the contributions of projects are **becoming tangible**. Specifically, the work of European Medical Command (EMC) has led to the **establishment** of a **Multinational Medical Coordination Centre** (MMCC) – a permanent multinational entity that increases military medical support readiness. EUFOR Crisis Response Operation Core (EUFOR CROC) created a comprehensive **force/capability database** to support the **EU Rapid Deployment Capacity** (EU RDC) and has generally enhanced EU Member States preparedness and commitment to engage in operations and missions. While still ongoing, **Cyber Rapid Response Teams** (CRRT) is active and regularly deploying a capability to monitor and safeguard against cyber intrusions. With regard to training, **Joint European Intelligence School** (JEIS), has delivered several intelligence courses, and plans to reach FOC by the end of the year.

Additionally, the overall impact of PESCO extends beyond the projects launched within its framework. In some cases, PESCO activities have paved the way for efforts linked to EDF or other multinational EU initiatives. A notable example is the **EU Radionavigation Solution** (EURAS), which has created synergies with the Advanced Galileo PRS resilience for EU Defence (Navguard) EDF project, driving the development of critical EU military capabilities, such as the Galileo-based PNT and Navigation Warfare (NAVWAR) doctrine. Thus, their potential in enabling follow-on cooperation through new structures should be acknowledged.

EDA expert support has proven to be advantageous to 16 projects since the launch of PESCO. Among the supported projects that reported multiple deliverables, **Chemical, Biological, Radiological and Nuclear** (CBRN) **Surveillance as a Service** (CBRN SaaS), which seeks to provide a sensor network for enhanced CBRN monitoring, is receiving assistance in identifying and harmonising requirements, developing scenarios, and defining concepts of operations. Furthermore, **GeoMETOC Support Coordination Element** (GMSCE), which aims to bolster the EU's GeoMETOC capabilities, has benefited from EDA's support, particularly in harmonising requirements at EU level, developing a Common Staff Target, a Common Staff Requirement, and as appropriate a follow-on Business Case.

Beyond the first phase, **effective project management and delivery** will remain essential, with EDA also continuing to play a key role in supporting the implementation of projects and assessing projects' progress, identifying potential synergies among them, and offering guidance on project advancement.

5. Way ahead

The next phase of PESCO (2026-2030) will unfold against the backdrop of an increasingly contested and demanding security environment. Overcoming persistent capability shortfalls, especially those dependent on coordinated intergovernmental commitment, has emerged as both a strategic necessity and a key priority within the EU's broader agenda.

PESCO is anticipated to remain an optimal framework for implementing projects that have a **mid- to long-term focus** and that are designed to have significant impact on the capability landscape. This is particularly relevant for pan-European projects, especially those focused on **strategic enablers**, **force multipliers** and other complex domains, which can contribute to **EU's rearmament efforts**. As this report has shown, many ongoing PESCO projects are actively or can further contribute to the critical capability priority areas identified in the European Council Conclusions and the White Paper for European Defence - Readiness 2030.