



ANNEX B

PESCO project proposals assessment report

PESCO PROJECT PROPOSALS ASSESSMENT REPORT

PESCO Secretariat documentation for Government use only

17 SEPTEMBER 2021

LIMITED



ANNEX B

PESCO project proposals assessment report

This page is intentionally left blank



ANNEX B

PESCO project proposals assessment report

Contents

Executive Summary 5

Assessment Summary..... 7

Assessment of Individual PESCO project proposals 17

 Initial Grouping 1: Land 17

4.1.32 –Main Battle Tank Simulation and Testing Center (MBT-SIMTEC) 18

4.1.33 - EU Military Partnership (EU MP) 23

 Initial Grouping 2: Maritime..... 27

4.1.34 - Essential Elements of European Escort (4E) 28

4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV) 34

 Initial Grouping 3: Air Systems 39

4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC) 40

4.1.37 - Next Generation Small RPAS (NGSR) 45

4.1.38 - Rotorcraft Docking Station for Drones (RDSD)..... 51

4.1.39 - Small Scalable Weapons (SSW) 56

4.1.40 - Air Power 61

4.1.46 - Future Medium-size Tactical Cargo (FMTC)..... 66

 Initial Grouping 4: Cyber, C4ISR 71

4.1.41 - Cyber Ranges Federations (CRF) 72

4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)..... 77

4.1.45 - Robust communication infrastructure and networks (ROCOMIN) 82

 Initial Grouping 5: Space 87

4.1.43 - Common Hub for Governmental Imagery (CoHGI) 88

4.1.44 – Defence of Space Assets (DoSA) 92

List of Acronyms 97



ANNEX B

PESCO project proposals assessment report

This page is intentionally left blank

ANNEX B

PESCO project proposals assessment report

Executive Summary

The PESCO final assessment report includes the PESCO secretariat assessment for the fifteen (15) project proposals that were jointly submitted by the PESCO participating Member States. The assessment includes the capability perspective provided by EDA and the operational viewpoint provided by EUMS.

A. The following **ten (10) project proposals** are recommended for the main focus for further considerations from both the **capability perspective** and the **operational viewpoint**:

1. (ES) Essential Elements of European Escort (4E)
2. (EE) Medium size Semi-Autonomous Surface Vehicle (M-SASV)
3. (DE) Strategic Air Transport for Outsized Cargo (SATOC)
4. (ES) Next Generation Small RPAS (NGSR)
5. (IT) Small Scalable Weapons (SSW)
6. (FR) Air Power
7. (FR) Future Medium-size Tactical Cargo (FMTC)
8. (PT) Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)
9. (DE) Common Hub for Governmental Imagery (CoHGI)
10. (FR) Defence of Space Assets

B. The following **four (4) project proposals** are recommended for the main focus for further considerations **only from the operational viewpoint**:

11. (EL) Main Battle Tank Simulation and Testing Center (MBT-SIMTEC).
The project is not recommended from the capability perspective mainly due to the low likely impact on the coherence of the capability landscape, including the low magnitude of the project, which is missing to involve the user communities of the Leopard Main Battle Tanks.
12. (FR) EU Military Partnership (EU MP).
The project is not recommended from the capability perspective mainly due to the fact (declared intent) that it does not include capability development activities.
13. (IT) Rotorcraft Docking Station for Drones.
The project is not recommended from the capability perspective mainly due to the low maturity and undeveloped elements of resources and financial support.



ANNEX B

PESCO project proposals assessment report

14. (EE) Cyber Ranges Federations (CRF).

The project is not recommended from the capability perspective mainly due to the lack of coherence of effort and output, with a risk of duplicating an ongoing, nearly identical activity at the EU level.

ANNEX B

PESCO project proposals assessment report

Assessment Summary

Recommendation

Based on the application of the assessment criteria to the descriptions of the project proposals jointly submitted by at least 2 pMS, including the level of interest indicated so far by participating PESCO Member States and pending further changes to this, it is recommended to put the **main focus** on the following projects:

- A. The following ten (10) project proposals could be **recommended for the main focus from the capability perspective as well as from the operational viewpoint**:

(1) 4.1.34 - Essential Elements of European Escort (4E)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing the most important systems for next generation surface combatants (frigates and destroyers) that may be built in Europe from 2035 to 2045 with a Project Execution Year in 2031. The project proposal addresses the EU Capability Development Priority “Naval Manoeuvrability” and notably a long-term activity of the AoA of the agreed SCC. More specifically it is oriented until 2031 on the Research and Technology (R&T) dimension and could also contribute to the EPC2S Focus Area regarding R&T projects but also activities at sub-system level. The project is considered to have up to medium impact on the coherence of the European capability landscape only in the long-term from 2035 on when the design and construction phase is foreseen to show initial results. This requires however, that the R&T deliverables will be transformed into capability-oriented projects. A higher impact could be achieved if more pMS join the project.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [28](#))

(2) 4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing a medium size multi mission semi-autonomous surface vehicle that would potentially provide the European navies with a needed capability to extend the operational footprint of main combat ships and to support littoral operations. The project addresses the EU Capability Development Priorities “Naval Manoeuvrability” and “Underwater Control contributing to resilience at sea”, including their associated Strategic Context Cases (SCC) and is directly addressing the focus areas EPCS2 as laid down in the CARD Report. The limited magnitude of the project and the current level of participation, results in a low potential impact on the coherence of the European capability landscape. However, the project is very well suited to contribute to a bigger picture (EPCS2 or to a cluster of autonomous/semi-autonomous naval systems).

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is

ANNEX B

PESCO project proposals assessment report

assessed as having a medium impact on the fulfilment of the EU CSDP military LoA. It indirectly addresses the HICG Maritime engagement incl. anti-submarine warfare. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [34](#))

(3) 4.1.36 - Strategic Air Transport for Outsized Cargo (SATOC)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at collecting and harmonising different national requirements (no harmonised requirements have been drafted so far) and identifying options for a solution for strategic air transport capabilities for outsized cargo, including commercial off the shelf. The potential impact on the capability landscape can be considered low to medium in case the project will enter the subsequent phases of capability development. The project addresses the EU Capability Development Priority “Air Mobility”, the CARD Focus Area “Enhanced Military Mobility” and the CARD collaborative opportunity “Fixed Wing Air Transport”. Considering the timeline provided, the project is also aligned with the agreed SCC and the activities of the Avenues of Approach (AoA) for a long-term impact. Regarding the CARD recommendations, the project represents a visible step to start a joint preparation of the next planning horizon. The project can potentially address the current gap in strategic air transport, considering the lack of European large-size platforms capable of outsized cargo.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having High impact on the fulfilment of the EU CSDP military LoA. It directly addresses the HICG Strategic Air and Sea Transport. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14. It is recommended to be put in the main focus considering its future contribution to Europe’s strategic autonomy.

(detailed assessment on page [40](#))

(4) 4.1.37 - Next Generation Small RPAS (NGSR)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project proposal aims at developing the next generation of small RPAS for Land units, SOF, maritime vessels, including for civilian and law enforcement use. The potential impact on the coherence of the capability landscape is considered low. This could be improved with a further increase in project members. The development of a tactical UAS directly addresses the EU Capability Development Priority “Air Superiority” and takes up the finding of the CARD Aggregated Analysis namely for the collaborative opportunity “Tactical Remotely Piloted Aerial Systems”. In addition, the project proposal represents an invitation to jointly prepare the next planning horizon and thus contributes to implement the CARD recommendations. The project can potentially address R&T activities in different areas such as UAS, AI/machine learning, payload modularity, sensors development, and can potentially positively impact the EDTIB.

ANNEX B

PESCO project proposals assessment report

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact on the fulfilment of the EU CSDP military LoA. It directly addresses the HICG Land ISTAR. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [45](#))

(5) 4.1.39 - Small Scalable Weapons (SSW)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The proposal is addressing the EU Capability Development Priority “Air Superiority” and aims at providing a new low-cost weapon with potential scalable-effects and the ability to loiter/re-loiter and to be launched/employed from fixed wing & rotary wing air assets. There is an initial intention to deliver a Small Scalable Weapon by 2026. However, the current tentative roadmap needs to be further substantiated. A higher level of participation is still needed. To improve the potential impact of the project on the coherence of the European capability landscape, which is considered low at this stage. The project can be assumed to contribute to the coherence of output with NATO as it was clarified that the project can build on the TRL 4 prototype that was developed in the NATO project Small Scalable Kinetic Weapon (SSKW).

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. It addresses directly HICG Air Precision Strike – Unmanned. This requires, however, meeting the integration with existing and future aerial platform meeting as a paramount requirement in order for the project to deliver concrete operational benefits. In its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitment 12 and 13.

(detailed assessment on page [56](#))

(6) 4.1.40 - Air Power

Capability perspective: The project proposal is not recommended for the main focus from the capability perspective. A higher level of participation is still needed to improve the potential impact of the project on the coherence of the European capability landscape, which is considered low to medium at this stage, considering that the current subscribed project members fighters’ fleet is reaching out about 40% of the PESCO pMS fighters. The project proposal addresses the EU Capability Development Priority “Air Superiority” at large. Without specifying a dedicated project or capability itself, the proposal approaches the topic “Air Power” from a conceptual and overarching perspective. This is also indicated by the large number of activities of the Avenues of Approach the project proposal refers to and the numerous CARD collaborative opportunities the project description mentions as being linked to. With this, the project proposal could be considered to aim to contribute to the implementation of the CARD recommendation to jointly prepare the next planning horizon (beyond the mid-twenties) regarding air power in general terms. Besides that, the technology aspects seem to be in the foreground at this stage, as it was clarified

ANNEX B

PESCO project proposals assessment report

that the project focuses on the technological bricks (using TBBs as a basis) and not on platform programmes as such. However, the project proposal needs to be further defined and matured to indicate the actual deliverables and it would need to specify how to avoid the risk of a duplication of efforts with already ongoing efforts.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [61](#))

(7) 4.1.46 - Future Medium-size Tactical Cargo (FMTC)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at delivering a tactical cargo aircraft, keeping advantage of a “A400M family approach” and exploiting synergies in operation, logistics, training and personnel. The project addresses the EU Capability Development Priority “Air Mobility” and the CARD Focus Area “Enhanced Military Mobility”. The project could potentially support a wide range of industrial and technological competencies: it covers collaborative R&T and capability development aspects and could employ technologies compatible with other future-oriented air projects, such as air combat programmes. The project could boost synergies with ongoing activities in EU context and potentially contributes to addressing NATO major shortfall areas in Readiness, Interoperability, Medical Support. The potential impact of the project on the coherence of the European capability landscape is considered low at this stage as it seems to serve the improvement of the national capability profile of the project members in the first place, and it can be further improved with the subscription of additional project members. Nevertheless, it is recommended for the main focus as it aims to close an expected capability gap in the air transport domain as from the second half of 2030s.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having High impact on the fulfilment of the EU CSDP military LoA. It indirectly addresses the HICGs Strategic Air and Sea Transport, Air to Air refuelling and to a lesser extent Special Operation Forces. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [66](#))

(8) 4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing an automated digital 3D mapping and modelling system to identify urban target structures. The mapping system would support the decision-making process in the areas of targeting, battle damage assessment, manoeuvre and training, and enhance situational awareness. The tool and the decision support service could ideally be used by HQs Staffs and is also

ANNEX B

PESCO project proposals assessment report

usable for civilian purposes and operations, including disaster relief. The project proposal addresses the EU Capability Development Priority “Information Superiority” and intends in phase one (until 2025) to develop the common Staff Targets (CST) and Requirements (CSR). The project is aligned with the agreed Avenues of Approach, however the limited magnitude of the project and the current level of participation result in a low potential impact on the coherence of the European capability landscape at this stage.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. It directly addresses aspects of HICGs in the “INFORM” and “ENGAGE” Capability Areas. In its current form, it does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

(detailed assessment on page [77](#))

(9) 4.1.43 Common Hub for Governmental Imagery (CoHGI)

Capability perspective: The project is recommended for the main focus from the capability perspective. The project aims to increase the provision of classified governmental imagery enabling the exchange of information for decision-making and contributing to the intelligence picture at political, strategic, operational and tactical levels. The potential impact on the coherence of the EU capability landscape is estimated to be low. The project is addressing the EU Capability Development Priority “Space-based Information and Communication Services” and its timeline is aligned with the AoA as laid down in the agreed SCCs. The project could be considered to contribute to the focus area “Defence in Space” as laid down in the CARD Report and to directly address CARD recommendations for possible future projects. Overall, the EU tools CDP/SCC/CARD have been used as an orientation to guide the project generation.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. It indirectly addresses the HICG JOINT ISR. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [88](#))

(10) 4.1.44 Defence of Space Assets (DoSA)

Capability perspective: The project is recommended for the main focus from the capability perspective. The project aims at increasing the EU’s operational efficiency in space through defining essential blocks which will enhance safety and resilience and maximise safe use of space. Capability wise, the project concentrates on doctrine and CONOPS, protection capabilities and on an EU supply chain. The project addresses the CDP “Space-Based Information and Communication Services (SBICS)” and could contribute to the CARD Focus Area “Defence in Space”. At this stage, the project would have up to medium impact on the EU capability landscape as the current subscribed project members have around 50% of the EU space assets and it will further benefit by

ANNEX B

PESCO project proposals assessment report

clarifying the specific capability that will be delivered. Moreover, the description of deliverables (e.g. CONOPS) over time and the financial planning including the expected contribution from project members were provided in the Clarification WS.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a HIGH impact overall on the fulfilment of the EU CSDP military LoA. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [92](#))

- B. The following four (4) project proposals could be **recommended for the main focus from a pure operational viewpoint:**

(1) 4.1.32 - Main Battle Tank Simulation and Testing Center (MBT-SIMTEC)

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project proposal aims at the establishment of a MBT simulation centre for training, based on existing national infrastructure, and at the further development of Modelling & Simulation capabilities, including networking with the training centres of the project members and creating new doctrine for the tactical use of MBT. Although the project proposal addresses the EU Capability Development Priority “Ground Combat Capabilities” and activities laid down in the Avenues of Approach (AoAs) of the agreed SCC as well as the CARD collaborative opportunities, including the Focus Area MBT, the potential impact on the coherence of the European capability landscape is considered low. This assessment resulted mainly from the limited participation and the absence of other users of LEO MBT (besides the project coordinator, the other project members are not Leopard MBT users).

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a LOW to MEDIUM impact overall on the fulfilment of the EU CSDP military LoA. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [18](#))

(2) 4.1.33 - EU Military Partnership (EU MP)

Capability perspective: The project is not recommended for the main focus at this stage from the capability perspective. The project is mainly of operational nature, and it aims at providing a comprehensive picture of the military capacity building activities of the MS, serving as a platform to share best practices about Military Partnership (Advise, Train, Equip, Accompany, Reform). The potential impact of the project on the coherence of the European capability landscape is considered low at this stage. The project is considered to address the EU Capability Development Priority “Cross-Domain capabilities contributing to achieve EU’s level of ambition” however, it is not aligned with any AoA as laid down in the agreed SCCs and states to not be capability oriented. The project is not addressing any NATO major shortfall areas nor any industrial and

ANNEX B

PESCO project proposals assessment report

technological competencies. The order of magnitude is low and the level of participation is limited at this stage.

Operational viewpoint: From the operational viewpoint, the project is recommended for the main focus as the creation of a perennial forum might create an interesting exchange platform to discuss Capacity-building. Based on the information provided, the project proposal is assessed as having a MEDIUM impact overall on the fulfilment of the EU CSDP military LoA. It could potentially address some aspects of the HICG Stabilisation Capabilities and, to a lesser extent, the Operational Collaborative Opportunity Non-Kinetic Engagement. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [23](#))

(3) 4.1.38 - Rotorcraft Docking Station for Drones

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project aims at developing a new capability to launch, operate, and recover a large number of small (mini, micro) Unmanned Air Systems (UAS) from rotorcraft platforms. The project proposal can only indirectly be linked to the agreed EU Capability Development Priority “Air Superiority”. The potential impact of the project on the coherence of the European capability landscape is considered low, mainly due to the limited number of project members. The roadmap and related milestones have partially clarified what will be delivered and in which time. Its focus on doctrine and interoperability, the lack of description on operational and further aspects, the absence of harmonized requirements and of a financial planning, suggest to not recommend it for the main focus.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a medium impact on the fulfilment of the EU CSDP military LoA. It indirectly addresses the HICGs Joint ISR, SOF, and Maritime engagement incl. anti-submarine warfare. The project is forward-looking, with significant operational benefits not being questioned especially when it comes to extending UAS operational range and exploiting potential for drones’ swarm. However, the issue connected with the UAS-Docking station integration remain to be deal with. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [51](#))

(4) 4.1.41 - Cyber Ranges Federations

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project aims at developing a platform for cyber training purposes by pooling and sharing MS national cyber ranges and federating them. This is intended to lead to improved interoperability. The project is in line with the EU Capability Development Priority “Enabling capabilities for Cyber Responsive operations” and with the CARD collaborative opportunity “Cyber Education, Training & Exercises”. Main requirements are already harmonised within and through EDA Cyber Ranges Federation CAT-B project. The potential impact to the coherence of the

ANNEX B

PESCO project proposals assessment report

capability landscape is low mainly because the project proposal represents the same activity as the already ongoing EDA ad-hoc CAT B project. In terms of improving the coherence, it is considered to not add much value since the number of potential project members is smaller than the one in the CAT B project. Instead, there is a risk that not all contributing pMS of EDA ad hoc Category B project will join the PESCO format, limiting thus progress in both approaches and/or leading to an unnecessary duplication of effort.

Operational viewpoint: The project is recommended for the main focus from the operational viewpoint. Based on the information provided, the project proposal is assessed as having a MEDIUM impact overall on the fulfilment of the EU CSDP military LoA. In its current form, it does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.

(detailed assessment on page [72](#))

C. The following project **could not be recommended for the main focus:**

(1) **4.1.45 - Robust communication infrastructure and networks (ROCOMIN)**

Capability perspective: The project proposal is not recommended for the main focus from the capability perspective. The project aims at increasing tactical and operational mobility of deployed forces through secure communication infrastructures and networks. The project addresses three EU Capability Development Priorities and the CARD Focus Area Enhanced Military mobility. Although it also boosts synergies with ongoing activities in EU context and potentially contributes to address NATO major shortfall areas, the potential impact of the project on the coherence of the European capability landscape is considered low at this stage. This assessment resulted mainly from the low level of maturity of the projects which is also confirmed by the very broad project scope which is not sufficiently supported with precise and sufficient information. Also, the identification of the required resources and financial support is limited, and no initial business case has been provided. A more detailed roadmap taking into account tasks and outcomes and referring to clearly identified Avenues of Approach and TBBs is needed to support the project. Moreover, with the current level of participation, the project seems to serve the improvement of the national capabilities of the project members.

Operational viewpoint: From the operational perspective, the project is assessed as having Low Impact on the EU CSDP military LoA and contributes to indirectly mitigating qualitative aspects of HICGs within the “C3” capability area. The proposed project is focused on identifying technical requirements to improve Communication Information Systems. Despite the positive impact on interoperability in terms of harmonisation of common standards, the proposal will probably have no direct impact on CSDP missions and operations.

(detailed assessment on page [82](#))

ANNEX B

PESCO project proposals final assessment report

Capability Perspective										Operational Viewpoint																																																																																																																																																																																																																																																																																																																																																																																
Coherence of the Capability Landscape			Coherence of effort & output with NATO				Resources and Financial Support			Bridging Operational Gaps		Operational Benefits																																																																																																																																																																																																																																																																																																																																																																														
EU CDP	SCC/ AoA	CARD	Potential Impact	Ham. Reqs.	Relevant Ongoing Activities	Priorities (MSA)	Relevant Ongoing Activities	Initial Business Case	Budget Allocation	EDF	RC17	PC18	Deploy-ability	Avail-ability	Inter-operability	MS LL&LI	Impact on EU CSDP Mil. LOA																																																																																																																																																																																																																																																																																																																																																																									
Land and Logistics																		4.1.32 - Main Battle Tank Simulation and Testing Center (MBT-SIMTEC)																		L-M	4.1.33 - EU Military Partnership (EU MP)																		M	MARITIME																			4.1.34 - Essential Elements of European Escort (4E)																		H	4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H
4.1.32 - Main Battle Tank Simulation and Testing Center (MBT-SIMTEC)																		L-M	4.1.33 - EU Military Partnership (EU MP)																		M	MARITIME																			4.1.34 - Essential Elements of European Escort (4E)																		H	4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																		
4.1.33 - EU Military Partnership (EU MP)																		M	MARITIME																			4.1.34 - Essential Elements of European Escort (4E)																		H	4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																					
MARITIME																			4.1.34 - Essential Elements of European Escort (4E)																		H	4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																								
4.1.34 - Essential Elements of European Escort (4E)																		H	4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																											
4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)																		M	AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																														
AIR																			4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																	
4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)																		H	4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																				
4.1.37 - Next Generation Small RPAS (NGSR)																		H	4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																							
4.1.38 - Rotorcraft Docking Station for Drones																		M	4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																										
4.1.39 - Small Scalable Weapons (SSW)																		H	4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																													
4.1.46 - Future Medium-size Tactical Cargo (FMTIC)																		H	4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																
4.1.40 - Air Power																		H	CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																			
CYBER, C4ISR																			4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																						
4.1.41 - Cyber Ranges Federations (CRF)																		M	4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																									
4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)																		H	4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																																												
4.1.45 - Robust communication infrastructure and networks (ROCCOMIN)																		L	SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																																																															
SPACE																			4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																																																																																		
4.1.43 - Common Hub for Governmental Imagery (CoHGI)																		H	4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																																																																																																					
4.1.44 - Defence of Space Assets (DoSA)																		H																																																																																																																																																																																																																																																																																																																																																																								



ANNEX B

PESCO project proposals assessment report

This page is intentionally left blank



ANNEX B

PESCO project proposals assessment report

Assessment of Individual PESCO project proposals Initial Grouping 1: Land

ANNEX B

PESCO project proposals assessment report

4.1.32 –Main Battle Tank Simulation and Testing Center (MBT-SIMTEC)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 1
- National budget involved from proposing MS: Partially provided.
- Maturity: No harmonised requirements, but there is an initial maturity level (at national level) and a plan for harmonisation.
- Lines of Development: Doctrine, Interoperability, Leadership, Training.
- Key milestones: Project Execution Year (PEY) 2023; Project Completion Year (PCY) 2026.

A. Recommendations

Conclusions

The project is recommended for the main focus from the operational viewpoint.

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project proposal aims at the establishment of a MBT simulation centre for training, based on existing national infrastructure, and at the further development of Modelling & Simulation capabilities, including networking with the training centres of the project members and creating new doctrine for the tactical use of MBT. Although the project proposal addresses the EU Capability Development Priority “Ground Combat Capabilities” and activities laid down in the Avenues of Approach (AoAs) of the agreed SCC as well as the CARD collaborative opportunities, including the Focus Area MBT, the potential impact on the coherence of the European capability landscape is considered low. This assessment resulted mainly from the limited participation and the absence of other users of LEO MBT (besides the project coordinator, the other project members are not Leopard MBT users).

Operational viewpoint: From the operational viewpoint, the proposal is expected to have a LOW to MEDIUM impact on the fulfilment of the EU CSDP military LoA by possibly increasing armoured units’ readiness and potentially mitigating some aspects of the HICG Readiness. It might contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations. Based on its consistency with RC and PC, the proposal is expected to have an indirect LOW to MEDIUM impact on the fulfilment of the EU CSDP military LoA.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- Clarification is needed on how this project could be used to further develop concepts/doctrines. It is of particular importance to describe how the link to harmonizing high level requirements is foreseen to be put into practice. This should be supported by a description of the links and potential synergies with ongoing initiatives at EU level.
- The potential impact of the project proposal would clearly benefit from a larger number of projects members and the clarification how the project proposal would tie into the existing MBT simulation systems and centres in these pMS.

ANNEX B

PESCO project proposals assessment report

- A dedicated financial plan, including an estimated budget over time and expected contributions from project members, is required. The business case is described in phases which are not clearly indicated in the timeline. The EU funding is foreseen to be requested; however, it does not correspond to the overall timeline. Therefore, further clarification on the overall plan and timeline is needed.

From the operational viewpoint: The next steps regarding the project will allow defining requirements.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is addressing the EU Capability Development Priority “Ground Combat Capabilities” as it can indirectly contribute to the upgrade of current and development of next generation armoured platforms, in particular Main Battle Tank (MBT). The project can be linked with the GMT 3.2.2 Conduct Ground-effect Operations as the simulated scenarios can contribute to deliver desired effects on the ground when conducting land operations.
- **SCC/AoA:** Considering the planned PCY for 2026, the project could be linked with the short-term activity “Develop common concepts for ground combat platform fleets”. It could also contribute to “harmonised operational requirements and an open architecture for digitalisation for different operational environments” and “start upgrading of land platforms to the same higher configurations and standards” of the module “Upgrade, modernise and develop Land Platforms” of the SCC “Ground Combat Capabilities”.
- **KSA:** There is no particular Key Strategic Activity related with this project.
- **OSRA:** The project proposal has potentially several links to and could benefit from the OSRA TBBs within the CapTech Land and the CapTech Simulation: TBB74 – Land - Land Systems Architecture & Integration, TBB76 – Land - Passive and active protection for Land Systems, TBB79 – Land - Target / Threat recognition and identification, TBB83 – Land - Weapon system integration, TBB128 – Simulation – Integrated Live, Virtual and Constructive (I-LVC) for Training, Simulation and Serious Games Solutions, TBB130 – Simulation - Immersive, Virtual and Augmented Reality, TBB132 – Simulation - Joint Strategic, Operational and Tactical level simulators, TBB133 – Simulation - Modelling & Simulation as a Service (MSaaS) for synthetic environment and rapid scenario generation. These potential links would need to be substantiated with further information on the estimated budget allocation.
- **CARD:** The project proposal directly addresses the Main Battle Tanks (MBT) Focus Area as laid down in the CARD Report and takes up the findings of the CARD Aggregated Analysis, namely from the identified collaborative opportunity MBT categorised as most promising, most pressing and most needed capability. Furthermore, and pending the interest from other pMS operating the same type of MBT, this project proposal offers a further opportunity to foster interoperability (in the area of training and simulation as well as tactics and doctrines) of current MBT (Leo 1 and Leo 2) operators.

ANNEX B

PESCO project proposals assessment report

- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage. The project proposal aims at developing a MBT simulation centre which, through practical training and testing on various tank simulators, would allow to test new tactics, create new doctrine for the tactical use of MBTs, define specifications for developing new fire control and C4I subcomponents, as well as the weapon and protection systems. A long run modular simulation system should be developed based on COTS and implementation of AI. However, the project does not clearly address how it plans to interact with other similar simulation centres, how this would increase the interoperability of different centres, and how the system will be developed in the long run. In addition, it is not clear how common exercises will be used in practice to develop concepts and doctrines or contribute to it at EU level. Considering that LEO MBTs are about 1/3 of the MBT fleet in the EU, the fact that the current potential project members are not users of this type of MBT and may not possess such centres to be internetworked, together to the unclear magnitude of the expected networking with other existing MBT simulation centres and notably those focused on LEO MBTs, the scope of the project might be limited. Therefore, the potential on the coherence of the capability landscape is considered low.
- **Potential impact on the EDTIB:** Low. The project can, indirectly, potentially contribute to the upgrade and development of existing platforms and new subcomponents of MBT to the “latest technological solution”. The involvement of industry, RTOs and academia is foreseen for R&D activities as well, but this has yet to be clearly defined.

Maturity

- **Harmonised Requirements:** The project proposal builds on existing Hellenic Armor Simulation Centre which has different Leopard MBT simulators installed: therefore, it will be building on the requirement for the Leopard MBT family. For the training part, there is adequate level of maturity as the simulators for LEO1 and LEO2 are already in service. The current training is based on NATO doctrine which can be used as a basis for the drafting of an EU concept and doctrine. There are no harmonised requirements for the networking dimension and the further development of the simulator; however, a plan for the harmonisation is reflected in the roadmap. Pending the interest of potential project members, the project will be opened for other types of MBTs as well. Other types of vehicles, such as IFVs, are also considered based on the interest of the potential project members.
- **Coherence with ongoing activities in an EU context:** There are potential synergies to be explored with ongoing PESCO projects such as “EU Test and Evaluation Centres”, specifically on the drafting of Tests and Evaluation procedures for the new low-cost simulators. MBT-SIMTEC can potentially exploit the experience and capacities of the EU Test and Evaluation Centres on the development of the new simulators. Links with Integrated European Joint Training and Simulation Centre (EUROSIM) can be further investigated on the networking and the harmonization of the requirements for the interoperability of the existing simulation systems in EU. Armoured Infantry Fighting

ANNEX B

PESCO project proposals assessment report

Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle (AIFV/AAV/LAV) can potentially be linked regarding the interoperability and the networking between MBT and AIFV systems. The project can also be linked with EDA activities under “Optimization of The Main Battle Tank Capability in Europe with Initial Focus on Leopard 2 (OMBT-LEO2) Working Group” and to EU Education Project Team from European Defence Standardization Management Group (EDSMG).

Coherence of effort and output

- **NATO priorities:** The project addresses the NATO Major Shortfall Areas Training and Exercises, Interoperability as well as Usability of Land Manoeuvre Formations.
- **Collaborative activities in a NATO context:** There are no similar activities within the FNC Clusters/Larger Formations. MBT-SIMTEC cooperation with the NATO Modelling and Simulation CoE Centre of Excellence (M&S CoE) could provide opportunities to discuss common development of low-cost simulation systems as well as identifying and creating solutions to shortfalls that may occur in new platforms development. A common EU doctrine and procedures development based on the existing NATO TTPs would enhance interoperability in operations.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment. As mentioned in the proposal description, the budget will be initially limited in functional costs and fees and will be revised later based on the agreed requirements.
- **Budget Allocation:** There is an estimation for the expected contribution from the project members to participate in the envisioned trainings. An initial budget estimation for the upgrade of the IT infrastructure was reported (1M €). No further planned or estimated budget allocation of the project is provided, no related timelines and no estimation of contributions from industry.
- **EDIDP/EDF:** There is an intention to request EU financial support for critical IT upgrade (1M €) and for the development of simulators (300K €) EU financial support is currently envisaged for 2021, however this does not correspond to the overall timeline.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19) as the most demanding scenarios include the need for armoured units. The proposal is likely to facilitate common training of such capabilities.
- **Progress Catalogue:** The proposal is not directly consistent with the Progress Catalogue (PC20). There are no specific shortfalls or HICGs directly related to this project proposal. Nonetheless, pre-deployment training and increased use of simulation could remotely and partially address some shortfalls related to high readiness encapsulated in the HICG Readiness. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

ANNEX B

PESCO project proposals assessment report

Operational Benefits

- **Deployability of Capabilities and Forces:** Such project is likely to facilitate pre-deployment training of armoured units and might possibly increase their deployability.
- **Availability of Capabilities and Forces:** Increased training through simulation might indirectly increase the availability of such units by reducing the need for pre-deployment maintenance of existing equipment. In the current state, it remains difficult to assess to what extent such effect would be significant due to variety of existing MBT platforms.
- **Interoperability of Capabilities and Forces:** The proposal, through common training has the potential to increase interoperability of capability and forces. The results could assist in the process to improve the level of cooperation in the use of heavy armoured units.
- **Addresses MS' Lessons Identified and Learned:** This proposal might be interpreted as linkable to Lessons from CSDP and non-CSDP Operations and Missions as Pre-deployment training was identified in the Progress Catalogue (PC20). Nonetheless, lack of pre-deployment training for heavy armoured units was not a reported but it is important to keep in mind that such assets are not significantly deployed within CSDP missions and operations.
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to facilitate training, doctrine and potentially increase deployability of heavy armoured units needed for the most demanding scenarios. Even if there is no numerical shortfall when considering such capabilities, the proposal will address to some extent the lack of Readiness. Based on its consistency with RC and PC, the proposal may be assessed as having an indirect LOW to MEDIUM Impact on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (6, 7, 8, 9, 10, 15, 16, 17, 18, 19).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.33 - EU Military Partnership (EU MP)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 1
- National budget involved from proposing MS: Clarified that no budget will be required.
- Maturity: No harmonised requirements. Stocktaking of relevant military capacity building activities is foreseen as a first step.
- Lines of Development: Doctrine, Interoperability, Materiel, Training.
- Key milestones: Project Execution Year (PEY) 2023; Project Completion Year (PCY) 2024.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage from the operational viewpoint.

Capability perspective: The project is not recommended for the main focus at this stage from the capability perspective. The project is mainly of operational nature, and it aims at providing a comprehensive picture of the military capacity building activities of the MS, serving as a platform to share best practices about Military Partnership (Advise, Train, Equip, Accompany, Reform). The potential impact of the project on the coherence of the European capability landscape is considered low at this stage. The project is considered to address the EU Capability Development Priority “Cross-Domain capabilities contributing to achieve EU’s level of ambition” however, it is not aligned with any AoA as laid down in the agreed SCCs and states to not be capability oriented. The project is not addressing any NATO major shortfall areas nor any industrial and technological competencies. The order of magnitude is low and the level of participation is limited at this stage.

Operational viewpoint: From the operational viewpoint, the proposal is expected to have a medium impact on the fulfilment of the EU CSDP military LoA by possibly addressing some aspects of the HICG Stabilisation Capabilities. The project may contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- The financial dimension, including the identification of an initial business case, needs to be specified. It was clarified that financial contributions are not expected from the project members.

From the operational viewpoint:

The project will perform analytical tasks by taking stock of existing military partnership activities and benchmarking existing practices. It will provide a perennial and interesting platform where all lessons learned and best practices about military partnership could be exchanged with a view to feed pMS national policies and strategies. The context of the production of a dedicated doctrine will need to be clarified in the early stages of the project as it needs to be compatible with or included in the EU Conceptual Development

ANNEX B

PESCO project proposals assessment report

Implementation Plan (CDIP). From the operational perspective, in the longer term, it would be important for the project to remain open in order to include new pMS as participants or to tackle capacity-building in an integrated form by including civilian or police matters.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is addressing the EU Capability Development Priority “Cross-Domain capabilities contributing to achieve EU’s level of ambition” and more particularly the area of “enabling capabilities to operate autonomously within the EU’s LoA” by improving the European capacity to commit alongside and sustain partners’ military forces.
- **SCC/AoA:** The project is not aligned with the AoA activities as laid down in the agreed SCCs. However, the project proposal identifies activities on joint or coordinated actions of military capacity building between pMS, potentially addressing the SCC module “Enabling capabilities to operate autonomously within the EU’s LoA”.
- **OSRA:** The project proposal is not consistent with OSRA as it does not include any R&T aspects.
- **KSA:** Given the scope of the project, no link with KSA reports can be expected.
- **CARD:** The project proposal has no direct reference to a Focus Area, however in the 2020 CARD Aggregated Analysis, a potential for collaboration in the area of “Stabilization and Reconstruction, Strategic Communication, Cyber Effects and Response action” has been identified, even though no concrete collaborative opportunities have been developed. The 2020 CARD recommendations stressed the need to address crises in current missions and operations in the short and medium term.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low. The project proposal aims at serving as a platform for EU Member States and relevant EU actors to exchange national cultures and strategies, share information and discuss best practices about Military Partnership (Advise, Train, Equip, Accompany, Reform) with a view to rebuild partners’ military institutions. The project is not related to the capability development. Furthermore, the low number of project members negatively affects the magnitude of the project; therefore, the potential impact on the coherence of the capability landscape is considered low.
- **Potential impact on the EDTIB:** Low. Considering the scope of the proposal and given that industry involvement is not foreseen, the project has no potential impact on the EDTIB or competitiveness of the European Defence Industry.

Maturity

- **Harmonised Requirements:** There are no harmonised requirements, nor a plan for the harmonisation of requirements reflected in the roadmap.

ANNEX B

PESCO project proposals assessment report

- **Coherence with ongoing activities in an EU context:** There are potential synergies to be explored with ongoing PESCO projects such as Co-Basing and EUFOR Crisis Response Operation Core (EUFOR CROC).

Coherence of effort and output

- **NATO priorities:** Based on the information provided, the project is not addressing any NATO Major Shortfall Area. Defence and security capacity building of partners was identified amongst main areas for NATO-EU cooperation under the Joint Declaration.
- **Collaborative activities in a NATO context:** Based on the available information, the EU Military Partnership project could interact with the NATO Security Force Assistance Centre of Excellence in the areas of interoperability, training and exercises. Furthermore, it could contribute to developing a coherent and complementary approach to capacity building of partners in both organizations, taking into consideration NATO's Defence Capacity Building Initiative (DCB). In terms of supporting NATO-EU cooperation, unnecessary duplication with ongoing activities as part of the implementation of the NATO-EU Joint Declaration should be ensured.

Financial Support

- **Initial Business Case:** The expected benefit was described in the clarification workshop.
- **Budget Allocation:** It was clarified that no budget allocation is expected for this project. Active contribution through national experts is expected.
- **EDIDP/EDF:** No intent to request financial support within the framework of the EDF.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19) as some scenarios include the need for capacity-building capabilities focused on mentoring and training.
- **Progress Catalogue:** The proposal has potential to be directly consistent with the Progress Catalogue (PC20) as it may facilitate some capabilities regrouped in the HICG Stabilization Capabilities. It must be noted that the project has the potential to address the Operational Collaborative Opportunity Non-Kinetic Engagement if, in the longer term, it was to include Strategic Advise (S&R-STRAT-ADV) and training Police capacity (S&R-POLICE-TRG-CADRE).

Operational Benefits

- **Deployability of Capabilities and Forces:** The project will create a perennial forum for the participants that would exchange their experience in capacity-building in order to collect best practices and potentially prepare the drafting of a doctrine. It will not provide new deployable assets but is likely to indirectly facilitate pre-deployment training of specialists able to mentor and train partner forces and might possibly increase their deployability.

ANNEX B

PESCO project proposals assessment report

- **Availability of Capabilities and Forces:** The project does not aim at providing new capabilities but to facilitate training and doctrine works. In the current state, it remains difficult to assess to what extent such effect would be significant on the availability of such assets.
- **Interoperability of Capabilities and Forces:** The proposal, through the drafting of a common doctrine has the potential to greatly increase interoperability of capability and forces. The project also plans to engage with NATO and other third-states involved in this kind of interactions with partners. The results might assist in the process to improve the level of cooperation in the use of Training and mentoring units.
- **Addresses MS' Lessons Identified and Learned:** This proposal is linkable to Lessons from CSDP and non-CSDP Operations and Missions as Pre-deployment training was identified in the Progress Catalogue (PC20) and the need for greater engagement with local authorities and population was part of the lessons learned. On the other hand, it must be noted that it could also be an interesting source of lessons learned on this specific issue.
- **Impact on the Fulfilment of the Level of Ambition:** The project will create a perennial forum for the participants that will serve as a catalyst where all lessons learned and best practices about capacity-building could be exchanged with a view to feed pMS national policies and strategies. It is expected to be operational by 2024 and could provide interesting findings in the short term while allowing continuing studying these issues on the longer term. The project is likely to facilitate training, doctrine and potentially increase deployability of training and mentoring units linkable to Stabilisation Capabilities. The proposal may be assessed as having an indirect MEDIUM Impact on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided, it is assessed that the proposed project has the potential to contribute to 4 of the more binding commitments (7, 10, 15, 17).

From the operational viewpoint, based on the information provided, the project does appear to contribute to the more binding commitments 12 and 13 but does not appear to contribute to the more binding commitment 14.



ANNEX B

PESCO project proposals assessment report

Assessment of Individual PESCO projects Initial Grouping 2: Maritime

ANNEX B

PESCO project proposals assessment report

4.1.34 - Essential Elements of European Escort (4E)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 2
- National budget involved from proposing MS: ES estimates the overall cost of the project at 700 M€, with ES expecting to contribute approx. 5.3 M€ per year to support the project.
- Maturity: No harmonised requirements yet, but a plan for harmonisation is reflected in the roadmap.
- Lines of Development: Doctrine, Interoperability, Materiel, Training
- Key milestones: Project Execution Year (PEY) 2031; Project Completion Year (PCY) 2045.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing the most important systems for next generation surface combatants (frigates and destroyers) that may be built in Europe from 2035 to 2045 with a Project Execution Year in 2031. The project proposal addresses the EU Capability Development Priority “Naval Manoeuvrability” and notably a long-term activity of the AoA of the agreed SCC. More specifically it is oriented until 2031 on the Research and Technology (R&T) dimension and could also contribute to the EPC2S Focus Area regarding R&T projects but also activities at sub-system level. The project is considered to have up to medium impact on the coherence of the European capability landscape only in the long-term, from 2035 on, when the design and construction phase is foreseen to show initial results. However, this requires that the R&T deliverables will be transformed into capability-oriented projects. A higher impact could be achieved if more pMS join the project.

Operational viewpoint: From the operational viewpoint, the project is likely to provide technological blocks that will support capabilities corresponding to the short term HICG Maritime engagement incl. anti-submarine warfare. Based on its consistency with RC and PC, the proposal is expected to have a direct High impact on the fulfilment of the EU CSDP military LoA. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective, the following steps are recommended to further improve the project proposal:

- The project is recommended to describe more explicitly its relationship with/contribution to the CARD Focus Area EPCS2. It seems as if the project proposal is looking at numerous projects which are all addressing the sub-system level without further specification.

ANNEX B

PESCO project proposals assessment report

- The phased roadmap provided should be further specified in terms of prioritising the development of the different systems while describing their desired outcome. The assumed impact of the project proposal would benefit from an increased number of project members.
- The financial dimension, including the identification of an estimated budget over time and expected contributions from project members, was clarified for the first phase of the project.
- In the FNC context, the project could look for synergies with the cluster Anti-Submarine Warfare in terms of training activities.

From the operational viewpoint:

The nature of the project would suggest possible links with other PESCO projects like the European Patrol Corvette (EPC) and other projects related to communication and information systems like European Collaborative Warfare (ECOWAR) and European Secure Software defined Radio (ESSOR)

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** Through the development of various key systems for the next generation of surface combatants (frigates and destroyers) focused on five areas (Combat and Weapons Systems; Communications Systems; Platform Control Systems; Navigation Systems independent from GNSS; and Integration Systems), this project proposal addresses the EU Capability Development Priority “Naval Manoeuvrability”.
- **SCC/AoA:** The project proposal contributes to achieve the long-term objectives as laid down in the SCC “Naval Manoeuvrability”. Considering the planned PCY for 2045, the project is aligned with AoA long term activities “Develop a collective approach for a common design of standardized deployable systems e.g., modular ship” of the module “Surface Superiority” and with the long-term activity “Develop collaborative R&D projects to boost the self-defence (hard and soft kill) and stealth capabilities” of the module “Power Projection”.
- **KSA:** Overall, the proposal potentially supports a wide range of industrial competencies in the field of energy generation, storage and management; emissions reduction, securing energy sources from external threats or improving electrical distribution on board; as well as sensor and navigation systems. Considering the broad aspects of this project proposal, it is possible to identify various areas that may have a potential link to Key Strategic Activities identified in different KSA reports, such as Energy on Board of Ships, Guidance and Control and Navigation in GNSS denied environment. In addition, some of the technological developments envisioned by the project are also relevant to upcoming KSA analyses, e.g., Military Application of Cloud Technologies, Underwater Detection by all means.
- **OSRA:** The project proposal is very broad and touches on a number of areas that have been or are currently being addressed within the Maritime CapTech community. Combat systems, however, have not been an area for R&T collaboration. The project proposal could benefit from the following OSRA TBBs: TBB95 – Maritime - Simulation

ANNEX B

PESCO project proposals assessment report

and Training, TBB96 - Maritime - Platform Survivability and Operability in Challenging conditions, TBB97 - Maritime - Energy and Propulsion, TBB99 – Maritime - Identifying and Countering Threats, TBB100 – Maritime - Smart Industrialisation and Predictive Maintenance, TBB101 – Navigation – Navigation in GNSS denied environment, TBB102 – Navigation - Position, Navigation and Timing (PNT) superiority and integration into operations and systems

- **CARD:** The CARD findings and recommendations are considered as an orientation for this project proposal. It is directly addressing the EPC2S Focus Area as laid down in the CARD report, and would contribute to implementing it, if more pMS will join. It also takes up the findings of the CARD aggregated analysis as it is related with a number of the collaborative opportunities identified in the CARD analysis as being one of the most pressing capabilities. The 2020 CARD Aggregated Analysis revealed a high level of fragmentation where naval vessels are concerned as pMS pursue capabilities related to Naval Manoeuvrability nationally: a collaborative approach on procurement, design, development, and acquisition would not only reduce the number of different classes and types but also significant savings could be achieved by the mid-2030s. Additionally, the CARD analysis revealed that many pMS have plans to replace vessels, mainly corvette and frigate-class surface combatants, maritime patrol vessels and also auxiliary vessels, within a timeframe which is in line with this project.
- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens. In addition, the project addresses most of the activities in the A.3 category of the EU Maritime Security Strategy Action Plan.
- **Potential impact on the coherence of the European capability landscape:** Low to Medium at this stage. The CARD Aggregate Analysis revealed mediocre levels of coherence in Surface Superiority and Power Projection due to a high level of fragmentation in terms of ship classes in use. This is a project proposal of significant scale, which aims to develop key systems in five areas (combat and weapon systems, communication systems, platform control systems, navigation systems, integration of systems) which are important to achieve defragmentation at sub-system level and support the modular approach which are also targeted by the PESCO project EPC as well as the CARD Focus Area EPCS2. The project proposal would enable participating EU navies to configure their new ships individually however, with a high level of commonality. The current subscribed project members navy fleets are reaching out about 30% of the PESCO pMS navy fleet size, however a higher number of participating members would improve the potential impact.
- **Potential impact on the EDTIB:** The objectives and scope of the proposal enable to estimate a possible medium/high impact on the EDTIB. The scope and potential output of the project proposal covers five areas: “Combat and Weapons Systems”, “Communications Systems”, “Platform Control Systems”, “Navigation Systems independent from GNSS” and “Integration of Systems System”, whereby in some cases dependencies and gaps exist, as highlighted in related KSA reports. The roadmap includes technology and industrial proposal submission (during Phase 2), TRL 2-6 maturation (during Phase 3) and TRL 7-9 development (during Phase 4). Depending on how the project will be implemented and the degree of industrial involvement, the

ANNEX B

PESCO project proposals assessment report

initiative has the potential to strengthen the EDTIB competitiveness. It was clarified that on the basis of specific focus of project members on specific sub-systems, the project members' industry can take the lead on the respective development activities.

Maturity

- **Harmonised Requirements:** The systems to be developed are not determined yet, as the decision depends on agreements between project members. No harmonised requirements are in place yet, but there is a plan to harmonise them in Phase 1 and 2 of the roadmap.
- **Coherence with ongoing activities in an EU context:** There are links to other PESCO projects and synergies to be exploited with them most notably with the ongoing PESCO projects such as Maritime Unmanned Anti-Submarine System (MUSAS), with regards to integration of unmanned systems for ASW; European Patrol Corvette (EPC), due to the extensive use of the same systems for corvettes as well; Upgrade of Maritime Surveillance (UMS), with regards to integration of surveillance sensors on board and their links to shore; Strategic C2 System for CSDP Missions and Operations (EUMILCOM) with regard to the foreseen communication systems; Electronic Warfare Capability and Interoperability Programme for Future JISR Cooperation (JISR) with regard to EW systems, and EU Radionavigation Solution (EURAS) with regard to positioning and navigation.

Coherence of effort and output

- **NATO priorities:** The project may contribute to addressing NATO major shortfall areas Maritime Engagement and Anti-Submarine Warfare, for ASMD, surface combat and power projection. The modular system approach could also enable 4E to support other shortfall areas in the maritime domain, including JISR, Information Superiority, cyber defence and contribute to achieving air superiority and other cross domain capabilities. Cooperation in the maritime domain is amongst the key areas identified for cooperation under the NATO-EU Joint Declaration.
- **Collaborative activities in a NATO context:** The project could be related to the High Visibility Project 'Maritime Unmanned Systems' as well as to multiple projects and proposals developed in the NATO Smart Defence framework. The project members could elaborate on the intended synergies/ways to avoid unnecessary duplication with the above-mentioned initiatives. Furthermore, the proposing MS provided further details in the Clarification WS on how it intends to use the results of an already completed SD project 1.1047 Shipborne Radar-Based Detection of Fast-Flying Low RCS Objects. In the FNC context, the project could look for synergies with the cluster Anti-Submarine Warfare in terms of training activities.

Financial Support

- **Initial Business Case:** The estimated cost of the overall program is within a range of 700 M€. The planned national contribution of ES is 5,3 M€ (average) per year for the duration of the project.

ANNEX B

PESCO project proposals assessment report

- **Budget Allocation:** Information was provided on the budget allocation for the initial phase of the project. The project coordinator intends to establish a national project office to support the project.
- **EDIDP/EDF:** There is an intent to request financial support within the framework of the EDF. It was clarified that convergence with EDF programs will be sought to maximize financing. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to trigger the development of assets related to the capabilities contributing to Maritime interdiction (NMIO) and provide systems for other activities such as anti-submarine (ASW), anti-surface warfare (ASuW) and others that are part of EU requirements for many scenarios.
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). The project is likely to provide systems to be implemented on maritime platforms. These assets would support capabilities corresponding to the short-term HICG Maritime engagement incl. anti-submarine warfare more specifically NMIO. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal appears to include the possibility to deploy such systems at an important range that should cover all the range for potential EU CSDP missions and operations. The range is likely to be more dependent on the future platforms transporting the system but given the nature of the maritime platforms in the scope of the project, the new systems could normally be used in CSDP operations and missions.
- **Availability of Capabilities and Forces:** The project will support build-up of future Navy platforms which should be committed to the Force Catalogue in the long term. Nonetheless, it is clear that these capabilities will not be actually operationally available in the medium term.
- **Interoperability of Capabilities and Forces:** Multinational development of such tools is likely to support future interoperability.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** Based on consistency with RC19 and PC20 the proposal may be assessed as having a HIGH Impact on the achievement of EU CSDP military LoA. The project proposal may be seen as long-term effort that might not have a significant impact in the short and medium term.



ANNEX B

PESCO project proposals assessment report

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to **11** of the more binding commitments (3, 6, 7, 8, 9, 11, 15, 16, 17, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.35 - Medium size Semi-Autonomous Surface Vehicle (M-SASV)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 2
- National budget involved from proposing MS: Not estimated yet. The estimation of the overall cost of development is 70 M€.
- Maturity: Bilateral discussions on harmonisation are initiated. However, actual harmonisation phase (Phase 1) is planned to start at Q3/2021.
- Lines of Development: Doctrine, Interoperability, Materiel, Training, Personnel
- Key milestones: Project Execution Year (PEY) 2023; Project Completion Year (PCY) 2030.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing a medium size multi mission semi-autonomous surface vehicle that would potentially provide the European navies with a needed capability to extend the operational footprint of main combat ships and to support littoral operations. The project addresses the EU Capability Development Priorities "Naval Manoeuvrability" and "Underwater Control contributing to resilience at sea", including their associated Strategic Context Cases (SCC) and is directly addressing the focus areas EPCS2 as laid down in the CARD Report. The limited magnitude of the project and the current level of participation, results in a low potential impact on the coherence of the European capability landscape. However, the project is very well suited to contribute to a bigger picture (EPCS2 or to a cluster of autonomous/semi-autonomous naval systems).

Operational viewpoint: From the operational viewpoint, the project is assessed as having Medium Impact on the EU CSDP military LoA and addresses indirectly the HICG Maritime engagement incl. anti-submarine warfare. It could contribute to strengthening the Union's operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- Besides the provided indication for the overall budget, the financial dimension, including the identification an estimated budget over time and expected contributions from project members, needs further elaboration, with particular focus on the Phase 1.

From the operational viewpoint:

- Potential contribution to addressing the harbour protection capability could be explored in order to improve further the operational benefit.

ANNEX B

PESCO project proposals assessment report

- Potential synergies with other PESCO Projects such as Maritime Awareness Systems (MAS) and Mine Counter Measures (MCM) should be examined.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is mainly addressing the EU Capability Development Priority “Naval Manoeuvrability” as the development of a medium size semi-autonomous surface vehicle can contribute to the surface superiority, situational awareness and power projection. The project partially also addresses the EU Capability Development Priority “Underwater Control contributing to resilience at sea”, namely with regard to Mine Warfare and ASW.
- **SCC/AoA:** According to the planned timeline the project is expected to deliver a modular surface vehicle in the medium-term (PCY 2030) with semi-autonomous functionalities and it is aligned with the AoA activities as laid down in the agreed SCC Naval Manoeuvrability: “Harmonize requirements for future unmanned system” and “Develop the common design of a long-range unmanned platform”. The development of a modular surface vehicle brings forward the long-term activity “Develop a collective approach for a common design of standardized deployable systems” of the module “Surface Superiority” as well as the long-term activity in the MCM module of the Underwater Control SCC “Develop common standardized UMS platforms, fitted for MW, ASW, and ISR”. The scope and the objectives, that were clarified in the Clarification WS, imply alignment with the following activities in the Underwater Control SCC: “Develop UMS capabilities to detect and counter physical obstructions and operate in non-permissive environment” (mid-term, MCM module), “Develop ASW unmanned vehicles” (mid-term, ASW module), “Establish a balanced mix between remote and autonomous systems” (long-term, ASW module).
- **OSRA:** The project proposal focuses on a topic that has been a driver for collaboration with the Maritime CapTech for many years. EDA is currently running a study on the standardisation for mission modules which builds upon previous efforts in this area. The proposal addresses elements of the Technology Building Blocks (TBBs) on “Increased Autonomy and Robotics” as well as on “Distributed Sensor Networks”, specifically the cyber defence aspects.
- **KSA:** The project proposal has the potential to contribute to strengthening EDTIB capacities in the field of autonomous systems, by addressing existing challenges in this domain, e.g., endurance, sensors, AI applications, standardization, interoperability, cyber resilience, among others. The project proposal could be linked with different KSA reports, such as Unmanned Maritime Systems, Multi-Robot Control and Cooperation – Increased Autonomy and Robotics, Information Process Enhancement by using AI and BD for decision-making support, Cyber Defence Situational Awareness and the Protection of Military CIS. Furthermore, the project may also contribute to support EU industrial capabilities in the field of Underwater Detection, area analysed in an upcoming KSA report.
- **CARD:** The project proposal can directly address the EPC2S Focus Area with the potential to impact on Maritime Surveillance, Maritime Patrol Vessels (development of a medium size multifunctional platform), Maritime Mine Countermeasures and Anti-

ANNEX B

PESCO project proposals assessment report

Submarine Warfare. Although not specifically mentioned in the project description, the proposal is potentially in line with the CARD collaborative opportunities “Maritime Patrol Vessels” and “Unmanned Maritime Systems for Underwater Threats”, and has some linkages with MSA, MMCM, and ASW. Based on the findings of the CARD Aggregated Analysis, the modularity and flexibility of the platform design has significant potential for broader interest especially among the small and medium size European navies.

- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens. In addition, the project has the potential to contribute to the implementation of the A.3 type activities in the EU Maritime Security Strategy Implementation Plan.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage, mainly due to the limited magnitude and the limited number of project members. The project proposal aims at developing a medium size semi-autonomous surface vehicle (M-SASV) of modular architecture that supports various mission modules/payloads (e.g., ISR, Anti-surface Warfare, Anti-submarine Warfare, Naval Mine Warfare or/and Naval Mine Countermeasures), with manned and unmanned functions combined and improved cyber resilience. The project proposal is directly addressing the focus areas EPC2S and could have a positive impact on coherence in Maritime Situational Awareness and Mine Warfare if an increased number of pMS join this project. The potential impact on Surface Superiority and Power projection is less clear and would depend on how this project links and generates synergies with other efforts in the EPC2S Focus Area.
- **Potential impact on the EDTIB:** Low to Medium. The project potentially supports a wide range of industrial competencies, including hybrid propulsion systems in the field of energy, sensors integration, cyber networks and autonomy functions enabled by artificial intelligence for the development of unmanned platforms. R&D investments are foreseen during the Phase 2 “Platform development” and there is an intent to request EDF funding for the development phase during the negotiations of the EDF work programme 2022. While the industrial consortium is not in place yet, the proposal specifies the intention to involve EU-based defence industry, including large entities, mid-caps and SMEs.

Maturity

- **Harmonised Requirements:** Harmonised requirements are not in place yet, however a harmonisation phase is reflected on the roadmap of the project.
- **Coherence with ongoing activities in an EU context:** There are links with ongoing PESCO projects such as, Maritime (Semi-) Autonomous Systems for Mine Countermeasures (MAS MCM), Maritime Unmanned Anti-Submarine System (MUSAS) and Upgrade of Maritime Surveillance (UMS), notably regarding the technological dimension. That applies also to the ongoing activities in the EDA CapTech Maritime. The project proposal should capitalise on the findings of these projects. An option to form a possible PESCO cluster on naval autonomous / semi-autonomous systems is

ANNEX B

PESCO project proposals assessment report

recommended to be further explored in order to facilitate a cross fertilisation of the related projects.

Coherence of effort and output

- **NATO priorities:** The project may contribute to addressing the following NATO Main Shortfall Areas: Maritime Engagement Capability, Anti-Submarine Warfare, Naval Mine Countermeasures. Cooperation in the maritime domain is amongst the key areas identified for cooperation under the NATO-EU Joint Declaration.
- **Collaborative activities in a NATO context:** Based on available information, the project could be related to the NATO High Visibility Project “Maritime Unmanned Systems” as well as to the Smart Defence project “Deployable Anti-Submarine Warfare Barrier”. In the FNC context, the project could look for synergies with the cluster “Anti-Submarine Warfare”.

Financial Support

- **Initial Business Case:** Preliminary cost estimated for the platform development is approximately 70 M€. As mentioned in the project description, a combination of national and EU funding would be needed for the project implementation.
- **Budget Allocation:** No planned or estimated budget allocation is provided, no related timelines and no estimation of contributions from pMS and industry. As mentioned in the project description, these elements need to be defined, pending agreements among pMS, national defence planning cycles and EDF work programme 2022 negotiations.
- **EDIDP/EDF:** There is an intent to request financial support within the framework of the EDF for R&D purposes. As EDF requires co-funding, a financial planning including this information would support the project’s maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). In particular, it may be directly associated with capability requirements within the “ENGAGE” (NASW-SUR, and NASUW-SUR), and “Protect” (VSWMCM) areas. In addition, it may contribute to fulfil the NUWEOD capability requirement. The relevant NASW-SUR capability requirement is present across all the Illustrative Scenarios apart from RE (crosscutting requirement) while NASUW-SUR, VSWMCM, and NUWEOD requirements serve the purpose of the Stabilization and Support to Capacity Building (SSCB), Conflict Prevention (CP) and Peace Enforcement (PE) Illustrative Scenarios.
- **Progress Catalogue:** The proposal is partially consistent with the Progress Catalogue (PC20). In this regard, it may contribute to mitigate the short-term HICG “Maritime engagement incl. anti-submarine warfare” (NUWEOD) within the “ENGAGE” area. Furthermore, should the project proposal further contribute to addressing harbour protection (Harbour Protection Module – short-term HICG), which is essential to ensure continuity of logistic sea routes (short-term HICG “Maritime engagement incl. anti-submarine warfare” - Harbour Protection Module, it could enhance its operational benefits. Nevertheless, given the expected Project Completion Year in 2030, the

ANNEX B

PESCO project proposals assessment report

project could have no significant impact on the relevant short-term HICG (2026). In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal envisages the delivery of a deployable capability. However, no information was provided to indicate potential support to Force Generation and HQ manning in CSDP missions and operations as well as the Rapid Response Databases.
- **Availability of Capabilities and Forces:** The proposal reports the possibility of capabilities being made available. Therefore, it could be assumed that the capabilities may be declared within Force Catalogue (FC) in the medium term.
- **Interoperability of Capabilities and Forces:** The proposal has the potential to support forces acting in synergy offering the prospective of interoperability of capability and forces, while fostering the development of joint and common standards and sharing doctrine and procedures.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to provide capabilities that would allow the mitigation of the HICG Maritime engagement incl. anti-submarine warfare. Based on its consistency with RC19 and partial consistency with PC20, the proposal may be assessed as having an indirect Medium Impact on the achievement of the EU CSDP military LoA in the short-term. Should the project proposal further contribute to addressing harbour protection within the HICG Maritime engagement incl. anti-submarine warfare, it could enhance its operational benefits. Given the expected Project Completion Year in 2030, the project could have no significant impact on the relevant short-term HICG (2026).

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (3, 6, 7, 8, 9, 15, 16, 17, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form seems to be contributing to the more binding commitments 12 and 13. It is too early at this stage for the contribution to commitment 14 to be assessed.



ANNEX B

PESCO project proposals assessment report

Assessment of Individual PESCO projects Initial Grouping 3: Air Systems

ANNEX B

PESCO project proposals assessment report

4.1.36 (R) - Strategic Air Transport for Outsized Cargo (SATOC)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 4, Potential Observers: 3
- National budget involved from proposing MS: Not required.
- Maturity: There are no harmonised requirements in place yet, however harmonisation is one of the objectives of the project.
- Lines of Development: Doctrine, Interoperability.
- Key milestones: Project Execution Year (PEY) 2023; Project Completion Year (PCY) 2026.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at collecting and harmonising different national requirements (no harmonised requirements have been drafted so far) and identifying options for a solution for strategic air transport capabilities for outsized cargo, including commercial off the shelf. The potential impact on the capability landscape can be considered low to medium in case the project will enter the subsequent phases of capability development. The project addresses the EU Capability Development Priority “Air Mobility”, the CARD Focus Area “Enhanced Military Mobility” and the CARD collaborative opportunity “Fixed Wing Air Transport”. Considering the timeline provided, the project is also aligned with the agreed SCC and the activities of the Avenues of Approach (AoA) for a long-term impact. Regarding the CARD recommendations, the project represents a visible step to start a joint preparation of the next planning horizon. The project can potentially address the current gap in strategic air transport, considering the lack of European large-size platforms capable of outsized cargo.

Operational viewpoint: From the operational viewpoint, the project is assessed as having a high impact on the fulfilment of the EU CSDP military LoA and mitigates shortfalls corresponding to the HICG Strategic Air and Sea transport. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- Although SATOC block 2 and 3 are described in the project, the planned PCY (2026) corresponds to the end of block 1. It was clarified that the project description of the PESCO project proposal covers only block 1.
- It was clarified that there are no financial requirements for the project. Initial business case elements were provided.

ANNEX B

PESCO project proposals assessment report

- The project needs more project members to unfold its full potential impact at European level. Higher number of projects members, including key users of strategic airlift capabilities, would positively impact the coherence of the EU capability landscape.

From the operational viewpoint: The next steps regarding the project will allow defining requirements and engaging with industrials in order to provide a feasibility study by 2026.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project proposal is directly addressing the EU Capability Development Priority “Air Mobility” and more particularly the module “Strategic Air Transport” by developing the preconditions to ensure a European outsized air cargo capability.
- **SCC/AoA:** The proposal, given the timeline provided, is fully aligned with the medium-term activity “Develop solution to enhance security of supply for low-end outsized cargo capability” of the Strategic Air Transport module of the Air Mobility SCC, in pursuit of the long-term activity “Develop an outsized cargo capability under European umbrella”. In this context, the proposal responds to the identified challenges: “To ensure full security of supply for the outsized cargo capability through the establishment of a long-term European solution” and “To develop future strategic air mobility capabilities based on an analysis of Member States’ desired global engagement and power projection”.
- **OSRA:** This proposal is not research-driven, but at least two of the potential solutions will require R&T investment (e.g., Conversion of civil airframers and Development of new airframe). Aerial Systems Strategic Research Agenda (SRA) Technology Building Block 09 (OSRA TBB09) “Fixed Wing” roadmap includes a project proposal on the scoping of necessary technologies for a future strategic outsized cargo system. This project proposal (TBB09x12: Outsized cargo air transport) is fully in line with the scope of this PESCO proposal. A clear linkage exists between the efforts for harmonising requirements, identifying potential solutions, and identifying research requirements thereto.
- **KSA:** The topic of “Outsized Cargo Air Transport” was proposed by EDA to pMS and industry among other areas considered for the 2020-2021 KSA report development cycle. Based on feedback received, the topic was considered as relevant and was supported both from pMS and industry, however it was not prioritised within the areas that were eventually chosen for the 2020-2021 KSA report cycle. The “Outsized Cargo Air Transport” topic is now under consideration by EDA, together with other topics, for the next 2021-2022 KSA report development cycle. EDA proposals for final topic selection will be submitted to pMS and industry for review in autumn 2021.
- **CARD:** The project proposal directly addresses the “Enhanced Military Mobility” (EMM) Focus Area. The 2020 CARD Aggregated Analysis highlighted the concerns for the lack of a European programme to follow up the outsized cargo interim solution (SALIS). It also indicated the “Fixed Wing Air Transport” as most needed, most

ANNEX B

PESCO project proposals assessment report

pressing, and most promising collaborative opportunity in the Strategic Air transport area. Moreover, the project is contributing to the implementation of the 2020 CARD recommendations, aiming to respond to the EU strategic critical shortfall after considering the harmonization of requirements for joint development and acquisition of the next generation of transports - outsized cargo. Therefore, it also represents a starting point to jointly prepare the next planning horizon.

- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low to Medium at this stage, mainly due to the limited number of project members including key users of strategic airlift capabilities. The project proposal aims at addressing the gap in strategic air transport by drawing common requirements for all potential solutions (step 1) and developing the selected solution (step 2,3) ranging from: the adaptation of existing frames, a civil-contractor solution, a conversion solution of a civil airliner to a new design, or a dedicated military platform development. The prudent approach allows pMS to join the project without committing to later steps. The EU requirement for Strategic Air transport calls for a range of platforms covering the whole spectrum of strategic airlift tasks. None of the EU MS currently owns such a platform capable of outsized cargo in terms of volume/weight/capacity needed. A wide participation would be required to build-up this capability, to increase the coherence of the European capability landscape and to reduce the dependencies on a third party. Such cooperative framework could make the capability also available to those pMS that have occasional use for it, enabling strategic deployment for missions, operations and exercises.
- **Potential impact on the EDTIB:** The impact on the EDTIB cannot be well assessed at this stage. A more concrete assessment would be possible once the preferred solution of a European aerial platform would be decided for the implementation of the project. The project is not research-driven however, if a future European solution for strategic airlift will be developed, the project may require R&T investment enhancing the competitiveness of the EU defence industries. Pending this decision and more detailed information on the potential technological advances addressed (e.g., entailing R&D activities and involvement of EU industries/entities), the EU defence industries could play a significant role through all phases of design, research and development. Solutions related to possible conversion of civil airliner(s), probably combined with modernisation/upgrades of (sub-)systems installed, would partially support the EDTIB, through development of components and sub-systems elements. Other possible solutions e.g., civil contracting opportunities will have very limited or none impact on EDTIB as it must be expected that a non-European platform is used (as it is currently the case with SALIS).

ANNEX B

PESCO project proposals assessment report

Maturity

- **Harmonised Requirements:** There are no common requirements in place yet. Therefore, the project (block 1) aims at harmonising and consolidating different requirements as first step.
- **Coherence with ongoing activities in an EU context:** The project can be linked with the European Air Transport Command (EATC) as a central operational command for strategic and tactical airlift.

Coherence of effort and output

- **NATO priorities:** The project may contribute to addressing the NATO Major Shortfall Areas: Readiness and Interoperability. The project could address requirements for next generation strategic air transport for outsized cargo in accordance with capabilities requested under NATO target E2201N “Strategic Deployment and Sustainment”.
- **Collaborative activities in a NATO context:** The project could provide a solution to reduce third party dependencies in the current SALIS outsized cargo contract. The project could also be related to the NATO Strategic Air Capability (SAC) programme. In the FNC context, the project could be related to the Multinational Air Group (larger formations).

Financial Support

- **Initial Business Case:** The value of the investment has been briefly described/clarified. The project will mainly build on human resources at the beginning of the project.
- **Budget Allocation:** Financial contributions might be required if the project members decide to fund their respective risk and feasibility studies.
- **EDIDP/EDF:** The proposal only provides general intention on requesting the financial support within the framework of the EDF, pending the discussions between project members on possible EDF funding for supporting studies.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to address the operational requirements in the PROJECT Capability area, specifically to Strategic Air Transport TCC-H.
- **Progress Catalogue:** the proposal is consistent with the Progress Catalogue (PC20). It directly addresses the HICG Strategic Air and Sea Transport. The proposal aims at examining the feasibility of having airline companies contracting large cargo aircrafts which requirements answer to the CCS TCC-H. The RC sets the necessary number and the PC identifies a lack of large “C17 – type” aircrafts contributing to achieve the EU CSDP military LoA. The lifecycle for the remaining AN-124 fleet (the mainstay for the strategic transport of over- and outsized cargo) is coming to an end and no replacement is envisioned. From this perspective, the proposal mainly focuses on consulting the main companies and see if they are able to transform existing planes and provide Strategic transport as a service. The project mainly aims at providing a feasibility study in the short term, but capabilities are unlikely to be provided in order

ANNEX B

PESCO project proposals assessment report

to support the EU military LoA in the short term (2026). In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** Currently, the project is a consultation of existing industries to conduct a feasibility study, it will not bring new capabilities. Nonetheless, if the project is fruitful, by nature, it might provide capabilities which albeit not being owned by Member States would greatly projection of EU forces. It would complement other multinational solutions that the EU can use but are not EU-driven like the European Air Transport Command (EATC).
- **Availability of Capabilities and Forces:** At this stage, it is understood that the project may not provide capabilities committed to the Force Catalogue but Strategic Air Transport as a service by contracting an industrial. Nonetheless, given the existing and planned fleets of A 400M, this would greatly mitigate the related shortfall for loads which are above A400M capabilities. Nonetheless, it appears that this program may not be available to CSDP missions and operations in the medium term.
- **Interoperability of Capabilities and Forces:** In terms of interoperability, a multi-nation-solution for such a system could enhance logistic interoperability between nations and a pooling-sharing option would be possible as well. But, in the end, it will create a capability which will not be owned by MS and the impact on interoperability is difficult to assess.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to provide a mitigation to the HICG Strategic Air and Sea Transport. Based on the consistency with RC19 and PC20 the proposal may be assessed as having a HIGH IMPACT on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to **7** of the more binding commitments (6, 7, 9, 10, 15, 16, 17).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.37 - Next Generation Small RPAS (NGSR)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 4, Potential Observers: 4
- National budget involved from proposing MS: Overall budget estimation from 4.5 to 11M€.
- Maturity: Initial requirements exist at the national level. Building up on the initial requirements for the harmonisation is foreseen.
- Lines of Development: Doctrine, Interoperability, Material, Training.
- Key milestones: Project Execution Year (PEY) 2027; Project Completion Year (PCY) Not defined.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project proposal aims at developing the next generation of small RPAS for Land units, SOF, maritime vessels, including for civilian and law enforcement use. The potential impact on the coherence of the capability landscape is considered low. This could be improved with a further increase in project members. The development of a tactical UAS directly addresses the EU Capability Development Priority “Air Superiority” and takes up the finding of the CARD Aggregated Analysis namely for the collaborative opportunity “Tactical Remotely Piloted Aerial Systems”. In addition, the project proposal represents an invitation to jointly prepare the next planning horizon and thus contributes to implement the CARD recommendations. The project can potentially address R&T activities in different areas such as UAS, AI/machine learning, payload modularity, sensors development, and can potentially positively impact the EDTIB.

Operational viewpoint: From the operational viewpoint, the project is assessed as having High Impact on the EU CSDP military LoA and addresses directly HICG in the “INFORM” Capability Area. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- Clarification is needed on the R&T dimension, especially on the extent to which those R&T activities are expected in which areas and if this would impact the PCY which has not been defined.
- The project would benefit from further clarifying the alignment with the identified AoA in the agreed SCC. A more detailed definition of the roadmap, including PCY, could contribute to this.

ANNEX B

PESCO project proposals assessment report

- A clarification on the industrial dimension of the project, including the possible usage of civil drones emerging technology, should be provided.
- An increased number of project members is recommended in view of achieving significant impact on economies of scale and enhancing the potential impact on the coherence of the EU capability landscape.

From the operational viewpoint: This proposal should further elaborate on the Air integration as it could affect the range of the relevant assets. Potential synergies with other PESCO Projects such as EU Collaborative Warfare Capabilities (ECoWAR), European Global RPAS Insertion Architecture System, and ESSOR as well as the Project proposal Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA UT) should be explored.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project proposal is addressing mainly the EU Capability Development Priority “Air Superiority” and more particularly the module “Air ISR platforms”. The project aims at the development of a class I small (less than 150 Kg) Tactical RPAS with ISR capabilities to be used mainly for Land units. Nevertheless, the same RPAS platform can be used in the maritime domain contributing to address the priorities “Naval Manoeuvrability” as the ISR data can be used to provide a maritime shared situational awareness. In addition, weaponization is at least envisaged.
- **SCC/AoA:** A listing of related AoA was provided, however the alignment cannot be assessed as it was also clarified that the contract will start to be executed from 2027, without defining the PCY and when the final outcome will be delivered. Further details are needed to confirm the alignment with the AoA as laid down in the agreed SCC.
- **OSRA:** Many R&T elements are mentioned in the project abstract section, but considering the PCY in 2027, it has to be clarified to what extent R&T activities are expected in the project and in which areas. The project is assessed to potentially address a huge number of TBBs¹. Further clarification on the scope would be beneficial for the project, also in consideration of keeping the planned PCY in 2027.

¹ Possibly relevant Technology Building Blocks include: TBB1 – Air - Autonomous Air Vehicle Operation, TBB2 – Air - Cooperative Air Vehicle Operation, TBB3 – Detect, Sense and Avoid, TBB4 – Air – Fault Diagnostics, Systems Prognosis and Self Repair, TBB6 – Air - Propulsion, Power Generation and Distribution, TBB13 – Missiles&Munitions - Precision Guided Munition and Missiles, TBB71 – Information - Information Process Enhancement by using AI and Big Data, TBB72 – Information- Long Range Communications, TBB77 – Land - Less-than-lethal effectors, TBB78 – Land - Manned/unmanned teaming, adaptive cooperation between manned and unmanned system with different levels of autonomy, TBB79 – Land - Target / Threat recognition and identification, TBB81 – Land - Novel User Interfaces for Soldier – Assets integration/ control, TBB83 – Land - Weapon system integration, TBB87 – Materials - Camouflage and signature management technologies, TBB104 – Navigation - Autonomous and automated GNC and decision-making techniques for manned and unmanned systems, TBB106 – Navigation - Multi-robot control and cooperation, TBB108 – Navigation – Key enabling and performance enhancing GNC technologies (i.e. Mini/Micro Accelerometers and Gyros, low power PRS receiver), TBB110 – Optronics - Passive imaging systems, TBB111 – Optronics - Novel optical configurations, TBB112 – Optronics - Active imaging systems, TBB119 – Radar - Detection, Tracking and Recognition of Challenging Targets.

ANNEX B

PESCO project proposals assessment report

- **KSA:** The following KSA reports previously developed are considered as directly or indirectly relevant to the project proposal in the RPAS areas: RPAS ATI – Industrial and Technological Dimension, Cooperative Air Vehicle Operation - Detect, Sense and Avoid Systems, Autonomous and Automated GNC and Decision-Making Techniques for Manned and Unmanned Systems, Detection Tracking and Recognition of Challenging Targets. In the above-mentioned KSA reports, relevant aspects in the area of RPAS, namely technologies, industrial capacities, skills and non-EU dependencies are being explored, providing an overview of such aspects, also in view of their relevance to EU’s strategic autonomy. Finally, the KSA report “Counter -UAS” currently under development during the 2020-2021 KSA report cycle (expected to be finalised this year) is considered as relevant to the project proposal.
- **CARD:** The project proposal does not directly address a Focus Area. However, it takes up the findings of the CARD Aggregated Analysis in particular for the identified collaborative opportunity “Tactical Remotely Piloted Aerial Systems” (RPAS). The project potentially contributes to the implementation of the CARD recommendations, addressing the area of harmonisation of requirements for tactical land and maritime RPAS and Joint Development and acquisition of next generation tactical RPAS. Both were identified as solutions to counter the trend of defragmentation. In addition, the project proposal directly focusses on the development of next generation capabilities, especially in AI, new sensor technologies, efficient propulsion and unmanned systems. Overall, that could be considered as an invitation to jointly prepare the next planning horizon, which is one of the CARD recommendations.
- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage. The project proposal aims at developing the next generation of small RPAS for Land units (brigade/division level), SOF, maritime vessels, including for civilian, law enforcement use. Armed forces of the EU MS currently lack an unmanned air system (with ISTAR, kinetic operations, C3 functions) used mainly by Land units in a flexible and effective way, since many of the current systems might need specific facilities (runways) and a considerable number of personnel to run it (pilots, maintenance, support, etc). The project takes up the findings of the CARD Aggregated Analysis related to capability development. Overall, the scope and the magnitude of the project proposal suggests that a low impact on defragmentation could be achieved and the PMS achieve the best quality for next generation of small RPAS, notably in terms of cutting-edge technologies. The potential impact on the coherence of the EU capability landscape would increase with a higher level of participation and the confirmation of the alignment with the AoA as laid down in the agreed SCC.
- **Potential impact on the EDTIB:** The proposal potentially contributes to improving European industry in different areas such as UAS, networking, AI/machine learning, payload modularity, sensors development, cyber operations, communication, and simulation. It potentially addresses R&D priorities. However, the industrial dimension is not yet defined. To this extent, it is important to consider the already high number of tactical UAS producer in the EU and the dual-use nature of RPAS technologies, with

ANNEX B

PESCO project proposals assessment report

defence specific activities that can benefit from innovative developments emerging in the field of civilian drones. Clarification on the industrial dimension taking into account the above elements would be needed to perform an assessment of the potential impact on the EDTIB.

Maturity

- **Harmonised Requirements:** No harmonised requirement in place. The project builds on some existing requirement at national level to set up the planned harmonised requirements.
- **Coherence with ongoing activities in an EU context:** There are links with ongoing PESCO projects. The project can exploit synergies in terms of studies and technology developed with ongoing PESCO projects, such as: European MALE RPAS, EU Collaborative Warfare Capabilities (ECOWAR), CBRN Surveillance as a Service (CBRN SaaS), European Global RPAS Insertion Architecture System (GLORIA), regarding training, standardization and operability, European Secure Software defined Radio (ESSOR), Electronic Warfare Capability and Interoperability Programme for Future JISR Cooperation and Counter Unmanned Aerial System (C-UAS). Additionally, there are already ongoing collaborative projects targeting the same capability area in an EU context such as the EDAs CAT B project ERA - Enhanced RPAS Automation (2016-2020) and its potential follow-up (under discussion at CapTech Air), the EDA CAT B project Enhanced RPAS Automation Phase 2 [ERA-2] "From automation to Autonomy".

Coherence of effort and output

- **NATO priorities:** The project is addressing a Major Shortfall Area "Joint Intelligence Surveillance and Reconnaissance". It could be mitigating tactical RPAS shortfalls, specifically small Type I. The modular approach for payloads could also address shortfalls in "Protection, Information Superiority" and "C2" areas. RPAS is one of the areas of common interest identified in the NATO-EU Joint Declaration.
- **Collaborative activities in a NATO context:** The project could look for synergies with other activities, including NATO Smart Defence projects and proposals 2.1074 Shipborne Unmanned Aircraft Systems (UAS) and 3.1222 Maritime Unmanned Aerial Systems (linked to the NATO Joint Capability Group on Unmanned Aircraft Systems (JCGUAS)) and those implemented within NATO STO, for instance Flight Testing of Unmanned Aerial Systems. In the FNC context, Tactical Remotely Piloted Systems (T-RPAS) are addressed through a sub-cluster of cluster JISR.

Financial Support

- **Initial Business Case:** The estimated cost of the program is within a range from 4.5 to 11M €, pending on the capacities decided for the system.
- **Budget Allocation:** Budget estimation is provided for different work strands (sub-industry programs) summing up to 10M€. No planned or estimated budget allocation over time is provided, no related timelines, and no estimation of contributions from pMS and industry. The ES Army will contribute in-kind (facilities and military personal)

ANNEX B

PESCO project proposals assessment report

for the test of the systems, both partially (sub-systems) and flying the demonstrator. Breakdown of the estimated cost was provided.

- **EDIDP/EDF:** There is an intent to request financial support within the framework of the EDF for research on sub-systems, such as enhanced ISR sensor, on-board radar, guided micro high precision munitions, on-board CBRN sensor, piloting assisted by AI or AI in support of flight simulation. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). In particular, it may be directly associated with the capability requirements ISTAR-UAV(CORPS&DIV)-COY and ISTAR-UAV(BDE)-PLT within the "INFORM" area. The relevant ISTAR-UAV(BDE)-PLT capability requirement is present across all the Illustrative Scenarios (cross-cutting requirement) while ISTAR-UAV(BDE)-PLT requirements serve the purpose of the Stabilization and Support to Capacity Building (SSCB), Conflict Prevention (CP) and Peace Enforcement (PE) Illustrative Scenarios.
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). In this regard, it may contribute to addressing the short-term HICG "Land ISTAR" (ISTAR-UAV(CORPS&DIV)-COY) within the "INFORM" area. A possible mitigation for ISTAR-UAV(CORPS&DIV)-COY shortfall has been identified in the increase of pMS' commitment of available assets/capabilities and procurement, with the interoperability being the main gap among LoD. From this perspective, the proposal may be regarded as fully mitigating the above-mentioned shortfalls as it envisages closing gaps in terms of doctrine, training, materiel and interoperability. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal envisages the delivery of a deployable capability. Furthermore, it shows the potential to significantly enhance sustainability and support to CSDP missions and operations, while fostering cost efficiency. However, no information was provided to indicate potential support to Force Generation and HQ manning in CSDP missions and operations as well as the Rapid Response Databases.
- **Availability of Capabilities and Forces:** The proposal reports the possibility of capabilities being made available for any operation, once fielded. Therefore, it could be assumed that the capabilities may be declared within Force Catalogue (FC). Given the project timelines, these capabilities are likely to be made available in the short to medium term.
- **Interoperability of Capabilities and Forces:** The proposal has the potential to generate scaling effects leading to an increase in interoperable forces and enhanced capabilities in the area of tactical RPAS. The proposal has the potential to support forces acting in synergy offering the prospective of interoperability of capability and forces.

ANNEX B

PESCO project proposals assessment report

Furthermore, the proposal is expected to support the alignment of EU and NATO standards that ensure interoperability with NATO

- **Addresses MS' Lessons Identified and Learned:** This proposal supports Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to provide capabilities corresponding to the HICG Land ISTAR. Based on its consistency with RC19 and PC20, the proposal may be assessed as having a direct High Impact on the achievement of the EU CSDP military LoA in the short-term.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (3, 6, 7, 8, 9, 15, 16, 17, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form seems to be contributing to the more binding commitments 12 and 13. It is too early at this stage for the contribution to commitment 14 to be assessed.

ANNEX B

PESCO project proposals assessment report

4.1.38 - Rotorcraft Docking Station for Drones (RDSD)

- Level of Interest: Possible Project Coordinator:1, Potential Project Members (including the coordinator): 2, Potential Observers: 3
- National budget involved from proposing MS: Not provided.
- Maturity: Initial requirements have been drafted in the Next Generation Rotorcraft Capability (NGRC) project; however, they need to be discussed and agreed between project members.
- Lines of Development: Doctrine, Interoperability.
- Key milestones: Project Execution Year (PEY) Not defined; Project Completion Year (PCY) Not defined.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage from the operational viewpoint.

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project aims at developing a new capability to launch, operate, and recover a large number of small (mini, micro) Unmanned Air Systems (UAS) from rotorcraft platforms. The project proposal can only indirectly be linked to the agreed EU Capability Development Priority "Air Superiority". The potential impact of the project on the coherence of the European capability landscape is considered low, mainly due to the limited number of project members. The roadmap and related milestones have partially clarified what will be delivered and in which time. Its focus on doctrine and interoperability, the lack of description on operational and further aspects, the absence of harmonized requirements and of a financial planning, suggest to not recommend it for the main focus.

Operational viewpoint: From the operational viewpoint, the project is assessed as having Medium Impact on the EU CSDP military LoA and addresses indirectly the HICGs Joint ISR, SOF, and Maritime engagement incl. anti-submarine warfare. It could contribute to strengthening the Union's operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- The phased roadmaps have been partially specified in terms of timelines in the Clarification WS as the actual PEY and PCY are missing. More evidence on whether there is alignment with the identified AoA in the agreed SCC would help support the project.
- A matured initial business case, including a specified and confirmed financial planning would support a better insight into the potential magnitude and reach at European level. The latter would clearly benefit from an increased number of project members.

ANNEX B

PESCO project proposals assessment report

- The synergies with activities in the NATO context and with ongoing activities in an EU context to avoid unnecessary duplication and to ensure effective synergies have been provided.
- The scope of the project should be better specified, in particular by specifying a set basic technical elements such as type of drones. This would facilitate the identification of potential R&T activities required, including the definition of a potential industrial element. A detailed plan on the industry involvement to the project should also be developed.

From the operational viewpoint:

- Potential synergies with other PESCO Projects such as EU Collaborative Warfare Capabilities (ECoWAR) and European Global RPAS Insertion Architecture System should be explored.
- Early identification of UAS-Docking station integration requirements in order to the project to produce concrete operational deliverables.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is not directly addressing any EU Capability Development Priority. The project can be considered as indirectly linked to the EU Capability Development Priority “Air Superiority” to support the new generation air combat systems (Swarming unmanned systems and teaming with manned assets) and to the technology dimension of the EU Capability Development Priority “Cross-domain capabilities contributing to achieve EU’s Level of Ambition” (“Development of systems with evolving levels of autonomy” as part of the submodule “Innovative technologies for enhanced future military capabilities”).
- **SCC/AoA:** The project proposal refers to the SCC “Air Superiority”, module “Air Combat” but it is not picking up identified activities of the AoA as laid down in the agreed SCC. However, Manned-Unmanned-Teaming (MUM-T) is an activity associated to this project which could also be found as a long-term activity in the SCC module “Air Combat”.
- **OSRA:** The project seems to have a dominant and strong R&T dimension and it can be linked to OSRA TBB02x08 “UAV launch and recovery from airborne platform – UAV mothership” and TBB01- “Air-Autonomous Air Vehicle Operation”. It could be assumed, that the existing Aerial Systems Strategic Research Agenda (SRA) covers additional relevant aspects for this project proposal necessary to achieve fully functioning unmanned air vehicle operation and MUM-T, including in a rotorcraft system context. Other elements can be found at: TBB01-Air-Autonomous Air Vehicle Operation, TBB03-Air-Detect, Sense and Avoid Systems, TBB07-Air-Secure Command and Control Systems, TBB08-Air-Rotorcraft: Next Generation High Performance Vertical Lift, TBB106-Navigation-“Multi-robot control and cooperation”, TBB122-Radar-“Multi-Platform RF Systems”.
- **KSA:** The following KSA reports are considered as directly or indirectly relevant to the area of drones related to the project proposal: RPAS ATI – Industrial and Technological

ANNEX B

PESCO project proposals assessment report

Dimension, Cooperative Air Vehicle Operation - Detect, Sense and Avoid Systems, Autonomous and Automated GNC and Decision-Making Techniques for Manned and Unmanned Systems, Detection Tracking and Recognition of Challenging Targets. The following KSA report is considered as directly relevant to the area of rotorcraft technologies: to Cutting Edge Technologies for Helicopters/Tilt Rotors. In all mentioned KSA reports, relevant aspects in the area of RPAS, namely technologies, industrial capacities, skills and non-EU dependencies are being explored, providing an overview of such aspects, also in view of their relevance to EU's strategic autonomy. Finally, the KSA report Counter-UAS currently under development during the 2020-2021 KSA report cycle (expected to be finalised – endorsed/noted by the SB later this year) is considered as relevant to drones.

- **CARD:** The project does not take up directly the findings of the CARD Aggregated Analysis related to capability development, as the UAS operated from rotorcraft platforms have not been explicitly addressed by CARD. The project could be considered as indirectly addressing the collaborative opportunity “Tactical Remotely Piloted Aerial Systems” (RPAS) which could be considered as most promising and most pressing. However, the project does not pick up the proposals to mitigate fragmentation but adds another facet.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low. The project proposal aims at developing a new capability to launch, operate, and recover large numbers of small (mini, micro) Unmanned Aircraft Systems (UAS) from rotorcraft platforms and it was clarified that the intention is to use a new platform. The intended scope and magnitude of the project (its ambition) has been clarified as evidence on what will be delivered in scope and time was provided in the Clarification WS.
- **Potential impact on the EDTIB:** There is no specific information on possible industry involvement or on the technological advances potentially addressed through industry R&D activities. The impact on the EDTIB and on the competitiveness of the European defence industry cannot be well assessed at this stage.

Maturity

- **Harmonised Requirements:** Initial requirements have been already drafted in the New Generation Rotorcraft Capability (NGRC) project, but they will need to be specified between project members.
- **Coherence with ongoing activities in an EU context:** There are already ongoing collaborative activities targeting the same capability in an EU context such as the ones related to manned and unmanned teaming and swarming in EDAs CapTech Air, Navigation, Radar.

Coherence of effort and output

- **NATO priorities:** The project is not addressing a NATO Major Shortfall Area.

ANNEX B

PESCO project proposals assessment report

- **Collaborative activities in a NATO context:** The project could contribute to fulfilling requirements defined under the NATO High Visibility Project Next Generation Rotorcraft Capability (NGRC). It was clarified that the roadmap might be linked to (but not limited by) the NATO Next Generation Rotorcraft Capability project.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment.
- **Budget Allocation:** No planned or estimated budget allocation of the project is provided, no related timelines and no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** EDF funding is foreseen for both research and capability windows. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is partially consistent with the Requirements Catalogue (RC19). In particular, it may contribute to address qualitative aspects to fulfil several capability requirements connected with the ability of operating Rotary-Wing assets within the "ENGAGE" and "INFORM" areas, serving the purpose of all Illustrative Scenarios. However, the proposal is likely to address emerging aspects of operational requirements driven by the future strategic and technological environment.
- **Progress Catalogue:** The proposal is partially consistent with the Progress Catalogue (PC20). In this regard, it may contribute to address some qualitative aspects of the short-term HICG Joint ISR and SOF, and the medium-term HICG "Maritime engagement incl. anti-submarine warfare" (NRW-ASUW), both identified within the "ENGAGE" area. Nevertheless, the proposal mainly focuses on technological capability development based on the perceived Future Security Environment and foreseen technology developments. Given the expected Project Completion Year, the project could have no significant impact on the relevant short-term HICG. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal envisages the delivery of a deployable capability and show potential to support Force Generation and HQ manning in CSDP missions and operations as well as the Rapid Response Databases, providing substantial support with personnel and materiel.
- **Availability of Capabilities and Forces:** Once acquired, capabilities resulting from the proposal will be declared within the Force Catalogue and made potentially available to deployable forces and capabilities for CSDP military missions and operations. Nonetheless, it is unclear when these capabilities will be actually operationally available.
- **Interoperability of Capabilities and Forces:** The proposal has the potential to support forces to act in synergy or require forces sharing common doctrine and procedures. It

ANNEX B

PESCO project proposals assessment report

is intended to develop a system allowing Teaming & Interoperability between Manned rotorcraft and Unmanned vehicle, while expanding the potential of unmanned air vehicles. That prepares the ground for future common standards for all European landscape. The proposal has the potential to foster interoperability, while sharing common technologies, doctrine and procedures. The proposal may also support the alignment of EU and NATO standards that ensure interoperability with NATO.

- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to augment qualitatively materiel for capabilities linkable to the HICGs Joint ISR, SOF, and Maritime engagement incl. anti-submarine warfare. Based on its partial consistency with RC19 and PC20, the proposal may be assessed as having an indirect Medium Impact on the achievement of the EU CSDP military LoA in the short and medium-term. Given the expected Project Completion Year, the project could have no significant impact on the relevant short-term HICG.

D. Contribution to the 20 more binding commitments

From the capability perspective, it is assessed that the proposed project has the potential to contribute to 7 of the more binding commitments (3, 6, 7, 9, 15, 16, 17)

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.39 - Small Scalable Weapons (SSW)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 2, Potential Observers: 2
- National budget involved from proposing MS: Not provided.
- Maturity: Operational Requirements defined within IT-DE-US Small Scalable Kinetic Weapon (SSKW) project, as well as TRL4 prototype developed. IT is also opened to define it further with other project members.
- Lines of Development: Doctrine, Interoperability, Leadership, Materiel, Training.
- Key milestones: Project Execution Year (PEY) 2022; Project Completion Year (PCY) 2026.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The proposal is addressing the EU Capability Development Priority “Air Superiority” and aims at providing a new low-cost weapon with potential scalable-effects and the ability to loiter/re-loiter and to be launched/employed from fixed wing & rotary wing air assets. There is an initial intention to deliver a Small Scalable Weapon by 2026. However, the current tentative roadmap needs to be further substantiated. A higher level of participation is still needed. To improve the potential impact of the project on the coherence of the European capability landscape, which is considered low at this stage. The project can be assumed to contribute to the coherence of output with NATO as it was clarified that the project can build on the TRL 4 prototype that was developed in the NATO project Small Scalable Kinetic Weapon (SSKW).

Operational viewpoint: From the operational viewpoint, the project is assessed as having High Impact on the EU CSDP military LoA and addresses directly the HICG Air Precision Strike – Unmanned. However, that involves meeting the integration with existing and future aerial platform meeting as a paramount requirement in order for the project to deliver concrete operational benefits. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective, the following steps are recommended to further improve the project proposal towards more maturity:

- Taking into account the presented tentative phased roadmap including deliverables and timing, the project proposal would further benefit from a more elaborated roadmap in terms of reference to Strategic Context Cases and Avenues of Approach.
- A matured initial business case, including a specified and confirmed financial planning, would support a better insight into the potential magnitude and reach at European

ANNEX B

PESCO project proposals assessment report

level. The latter would clearly benefit from an increased number of project members. Elements regarding the harmonisation of requirements were provided.

From the operational viewpoint:

- Potential synergies with other PESCO Projects such as MALE RPAS (Eurodrone) as well as the Project proposal “Automated modelling, identification and damage assessment of urban terrain” (AMIDA UT) should be explored.
- The potential operational output of the projects may clearly benefit from connecting different capabilities and furthering integration with aerial platforms.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** Small scalable weapons development is included in the EU Capability Development Priority “Air Superiority”, Module “Air Combat” with fixed and rotary wing (including loitering munitions and guided Micro or Nano high precision munitions) in the long-term perspective.
- **SCC/AoA:** The project proposal refers to the SCC “Air Superiority”, module “Air Combat” Armed RPAS - *including loitering munitions and guided Micro or Nano high precision munitions* – which is one of the activities identified in this AoA.
- **KSA:** There is no direct link with an existing KSA report. The oncoming KSA report on *Precision strike capabilities for land platforms* could provide valued elements on those technologies, skills and manufacturing capacities that are essential to be preserved or improved in order to strengthen the EDTIB and EU’s strategic autonomy in the area of this PESCO proposal. It could also provide some relevant information on the industries/entities potentially involved in area of this project.
- **OSRA:** There is no specific reference made to R&T aspects of small scalable weapons and consequently none of the Technology Building Blocks mentioned in the relevant SCC are mentioned in the project description. It could however be assumed, that relevant R&T aspects for this project proposal could at least benefit from the OSRA Technology Building Block (TBB) 19 - Improved Warhead and Penetrator design, in particular for the proposed projects *Scalable warheads for adaptive target effects; and Directional warheads against air targets*; the EDA study on Scalable Effects for Missiles and Munitions (SEMM) in 2019, and the proposed roadmaps for each of the most promising technologies (up-down link technologies, multi-functional fuse, tuneable effect, aimable mass/aimable velocity, target acquisition with use of artificial intelligence, etc.).
- **CARD:** The project proposal could be assumed having indirect links to the collaborative opportunities Tactical RPAS, MALE&HALE RPAS and Counter UAV in terms of using/exploiting the same technologies regarding scalable effects. However, these links are not specified by the project description itself. Therefore, it is considered, that the CARD findings did not serve as an orientation to generate the project proposal.
- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.

ANNEX B

PESCO project proposals assessment report

- **Potential impact on the coherence of the European capability landscape:** Low mainly due to the limited level of participation and the absence of a roadmap referenced with SCCs and AoAs. It has been clarified that such a system, once developed, might increase responsiveness against time-sensitive targets and enhance flexibility in the use of force with a low collateral damage option. Considering the growing need of scalable precision strike capabilities, a more specified project description could attract more pMS operating air platforms. The potential impact of the project proposal could be enlarged, as at this stage the project seems to serve the national capabilities of the project members.
- **Potential impact on the EDTIB:** Considering the scope of the project and envisaged industry involvement, the impact on the EDTIB and on the competitiveness of the European defence industry can be considered medium at this stage. There are some prototypes available within European Industry, for instance MBDA Germany - TDW. Other industries are expected to have initial developments in this domain. This project could further harmonize developments and create business conditions so that such prototypes could become mature and cost-effective products. It would further reinforce and develop European skills and competences in the domains of scalable effects. Weapons with reduced collateral damage effects will be a main request for future costumers.

Maturity

- **Harmonised Requirements:** The user system requirements are not defined and are one of the short-term objectives. However, similar operational requirements have been defined within IT-DE-US Small Scalable Kinetic Weapon (SSKW) project and a TRL4 prototype is developed under the scope of the SSKW project. It was clarified that the project proposal could take profit of these achievements. The proposal can also benefit from the previous EDA study on Scalable Effects for Missiles and Munitions (SEMM), as a starting point for additional harmonization of requirements.
- **Coherence with ongoing activities in an EU context:** There are potential synergies mentioned in the project proposal that could be explored with ongoing EDA activities such as, EDA's PT NLC, CapTech Missiles and Munitions, outcomes of SEMM OB Study and OSRA TBBs 12, 13, 19 and 21.

Coherence of effort and output

- **NATO priorities:** Based on information provided, the project is not addressing a NATO Major Shortfall Area.
- **Collaborative activities in a NATO context:** The project could potentially benefit from a TRL4 prototype (technology validated in lab) "Small Scalable Kinetic Weapon (SSKW)" developed jointly by IT, DE and US as a real-time, adjustable, UAV-delivered weapon to be used to limit collateral damage in urban environments. Further details were provided on how unnecessary duplication of effort could be avoided and on how synergies will be exploited. There is an intention to use the TRL4 prototype as a basis for the further development of the SSW.

ANNEX B

PESCO project proposals assessment report

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment.
- **Budget Allocation:** No planned or estimated budget allocation of the project is provided, no related timelines as well as no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** EDF funding is foreseen for both research and capability windows. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). In particular, it may be directly associated with the capability requirements FBX, UAS-A and UAS-A-D within the "ENGAGEMENT" area. The relevant FBX capability requirement is present in the Stabilization and Support to Capacity Building (SSCB), Conflict Prevention (CP) and Peace Enforcement (PE) Illustrative Scenarios while UAS-A and UAS-A-D requirements serve the purpose of the most demanding Illustrative Scenario (i.e.: PE).
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). In this regard, it may contribute to addressing the medium-term HICG "Air Precision Strike – Unmanned" (UAS-A and UAS-A-D) within the "ENGAGE" area. The project proposal aims at developing and fielding a new air-to-surface weapon system capable of producing scalable effects as main equipment of manned and unmanned aerial vehicles, focussing on Doctrine, Interoperability, Leadership, Materiel, Training LoD. From this perspective and given the ability of providing effects as integral part of the Air precision Strike – unmanned capability, the proposal has the potential to contributing to mitigating the previous HICG, with gaps being mainly in Materiel LoD. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal envisages the delivery of a deployable capability and show potential to support Force Generation and HQ manning in CSDP missions and operations as well as the Rapid Response Databases, providing substantial support with personnel and materiel.
- **Availability of Capabilities and Forces:** Once acquired, capabilities resulting from the proposal will be declared within the Force Catalogue and made potentially available to deployable forces and capabilities for CSDP military missions and operations. Nonetheless, it is unclear when these capabilities will be actually operationally available.
- **Interoperability of Capabilities and Forces:** The proposal has the potential to support forces to act in synergy or require forces sharing common doctrine and procedures. It is intended to develop a new air-to-surface weapon system capable of producing

ANNEX B

PESCO project proposals assessment report

scalable effects enhancing Interoperability and Integration among capabilities focussing on Air precision strike, while sharing common technologies, doctrine and procedures. Furthermore, the proposal may support the alignment of EU and NATO standards that ensure interoperability with NATO.

- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to provide capabilities corresponding to the HICG Air Precision Strike – Unmanned. Based on its consistency with RC19 and PC20, the proposal may be assessed as having a direct High Impact on the achievement of the EU CSDP military LoA in the medium-term.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 6 of the more binding commitments (3, 6, 9, 15, 16, 17).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.40 - Air Power

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 4
- National budget involved from proposing MS: Not provided.
- Maturity: There are no harmonised requirements in place yet. TBB roadmaps will be considered.
- Lines of Development: Doctrine, Interoperability
- Key milestones: Project Execution Year (PEY) 2024; Project Completion Year (PCY) 2025.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage from the operational viewpoint.

Capability perspective: The project proposal is not recommended for the main focus from the capability perspective. A higher level of participation is still needed to improve the potential impact of the project on the coherence of the European capability landscape, which is considered low to medium at this stage, taking into account that the current subscribed project members fighters' fleet is reaching out about 40% of the PESCO pMS fighters. The project proposal addresses the EU Capability Development Priority "Air Superiority" at large. Without specifying a dedicated project or capability itself, the proposal approaches the topic "Air Power" from a conceptual and overarching perspective. This is also indicated by the large number of activities of the Avenues of Approach the project proposal refers to and the numerous CARD collaborative opportunities the project description mentions as being linked to. With this, the project proposal could be considered to aim to contribute to the implementation of the CARD recommendation to jointly prepare the next planning horizon (beyond the mid-twenties) regarding air power in general terms. Besides that, the technology aspects seem to be in the foreground at this stage, as it was clarified that the project focuses on the technological bricks (using TBBs as a basis) and not on platform programmes as such. However, the project proposal needs to be further defined and matured to indicate the actual deliverables and it would need to specify how to avoid the risk of a duplication of efforts with already ongoing efforts.

Operational viewpoint: From the operational viewpoint, the project is likely to provide capabilities corresponding to several HICGs Air Precision Strike capabilities, unmanned, Maritime engagement incl. anti-submarine warfare (Rotary wing and anti-surface warfare) and Electronic Warfare (Airborne electronic attack). Based on its consistency with RC and PC, the proposal is expected to have a direct High impact on the fulfilment of the EU CSDP military LoA. It can contribute to strengthening the Union's operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal towards the main focus:

ANNEX B

PESCO project proposals assessment report

- A matured initial business case would result in a better insight into the potential scope and magnitude. The EU capability landscape would clearly benefit from an increased number of project members.
- There is a need to provide harmonized requirements as soon as possible and thus improve the maturity of the project proposal. This should also include the description of the actually intended deliverables.
- The scope of the project is still very wide and unspecified regarding the capability related project level. A stepwise approach to the objectives laid down in the project description was provided in the Clarification WS, including the description of the milestones for the phases 1 and 2 and a more elaborated content of the phase 3.
- In addition, there is a risk of duplication of efforts with ongoing work notably in the context of EDA working bodies. This does not only apply to the PT Air Superiority but also to the CAP Tech Aerial Systems. To both fora the necessary working links should be established.

From the operational viewpoint: The next steps regarding the project will allow defining requirements.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is directly addressing the EU Capability Development Priority “Air Superiority”, particularly the “Air Combat” module. The project description, however, does not refer to the TBB laid down in the related SCC but aims at identifying itself the technological components and the sub-systems of the next generation of air combat platforms.
- **SCC/AoA:** The project proposal refers largely to many activities laid down in Avenues of Approach for the SCC modules “Air Combat” and “Air ISR” in the short, in the medium and in the long term. It is considered that the SCC/AoA have been taken as an orientation to generate the proposal. This broad approach let the project proposal appear as an embracing umbrella to conceptualise the entire area “Air Power” while focussing on doctrine and interoperability. That makes it difficult to identify dedicated deliverables, notably from the capability perspective. The approach, however, has its merits because it is in line with the CARD recommendation to jointly prepare the next planning horizon. This is of particular importance for improving the coherence of the European capability landscape in two major aspects: upgrading the 4.5th generation European combat aircraft upgrades, especially for sensor capabilities and preparing it for the introduction of the 6th generation European air combat system.
- **OSRA:** This project is in line with the strategic objectives detailed in the CapTech Air SRA and with the hierarchy of TBBs defined by pMS. A reference to the related TBBs was provided, however it needs to be specified how the TBBs will be used in the Air Power project in order to avoid any risk of duplication. R&T needs to cover the current capability gaps and to fit the expected operational needs, along with specific implementation activities included in the TBB roadmaps, that have been identified by CapTech Air.

ANNEX B

PESCO project proposals assessment report

- **KSA:** The project proposal can be linked to the existing KSA reports Automated Air-to-Air Refuelling, Cutting edge technologies for Helicopters/Tilt Rotors, Manned/Unmanned Teaming, Cooperative Air Vehicle Operation, Detect, Sense and Avoid Systems and to the upcoming reports Next Generation of Energy & Propulsion Systems for Air Platforms and Counter-UAS (C-UAS).
- **CARD:** The project is not directly linked with any CARD Focus Area, however it addresses the CARD collaborative opportunities Fighter Aircraft, while aiming to harmonise the requirements for its next generation; Attack Helicopter, following 2020 CARD recommendations to focus on developing and harmonising upgrades of existing assets in order to improve operability and facilitate a convergence for the next generation of the assets in Europe; and Electronic Warfare systems.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low to Medium. The project proposal aims at increasing the air superiority capabilities of the armed forces of EU Member States, notably by defining which technological components will be needed for future air superiority systems and by identifying the sub-systems that will be integrated for the update and conception of platforms dedicated to combat from and in the air. The project takes up the findings of the CARD Aggregated Analysis related to capability development. The potential impact of this project proposal on the coherence of the capability landscape could be up to medium considering that the current subscribed project members fighters' fleet is reaching out about 40% of the PESCO pMS fighters. If the project proposal attracts more pMS with larger fighter fleets and delivers output which informs capability development in practical terms at large scale, it has the potential to go beyond the medium impact.
- **Potential impact on the EDTIB:** Low. Considering the scope of the proposal and the objectives to deliver roadmaps and requirements for components of future air systems, the potential impact on the EDTIB is assessed as low at this stage. The future projects that will benefit from this project's outcomes may have a high impact on the EDTIB.

Maturity

- **Harmonised Requirements:** It was clarified that for the operational requirements there are no harmonized requirements, the harmonisation is part of the project's scope. For the development of the roadmaps, there are no harmonised requirements yet, however the clarification provided pointed out that the technological priorities will be consistent with the relevant TBBs and the associated roadmaps which are based on harmonised requirements within the MS. It was also clarified that the work done by the Project Team Air Superiority would be a basis for this PESCO project. A link between this PESCO Project and the Air Superiority Project Team will be established in order to stimulate synergies between the two fora.
- **Coherence with ongoing activities in an EU context:** There are links with ongoing PESCO projects aiming at developing air combat platforms such as: European Medium

ANNEX B

PESCO project proposals assessment report

Altitude Long Endurance Remotely Piloted Aircraft Systems (MALE RPAS), European Attack Helicopters (TIGER Mark III), Airborne Electronic Attack (AEA) and Electronic Warfare Capability and Interoperability Programme for Future JISR Cooperation (JISR). The project has also synergies with EU Collaborative Warfare (EcoWar) and Materials and Components for technological EU competitiveness (MAC-EU). Additionally, and taking into account the SCC for Air Superiority, the project will explore the possibility to find synergies with the activity “Develop further the Combined Air Interoperability Programme (CAIP)” to increase interoperability between air assets (EAG framework). The project can also take advantage of several multinational activities ongoing in EDA CapTech Radar. Further investigation on competing approaches towards the 6th generation fighter aircraft as identified in the CARD Aggregated Analysis is essential in the early steps of the implementation of the project proposal to avoid unnecessary duplication of efforts.

Coherence of effort and output

- **NATO priorities:** The Air power project proposal may contribute to addressing the following NATO Main Shortfall Areas (MSA): Interoperability, Air Precision Strike.
- **Collaborative activities in a NATO context:** Based on available information, no related activities have been identified at this stage.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment.
- **Budget Allocation:** No planned or estimated budget allocation of the project is provided, nor related timelines. Clarification provided on the expected contributions from pMS and industry. Financial contribution from project members will be on a voluntary basis in the first phase of this project for the cost to develop the respective studies that would be required for the identification of the roadmaps.
- **EDIDP/EDF:** There is an intent to request financial support within the framework of EDF. It was clarified that a flow of funding from EDF after the completion of the project on several topics (about 100M€ per year) would be the optimal solution.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to facilitate collaborative development of many capabilities.
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). The project is likely to facilitate the development of assets and capabilities which would address several HICGs Air Precision Strike capabilities, unmanned, Maritime engagement incl. anti-submarine warfare (Rotary wing and anti-surface warfare) and Electronic Warfare (Airborne electronic attack). In its current form, the project does not seem to address any Operational Collaborative Opportunity.

ANNEX B

PESCO project proposals assessment report

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal appears to include the development of many systems to be implemented on existing platforms or new platforms. Their deployability will depend on the platforms which are to be defined in the early stages of the definition of requirements but, in the end, they are very likely to be deployable.
- **Availability of Capabilities and Forces:** The project will support build-up of future capabilities that should be committed to the Force Catalogue in the long term. Nonetheless, it is unclear when these capabilities will be actually operationally available.
- **Interoperability of Capabilities and Forces:** Multinational development of such tools is likely to support future interoperability.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** Based on its consistency with RC 19 and PC 20, the proposal is expected to have direct High impact on the fulfilment of the EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 11 of the more binding commitments (3, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.46 - Future Medium-size Tactical Cargo (FMTC)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 3
- National budget involved from proposing MS: Budget for phase 1 provided (30M €).
- Maturity: Identification of common operational needs and concept development is envisaged as a first step of the project, based on existing designs. However, there are no harmonised requirements in place yet.
- Lines of Development: Doctrine, Interoperability, Leadership, Materiel, Training.
- Key milestones: Project Execution Year (PEY) 2025; Project Completion Year (PCY) 2032.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at delivering a tactical cargo aircraft, keeping advantage of a “A400M family approach” and exploiting synergies in operation, logistics, training, and personnel. The project addresses the EU Capability Development Priority “Air Mobility” and the CARD Focus Area “Enhanced Military Mobility”. The project could potentially support a wide range of industrial and technological competencies: it covers collaborative R&T and capability development aspects and could employ technologies compatible with other future-oriented air projects, such as air combat programmes. The project could boost synergies with ongoing activities in EU context and potentially contributes to addressing NATO major shortfall areas in Readiness, Interoperability, Medical Support. The potential impact of the project on the coherence of the European capability landscape is considered low at this stage as it seems to serve the improvement of the national capability profile of the project members in the first place, and it can be further improved with the subscription of additional project members. Nevertheless, it is recommended for the main focus as it aims to close an expected capability gap in the air transport domain as from the second half of 2030s.

Operational viewpoint: From the operational viewpoint, the project is assessed as having a high impact on the fulfilment of the EU CSDP military LoA and mitigates shortfalls corresponding to the HICG Strategic Air and Sea transport. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- The financial dimension for the first phase was provided, including the identification of the main elements of an initial business case.

ANNEX B

PESCO project proposals assessment report

- The potential impact on the coherence of the EU capability landscape would benefit from an increased number of project members.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The development of a tactical cargo aircraft is directly addressing the EU Capability Development Priority “Air Mobility” in the area of fixed wing tactical air transport.
- **SCC/AoA:** The project is expected to deliver in the medium-term (PCY 2032) a tactical cargo aircraft and is bringing forward the long term AoA activity “Prepare the development of future tactical airlift system through the development of relevant technologies and the consolidation of harmonised requirements” as laid down in the agreed SCC “Air Mobility”. During the development phases, the project will also implement the agreed medium-term AoA activity “Analyse the future demand of Member States versus the existing platforms”.
- **OSRA:** The project description itself did not identify any link with the OSRA’s TBBs, however it touches several elements from the platform (CapTech Air SRA) to the systems (CapTechs Radar, Sensors, Components, etc.). The core Air TBB in relation (partial) with this project would be OSRA *TBB9. Fixed Wing*.
- **KSA:** Considering the scope of the proposal – development of a future new air platform -, a wide range of industrial capacities are addressed in the air domain. Consequently, all KSA reports related to air systems are applicable to this topic: Automated Air-to-Air Refuelling, Materials and Structures for Protection Against Military Threats, EO Counter Measure Systems, and Cooperative Air Vehicle Operation – Detect, Sense and Avoid Systems. The upcoming KSA report on Next Generation of Energy & Propulsion Systems for Air Platforms is also relevant for the proposal.
- **CARD:** The project proposal is directly addressing the focus area Enhanced Military Mobility (EMM) as laid down in the CARD Report and takes up the findings of the CARD Aggregated Analysis related to capability development, notably the identified collaborative opportunity “Fixed Wing Air Transport”, which was assessed as a most promising, most pressing, and most needed collaborative opportunity in 2020 CARD Aggregated Analysis. This project can potentially contribute to the harmonisation of requirements for the next generation of transports.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage, mainly due to the current level of participation. It has the potential to develop to medium with an increased number of participants having the intent to replace their aircrafts with the FMTC. The project proposal aims at increasing the air mobility capabilities of the armed forces of EU Member States, notably by delivering tactical

ANNEX B

PESCO project proposals assessment report

cargo aircraft complementing the range of assets available. It could cover a gap in the 20-to-25-ton payload class, enabling vehicle transport. It would also be available for the replacement of other ageing platforms in performing critical operational tasks (1300 C-130, by 2040). While building on the experience of ongoing programmes, the new airlifter shall break new ground in multi-mission capability and the employment of technologies compatible with other future-oriented air-projects, such as air combat programmes. The project proposal would reach a higher impact on the coherence of the capability landscape, reducing its fragmentation only with an increased magnitude, including a consistent number of pMS committing in the procurement of the FMTC, thereby reducing costs and exploiting synergies in operation (e.g., multinational wing) and logistics (maintenance, spare parts), training and personnel.

- **Potential impact on the EDTIB:** Medium. Major EU defence aerospace industries could play a significant role through all phases of design, research and development of the future tactical cargo aircraft. Considering the scope of the project, the collaborative R&T development aspects, the project would have a medium potential impact on the EDTIB and would contribute to enhance the competitiveness of EU defence industry.

Maturity

- **Harmonised Requirements:** There are no harmonised requirements. The plan for the definition of harmonised requirements should be better defined in the phased roadmap, including the identification of key milestones. The general specifications are set by the current designs and the possible complementarity with the A400 family aircraft.
- **Coherence with ongoing activities in an EU context:** The design and implementation of the project proposal can benefit from the potential synergies with European Air Transport Command that can play a role in this new proposed European fleet, increasing air mobility capability and multilateral operational cooperation. Additionally, in relation to tactical training, synergies with the European Tactical Airlift Centre (ETAC) should be further explored.

Coherence of effort and output

- **NATO priorities:** The project may contribute to addressing the following NATO Major Shortfall Areas: Readiness, Interoperability, Medical Support. The project could address a NATO Capability Target related to Fixed Wing Transport Cargo/Passenger Medium (TCC-M) capability.
- **Collaborative activities in a NATO context:** Based on available information, in the FNC context, the project could be relevant to the Cluster Support/Command & Control - Multinational Air Transport Unit.

Financial Support

- **Initial Business Case:** Elements of the value of the investment were provided as it was clarified that the new FMTC has the ambition to be available for the replacement of the current fleet of 1300 C-130 by 2040. The provision of a business case would further support the project proposal.

ANNEX B

PESCO project proposals assessment report

- **Budget Allocation:** The budget of the Phase 1 was provided (estimated at 30M €). No overall estimated budget allocation of the project is provided, no related timelines, no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** There is an intention to request financial support within the framework of the EDF, however the actions/activities for which support will be requested have not been defined yet.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to address the operational requirements in the PROJECT Capability area, specifically to Strategic Air Transport TCC-L or TCC-M, potentially, it could also address some aspect of capabilities in the ENGAGE capability area, specifically SOF-SOATU-FW.
- **Progress Catalogue:** The proposal is not directly consistent with the Progress Catalogue (PC20). Regarding Capability Codes and Statements (CCS), the capabilities provided would correspond to the same CCS as the A400M. Since the A400M is arriving in significant numbers, it might appear that there is no pressing need for such a project. Nonetheless, there are no replacement envisioned for C17 and AN-124. Moreover, A400M capabilities (and to a lesser extent KC 395) are well over the requirements for TCC-M and could very efficiently mitigate some aspects of the TCC-H shortfalls and some related to Air-to-air refuelling (AAR). Given that the other older TCC-M are slowly being retired as their maintenance may become difficult, it would appear interesting to dispose of a larger array of capabilities that would allow dedicating A400M to AAR and mitigation of TCC-H. The project is likely to provide capabilities in the long term that would avoid reliance on A400M for missions that could be conducted by smaller planes. Moreover, it could also support addressing some capabilities like SOF-SOATU-FW that are part of the HICG Special Operations Forces. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** As presented before, this project is likely to increase the deployability of all forces by increasing availability of A400M for strategic transport.
- **Availability of Capabilities and Forces:** The project is likely to provide capabilities which would be committed to the Force Catalogue in the longer term.
- **Interoperability of Capabilities and Forces:** Common development of such capability is likely to increase interoperability and create opportunities for shared training.
- **Addresses MS' Lessons Identified and Learned:** This proposal does support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress

ANNEX B

PESCO project proposals assessment report

Catalogue (PC20). It indirectly addresses Air to air refuelling and Strategic air Transport.

- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to allow dedicating A400M to mitigation to the HICG Strategic Air and Sea Transport and Air to Air Refuelling and could also support addressing some aspects of the HICG Special Operations Forces. Based on the consistency with RC19 and PC20 the proposal may be assessed as having an indirect HIGH IMPACT on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (3, 6, 7, 8, 9, 15, 16, 17, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form seems to be contributing to the more binding commitments 12 and 13. It is too early at this stage for the contribution to commitment 14 to be assessed.



ANNEX B

PESCO project proposals assessment report

Assessment of Individual PESCO projects Initial Grouping 4: Cyber, C4ISR

ANNEX B

PESCO project proposals assessment report

4.1.41 - Cyber Ranges Federations (CRF)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 6, Potential Observers: 4
- National budget involved from proposing MS: There is only a reference to the financial arrangements in the context of the EDA ad-hoc CAT B project.
- Maturity: Main requirements have been identified in the EDA Ad Hoc CAT B Cyber Ranges Federation project.
- Lines of Development: Facilities, Interoperability, Training.
- Key milestones: Project Execution Year (PEY) 2022; Project Completion Year (PCY) 2023.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage from the operational viewpoint.

Capability perspective: The project is not recommended for the main focus from the capability perspective. The project aims at developing a platform for cyber training purposes by pooling and sharing MS national cyber ranges and federating them. This is intended to lead to improved interoperability. The project is in line with the EU Capability Development Priority “Enabling capabilities for Cyber Responsive operations” and with the CARD collaborative opportunity “Cyber Education, Training & Exercises”. Main requirements are already harmonised within and through EDA Cyber Ranges Federation CAT-B project. The potential impact on the coherence of the capability landscape is low mainly because the project proposal represents the same activity as the already ongoing EDA ad-hoc CAT B project. In terms of improving the coherence, it is considered not to add much value since the number of potential project members is smaller than the one in the CAT B project. Instead, there is a risk that not all contributing pMS of EDA ad hoc Category B project will join the PESCO format, thus limiting progress in both approaches and/or leading to an unnecessary duplication of effort.

Operational viewpoint: From the operational viewpoint, the proposal is expected to have a medium impact on the fulfilment of the EU CSDP military LoA and supports mitigation of the HICG Cyberspace. It may contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective, the following steps are recommended to further improve the project proposal towards the main focus:

- The synergies and convergence with the ongoing EDA Ad Hoc Category B project Cyber Ranges Federation (CRF), including the envisaged added value, were partially clarified. However, the project still falls in the scope of the existing EDA Ad Hoc project CRF. Therefore, the ways and options how unnecessary duplication of efforts will be avoided need to be clarified.

ANNEX B

PESCO project proposals assessment report

- Further analysis is required considering that not all the contributing MS of the EDA ad hoc project have subscribed to the PESCO project.
- It is also recommended to identify the PESCO commitments the project proposal intends to address.

From the operational viewpoint: It would appear that the project would benefit exchanging early with all the other Cyber Defence projects. It could potentially address the Operational Collaborative Opportunity Non-Kinetic Engagement.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project proposal is directly addressing the EU Capability Development Priority “Enabling capabilities for Cyber Responsive operations”.
- **SCC/AoA:** The project proposal is aligned in general terms with the activities as laid down in the agreed SCC module “Cyber Education, Training and Evaluation”.
- **OSRA:** Although not explicitly mentioned in the project description, the project can be potentially linked with the OSRA TBB54- Cyber Research and Technology- “Modelling and Simulation for cyber defence” but considering that the PCY is already planned for 2023, it has to be specified which R&T activities and deliverables are expected in the project.
- **KSA:** The project proposal’s primary focus is on federating existing national Cyber Ranges, while it also can contribute to R&D and standardisation activities. In this way, the topic is directly linked to the KSA report on Cyber Defence R&T. Depending on the scope of the potential R&D activities within the project, and the potential inclusion of emerging technologies, like AI, Cloud Technologies or 5G, other areas examined in various KSA reports might also be relevant, like Cyber Defence Situational Awareness – Protection of military CIS; Information Process Enhancement by using AI and BD/AI and BD for Decision Making Support. Two upcoming reports on Military Application of Cloud Technologies and 5G for Defence might also be linked to the proposal.
- **CARD:** The project proposal is directly addressing the CARD focus area Enhanced Military Mobility (EMM), as it addresses Cyber Resilience and calls for “a Cyber Ranges Federation ad hoc project which can serve to support training personnel on the cyber protection of infrastructures and process”. The project proposal takes up the findings of the CARD Aggregated Analysis related to capability development. The project proposal contributes to develop a user group on European Cyber Defence training and exercises including pooling & sharing of national and European capacities and capabilities. In addition, the proposal touches upon Cyber R&T without, however, specifying the content and the approaches.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage. The project proposal aims at developing a sophisticated platform for cyber training purposes through connecting MS national cyber ranges and federating them

ANNEX B

PESCO project proposals assessment report

into a larger cluster. It was clarified that, compared to the EDA CAT B project, the project proposal aims at providing added value by offering the service of a testing capability for R&D activities. However, the scope of the EDA CAT B project includes R&D activities and the proposal itself states that there is a risk that not all cMS that are part of the EDA CAT B project “Cyber Range Federation” will join the PESCO format. This is also an indication that the project potentially duplicates what is already ongoing in the CAT B project. Therefore, there seems to be not much added value in terms of impact on the coherence of the European capability landscape. The level of participation and the differences in content should be further specified. In case the project would be selected, it could potentially raise the visibility of the federated cyber range capability in the EU and facilitate its use for the purposes of other PESCO projects (notably in the cyber domain). and for collaboration with EDA, ESDC, ENISA, Hybrid CoE, CCDCOE. The project proposal also aims at positively impacting other cyber projects in the PESCO framework, notably in the areas of training, exercise, testing, validation, and experimentation.

- **Potential impact on the EDTIB:** Considering the potential use of the cyber ranges federation for joint capability development of cyberspace technologies, as well as for standardisation, the impact on the EDTIB and the competitiveness of the European defence industry is estimated to be low to medium. This would depend on the development of R&D activities, which entails the involvement of emerging technologies, as well as on the contributions from pMS, industries and RTOs.

Maturity

- **Harmonised Requirements:** Main requirements have been identified in the EDA Ad Hoc CAT B Cyber Ranges Federation project. The fact that most of the participating member States already have cyber ranges is a good basis for harmonisation.
- **Coherence with ongoing activities in an EU context:** There are potential synergies to be explored with ongoing PESCO projects such as with Cyber Rapid Response Team (CRR), Cyber and Information Domain Coordination Centre (CIDCC) and EU Cyber Academia and Innovation Hub (EU CAIH). There is a risk that not all contributing pMS of EDA ad hoc Category B project will join the PESCO format, limiting thus progress in both approaches and/or leading to an unnecessary duplication of effort.

Coherence of effort and output

- **NATO priorities:** The need for a federated cyber range capability has been identified in the NATO framework. The project may contribute to addressing the NATO Major Shortfall Area Cyber Defence. Ensuring and expanding coordination on cyber security and defence is in line with the provisions of the EU-NATO Joint Declaration. In particular, strengthening coordination in the context of education and training is identified as a high priority.
- **Collaborative activities in a NATO context:** The project should ensure synergies and non-duplication with the activities implemented in the framework of the NATO Cooperative Cyber Defence Centre of Excellence, along the lines defined in a collaboration roadmap agreed between EDA and NATO CCDCoE. Clarification is needed whether the project would follow this roadmap.

ANNEX B

PESCO project proposals assessment report

Financial Support

- **Initial Business Case:** The project plans to build on the financial arrangements agreed in the context of the ad-hoc EDA project. The initial financial aspects of the phase 1 which was concluded in 2020 are provided.
- **Budget Allocation:** Provided that the financial arrangements of the ad-hoc EDA project will be maintained, the estimated contribution in kind is 200 man-days per CMS per year and the estimated monetary contribution is 15K€ per CMS per year.
- **EDIDP/EDF:** There is an intent to request financial support within the framework of the EDF. It is mentioned that EDF 2021 work programme includes a relevant topic on Improved Efficiency of Cyber Trainings and Exercises (IECTE), which focuses on advancing the preparedness of cyber defence operators and the capacity and interoperability of cyber ranges, which in a cost-efficient manner contributes to EU cyber security posture. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to address operational requirements within the PROTECT Main Capability Area.
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). Most shortfalls in the HICG Cyberspace may be mitigated or might be indirectly addressed to different extents by this project such as the ones like CD-STATIC, CD-DEPLOY. In its current form, the project does not seem to address any Operational Collaborative Opportunity but depending on the next steps of the project, it may potentially address capabilities in the range of CY-ISR, CY-EFFECTS and the Operational Collaborative Opportunity NON-KINETIC ENGAGEMENT.

Operational Benefits

- **Deployability of Capabilities and Forces:** This platform intends to train national Cyber Ranges to tackle cross-border cyber threat targeting EU pMS. Bearing in mind that cyberspace, as a fifth domain of operations is borderless, trainings and exercises using CRF will be more realistic. Therefore, CRF contributes to the development of a stronger EU cyberspace skills base that should support deployed capabilities.
- **Availability of Capabilities and Forces:** The project does not aim at providing capabilities within the Force Catalogue or its potential availability to deployable forces and capabilities for CSDP military missions and operations but it would support their training.
- **Interoperability of Capabilities and Forces:** the proposal has the potential to provide for EU MS with the opportunity to use CRF as a platform to share more easily their own capability developments as well as existing capabilities concerning training and exercises in the future. The results might assist in the process to improve the level of cooperation in the cyberspace.

ANNEX B

PESCO project proposals assessment report

- **Addresses MS' Lessons Identified and Learned:** This proposal does not address Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to facilitate training, doctrine and potentially support development of capabilities related to the HICG Cyberspace. Based on its consistency with RC and PC, the proposal may be assessed as having an indirect MEDIUM Impact on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 13 of the more binding commitments (3, 6, 7, 8, 9, 10, 11, 15, 16, 17, 18, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.42 - Automated Modelling, Identification and Damage Assessment of Urban Terrain (AMIDA-UT)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 3, Potential Observers: 3
- National budget involved from proposing MS: Initial national budget to be allocated is foreseen to 1M €. Initial financial volume estimated 5M €.
- Maturity: An initial draft list of requirements exists. It needs to be specified by project members.
- Lines of Development: Interoperability, Leadership, Materiel.
- Key milestones: Project Execution Year (PEY) 2022; Project Completion Year (PCY) Not defined.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage from both the capability perspective and the operational viewpoint.

Capability perspective: The project proposal is recommended for the main focus from the capability perspective. The project aims at developing an automated digital 3D mapping and modelling system to identify urban target structures. The mapping system would support the decision-making process in the areas of targeting, battle damage assessment, manoeuvre and training, and enhance situational awareness. The tool and the decision support service could ideally be used by HQs Staffs and is also usable for civilian purposes and operations, including disaster relief. The project proposal addresses the EU Capability Development Priority “Information Superiority” and intends in phase one (until 2025) to develop the common Staff Targets (CST) and Requirements (CSR). The project is aligned with the agreed Avenues of Approach, however the limited magnitude of the project and the current level of participation result in a low potential impact on the coherence of the European capability landscape at this stage.

Operational viewpoint: From the operational viewpoint, the project is assessed as having High Impact on the EU CSDP military LoA and addresses directly HICGs Land ISTAR and Indirect Fire Support. The project proposal is intended to develop a digital 3D mapping system enhancing existing ISTAR capabilities and facilitate the development of complex capabilities within the ENGAGE and INFORM capability Area. It can contribute to strengthening the Union’s operational effectiveness, enhancing the availability, readiness and interoperability of more effective capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- Higher number of projects members would positively influence the reach of this tool/service and thus the potential impact on the coherence of the EU capability

ANNEX B

PESCO project proposals assessment report

landscape. That would also show that the proposal would meet the requirements of several pMS.

- Further clarification is required on the financial aspects, and more particular on the overall budget of the project.

From the operational viewpoint:

- Potential synergies with other PESCO Projects such as EU Collaborative Warfare Capabilities (ECoWAR), EU Beyond Line Of Sight (BLOS) Land Battlefield Missile Systems, Indirect Fire Support (EuroArtillery) as well as the Project proposal Next Generation Small RPAS (NGSR) should be explored.
- Early identification of requirements relating to the integration with existing and future Command and Control Systems may clearly enhance the project proposal's capacity to connect forces, with valuable operation benefits.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project aims the development of a capability that will provide real time ISR data for Modelling, Identification and damage assessment in urban areas, thus addressing the EU Capability Development Priority "Information Superiority" and more particularly the module "Intelligence, Surveillance and Reconnaissance networked capability".
- **SCC/AoA:** The project is addressing the "ISR networking module" of the SCC Information Superiority. The project is expected to deliver first results (CST/CSR) by 2025 and from then on according to the medium-term activities of the respective Avenue of Approach and more particularly "Develop tools for optimization of ISR asset employment and AI techniques".
- **OSRA:** Many R&T areas can be linked with the project, but considering the planned PCY in 2025, it has to be clarified which R&T activities and deliverables are concretely expected to support the project with the TBBs mentioned in the description: TBB74 – Land – "Land Systems Architecture & Integration", TBB79 – Land – "Target / Threat recognition and identification", TBB112 – Optronics – "Active imaging systems", TBB114 – Optronics – "Image processing", TBB135– Simulation-Space "Recognized Space Picture", TBB129 – Simulation "Artificial Intelligence and Big Data for Decision Making Support", TBB133 Simulation – "Modelling & Simulation as a Service for synthetic environment and rapid scenario generation"
- **KSA:** The project has the potential to strengthen the EDTIB and industrial cooperation in several areas, such as sensor technologies, autonomous systems, data processing. The project proposal can be linked to the existing KSA reports: Information Process Enhancement by Using AI and BD/AI and BD for Decision Making Support; Autonomous and Automated GNC and Decision-Making Techniques for Manned and Unmanned Systems; Space Situational Awareness and to the upcoming ones: Military Application of Cloud Technologies, 5G for Defence, Sensors Network for ISR and Soldier's System might also be relevant for the proposal.

ANNEX B

PESCO project proposals assessment report

- **CARD:** Since the project contributes to information superiority, it could be considered as addressing indirectly the CARD focus area Soldier Systems although not foreseen for individual use. The project is considered to have/to further develop links to the following R&T-related collaborative opportunities identified in the latest CARD Analysis: the 5G, Software Define Networking (SDN), Stand-Off Detection Of Hybrid Threats Containing Explosives (STYX), the Integration and Update of Sensors for Enhanced ISTAR capabilities, Artificial Intelligence and Big Data for Decision Making in C4ISR, Cloud Intelligence for Decision Making Support and Analysis.
- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low. The project proposal aims at developing an automated system/equipment/tool for rapid mapping and identification of target structures in order to support planners, weaponeers, modelling and simulation analysts, battle damage assessors and commanders in the decision-making process or supporting training activities. Considering the intended scope and size of the project and the current level of participation the potential impact of the project proposal on the EU capability landscape is considered low. The project addresses very specific requirements, not common to all MS. However, more participants would be needed for a higher magnitude and potential impact of the project. Also, the clarification of the overall estimated financial volume will provide a better insight on the magnitude of the project.
- **Potential impact on the EDTIB:** Considering the scope of the proposal, the collaborative R&T development aspects related to sensors, unmanned systems and data processing technologies, as well as the utilisation of emerging technologies, like cloud computing and artificial intelligence, the impact on the EDTIB and the competitiveness of the European defence industry seems to be medium to high. The proposal explores the possibility to integrate modern sensors to support automated targeting and data fusion and to utilise AI in the decision-making process. The involvement of academia and industry is foreseen (contractors, SMEs, Midcaps, large companies and entities are mentioned in the proposal) and there is an intent to request financial support within the framework of the EDF to cover R&D. Finally, the proposal addresses a dedicated call topic “Digital Modelling for urban targets analysis”, for integration in the EDF Working Programmes (expected in 2022).

Maturity

- **Harmonised Requirements:** An initial draft list of requirements clarifying the operational needs and some technical specifications is provided. There is a need to refine them further with project members, detailing a plan to reach harmonized requirements.
- **Coherence with ongoing activities in an EU context:** There are potential synergies to be explored with the ongoing PESCO Projects: EU Collaborative Warfare Capabilities (ECOWAR), European Military Space Surveillance Awareness Network (EU-SSA-N), Integrated Unmanned Ground System (iUGS), Geo-meteorological and Oceanographic

ANNEX B

PESCO project proposals assessment report

(GeoMETOC) Support Coordination Element (GMSCE), Deployable Military Disaster Relief Capability Package (DM-DRCP). Also, the project proposal can be linked with activities under the EDA CapTech Land development project “3D terrain and city models for situational awareness, decision making and effector coordination”.

Coherence of effort and output

- **NATO priorities:** The project may contribute to the following NATO capabilities and shortfalls: All Joint Manoeuvre – Land units (E.1.2); Command and Control Operations/Tactical (C.2.2, C.2.3); Communication and Information Systems units (C.3.); Collection units (I.2); Processing units (I.2).
- **Collaborative activities in a NATO context:** Based on available information, no related activities have been identified at this stage.

Financial Support

- **Initial Business Case:** Estimated initial financial volume 5M€.
- **Budget Allocation:** Initial national budget to be allocated is foreseen to 1M€. No related timelines, and no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** There is intent to request financial support in the context of 2021 EDF Working Program (a relative topic of 30M € is expected to be included in the 2022 EDF WP), addressing the R&D in the fields of (i) Disruptive technologies, (ii) Preparation, protection, deployment and sustainability and (iii) Information management and superiority, C4ISR, cyber defence and cybersecurity. As EDF requires co-funding, a financial planning including this information would support the project’s maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). In particular, it may be directly associated with several capability requirements within the “ENGAGEMENT” and “INFORM” areas and contributes to fulfil several capability requirements within the “C3” and “PREPARE” areas, serving the wider scope of all Illustrative Scenarios (cross-cutting requirement).
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). In this regard, it may contribute to addressing the short-term HICG “Land ISTAR” (ISTAR-UAV(CORPS&DIV)-COY and ISTAR-C2&FUSION(DIV)-TEAM) within the INFORM area and the medium-term HICG “Indirect Fire Support” within the “ENGAGE” area, while contributing to mitigating the short-term HICG Joint ISR, and the medium-term HICGs “Air Precision Strike – Unmanned” and “C-IED”. The project proposal is intended to develop a digital 3D mapping system supporting ISTAR abilities that are integral part of complex capabilities within the engage and inform areas, thus furthering system integration, interoperability and operational effectiveness. From this perspective, the proposal has the potential to contributing to mitigating the previous HICGs, with gaps being mainly in Materiel and interoperability LoD. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

ANNEX B

PESCO project proposals assessment report

Operational Benefits

- **Deployability of Capabilities and Forces:** The proposal envisages the enhancement of existing deployable capability. It shows the potential to strengthen support to CSDP missions and operations, including civilian missions, although no information was provided to indicate potential support to Force Generation and HQ manning in CSDP missions and operations as well as the Rapid Response Databases
- **Availability of Capabilities and Forces:** Given that the proposal aims at reinforcing/upgrading existing or future capabilities, once acquired, the capacity will be declared within the Force Catalogue under the umbrella of relevant capabilities implementing it. Given the project timelines, these capabilities are likely to be made available in the short to medium term.
- **Interoperability of Capabilities and Forces:** The proposal has the potential to support forces to act in synergy or require forces sharing common doctrine and procedures. It is intended to develop a digital info structure (3D mapping) enhancing ISTAR functions of relevant capabilities, to which Interoperability and Integration represent the paramount building blocks. As a system of systems, it may connect existing capabilities fostering together common procedures and training. To this end, early identification of requirements relating to the integration with existing and future Command and Control Systems may clearly enhance the project proposal's capacity to connect forces. The proposal may support the alignment of EU and NATO standards that ensure interoperability with NATO.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The proposal is likely to augment existing capabilities and facilitate capability development related to HICGs Land ISTAR and Indirect Fire Support, while contributing to the mitigation of HICGs Joint ISR and Air Precision Strike – Unmanned. Based on its consistency with RC19 and PC20, the proposal may be assessed as having a direct High Impact on the achievement of the EU CSDP military LoA in the short and medium-term.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (3, 6, 7, 8, 9, 15, 16, 17, 19, 20).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.45 - Robust communication infrastructure and networks (ROCOMIN)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 2, Potential Observers: 2
- National budget involved from proposing MS: Not provided.
- Maturity: Overarching requirements exist; however, they need to be specified. That is one of the key elements of the project proposal. ROCOMIN will be adhered to development, security and operations (DevSecOps).
- Lines of Development: Interoperability, Material.
- Key milestones: Project Execution Year (PEY) 2022; Project Completion Year (PCY) Not defined.

A. Recommendations

Conclusions

The project is not recommended for the main focus.

Capability perspective: The project proposal is not recommended for the main focus from the capability perspective. The project aims at increasing tactical and operational mobility of deployed forces through secure communication infrastructures and networks. The project addresses three EU Capability Development Priorities and the CARD Focus Area Enhanced Military mobility. Although it could be assumed that it boosts synergies with ongoing activities in EU context and potentially contributes to address NATO major shortfall areas, the potential impact of the project on the coherence of the European capability landscape is considered low at this stage. This assessment resulted mainly from the low level of maturity of the projects which is also confirmed by the very broad project scope which is not sufficiently supported with precise and sufficient information. Also, the identification of the required resources and financial support is limited and no initial business case has been provided. A more detailed roadmap taking into account tasks and outcomes and referring to clearly identified Avenues of Approach and TBBs is needed to support the project. Moreover, with the current level of participation, the project seems to serve the improvement of the national capabilities of the project members.

Operational viewpoint: From the operational perspective, the project is assessed as having Low Impact on the EU CSDP military LoA and contributes to indirectly mitigating qualitative aspects of HICGs within the “C3” capability area. The proposed project is focused on identifying technical requirements to improve Communication Information Systems. Despite the positive impact on interoperability in terms of harmonisation of common standards, the proposal will probably have no direct impact on CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- The existing phased roadmap is needed to be specified in terms of key milestones, final deliverables which are roughly described and outcomes, including an estimation of the expected PCY. This would help to further clarify and refine the scope and tasking of the

ANNEX B

PESCO project proposals assessment report

project which is very broad. A more detailed plan on how the different tasks of the project would be undertaken and a better definition of the expected outcomes are needed.

- The involvement of more member states in the definition of the harmonised requirements should be pursued to ensure a better interoperability and to further improve the European dimension and magnitude of the project.
- The financial dimension, including the identification of an initial business case, needs to be developed. This would provide a better insight of the potential magnitude.
- Synergies with the ongoing PESCO projects ECOWAR should be further explored.

From the operational viewpoint further information is required on the expected Project Completion Year and, notably, the project's contribution to availability and deployability of forces and capabilities for the achievement of the EU CSDP military Level of Ambition.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project, which is broad in scope, aims at identifying, coordinating and facilitating activities to support military needs and capabilities in the area of robust communication infrastructures and networks in the environment of fast digitization of the armed forces and secure interoperability and it is assessed to partially address 3 EU Capability Development Priorities "Space-based Information and Communication Services", "Enabling Capabilities for Cyber Responsive Operations", "Information Superiority".
- **SCC/AoA:** The project description does not pick up identified activities of the AoA as laid down in the agreed SCCs, but references in general terms multiple modules of SCC "Information Superiority" and "Integration of Military Air Capabilities in a Changing Aviation Sector" without further specifying the gains and benefits which should be achieved with a view to the distinct European capability development priorities. Since the project proposal aims at identifying and coordinating operational capability needs while synchronizing operational and capability concepts, including those that may be supported by the EDF e.g., WP 2021², clarification is needed on the relationship to the agreed SCC/AoA.
- **OSRA:** The project description itself did not identify any link with the OSRA's TBBs and the information provided is not sufficient to identify direct links with any TBBs. Possible related activities can be found in TBB66 – Information - "Coalition Network Security and Protection and Interaction with commercial technologies", TBB67 – Information – "Cognitive Radio", TBB68 – Information- "Tactical Cloud Infrastructure for C4ISR System", TBB74 – Land – "Land Systems Architecture & Integration", TBB78 – Land – "Development of unmanned systems, manned/unmanned teaming"

² EDF-2021-C4ISR-D-COMS: Robust defence multi-dimensional communications:
https://ec.europa.eu/defence-industry-space/commission-implementing-decision-3062021-financing-european-defence-fund-established-regulation-eu_en

ANNEX B

PESCO project proposals assessment report

- **KSA:** The project proposal potentially addresses the Key Strategic Activity reports “Software Defined Radio/Software Defined Networking” and “Cyber defence situational awareness and the protection of military CIS”. Overall, the proposal supports a wide range of industrial competencies in the field of robust communication infrastructures and networks as well as secure interoperability. Considering the broad focus of this project proposal and its potential ramifications, it is possible to identify various areas that may have a potential link to Key Strategic Activities identified in different KSA reports which include the upcoming reports “Sensors Network for ISR” and “5G for Defence” as well as the report on “Military Applications of Cloud Technologies”.
- **CARD:** The project proposal is directly addressing the focus area Enhanced Military Mobility (EMM) as laid down in the CARD Report in particular in the field of protection of the IT systems (robustness and resilience) and the R&T dimension relating to the challenges of information management with strategic/tactical CIS including coalition network security, cognitive radio and tactical cloud infrastructure. It also takes up the findings of the CARD Aggregated Analysis related to capability development, notably the identified collaborative opportunities from the 2020 CARD Aggregated Analysis within two areas where collaboration is very promising, such as: Satellite Communication (SatCom) and Tactical CIS from capability area, and the 5G or Software Define Networking (SDN) opportunity from the research area. Furthermore, the 2020 CARD Aggregated Analysis identified the potential for collaboration in the research-related areas linked to the CapTech Radar area. However, further details are needed in order to better identify to what extent the project takes up the findings of the CARD Aggregated Analysis.
- **EU Global Strategy:** The project proposal is deemed as contributing to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage, mainly due to the level of participation which is of extremely importance when addressing the issue of requirements for interoperability CIS/C2, and the very broad scope of the project. The project proposal addresses the key need of secure digital communication in the tactical environment, which is of strategic importance, aiming at identifying, coordinating and facilitating activities to support military needs and capabilities in the area of robust communication infrastructures and networks in the environment of fast digitization of the armed forces and secure interoperability. The project proposal aims at increasing C2 capability through improved communication on the move to European forces. The project proposal mentioned the security conformity with Federated Mission Network which is considered key and advocated by the current revision of the EU concept for CIS for EU-led missions and operations. However, an increased number of project members is essential to reach an important magnitude and to increase the potential impact of the project. Considering that the proposal addresses directly the CARD Focus Area Enhanced Military mobility and that some relevant activities in the context of the project are identified as most promising CARD collaborative opportunities (e.g., Tactical CIS or SATCOM), the potential impact on the

ANNEX B

PESCO project proposals assessment report

coherence of the European capability landscape could be higher in case a sufficient magnitude would be reached.

- **Potential impact on the EDTIB:** The impact on the EDTIB is estimated to be low to medium. The project potentially supports a wide range of industrial competencies, including modern antenna technology to improve satcom-on-the-move, computing power and commercial technology (like 5G). The project would potentially boost EU industry in the area of communications and networks. The involvement of industries and academia is foreseen; however, the industrial consortium is not in place yet. The project proposal aims to contribute to a security of supply and security.

Maturity

- **Harmonised Requirements:** The project builds on the security and interoperability requirements already defined in the context of FMN, although the wide scope of the project goes much beyond the context of the FMN. Thus, the project requires a definition of harmonisation of requirements, as the further Identification of operational needs and harmonisation of requirements are key elements of the project proposal. Moreover, the project would need more project members in view of granting the required interoperability.
- **Coherence with ongoing activities in an EU context:** There are links to other ongoing PESCO projects such as European Secure Software defined Radio (ESSOR), through supplying ad hoc network capability over wireless communications, EU Collaborative Warfare Capabilities (ECoWAR), Integrated Unmanned Ground System (iUGS) and to the potential 4th wave project AMIDA-UT.

Coherence of effort and output

- **NATO priorities:** The project and the solutions developed may contribute to addressing NATO Major Shortfall Areas: Interoperability and Command and Control.
- **Collaborative activities in a NATO context:** Based on available information, the project aims at coherence with NATO activities and standards, particularly the Federated Mission Networking (FMN) initiative.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment.
- **Budget Allocation:** No planned or estimated budget allocation of the project is provided, no related timelines and no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** There is an intent to request financial support within the framework of the EDF for studies involving academia, institutes and industry. As EDF requires co-funding, a financial planning including this information would support the project's maturity.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is not consistent with the Requirements Catalogue (RC19). It could be considered to be contributing to crosscutting

ANNEX B

PESCO project proposals assessment report

requirements addressing capabilities across all the operational domains and serving the purpose of all Illustrative Scenarios.

- **Progress Catalogue:** The proposal is not consistent with the Progress Catalogue (PC20). In this regard, it might contribute to indirectly mitigate several HICGs from a qualitative point of view within the C3 area, addressing especially the Concept and Interoperability Lines of Developments. However, the project does not envisage any specific capability development but rather it might be considered a long-term Research and Technology (R&T) effort aimed at identifying technical requirements to improve Communication Information Systems. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** No information was provided to indicate how the project will support the preparation of deployable capabilities at the strategic and operational level; nor was there information on the delivery of a deployable capability, or support to force generation, HQ manning in CSDP missions and operations.
- **Availability of Capabilities and Forces:** No information was provided regarding the intent to declare the capability within the Force Catalogue or its potential availability to deployable forces and capabilities for CSDP military missions and operations.
- **Interoperability of Capabilities and Forces:** Identifying common technical requirements to improve Communication Information Systems, the proposal has the potential to generate effects leading to an increase in interoperable capabilities. Furthermore, the proposal may support the alignment of EU and NATO standards that ensure interoperability with NATO.
- **Addresses MS' Lessons Identified and Learned:** This proposal does not support Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to contribute to indirectly mitigating qualitative aspects of several HICGs with the C3 capability area. Based on its lack of consistency with RC19 and PC20, the proposal may be assessed as having an indirect Low Impact on the achievement of the EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided at this stage, it is assessed that the proposed project has the potential to contribute to 10 of the more binding commitments (3, 6, 8, 9, 11, 15, 16, 17, 19, 20).

From the operational perspective, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitments 12 and 14. It appears to contribute to the more binding commitment 13.



ANNEX B

PESCO project proposals assessment report

Assessment of Individual PESCO projects Initial Grouping 5: Space

ANNEX B

PESCO project proposals assessment report

4.1.43 - Common Hub for Governmental Imagery (CoHGI)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 6, Potential Observers: 5
- National budget involved from proposing MS: Not provided.
- Maturity: No harmonized requirements are in place yet. The SBEO Business Case analysis will provide support for initial activities.
- Lines of Development: Facilities, Interoperability, Materiel, Organisation.
- Key milestones: Project Execution Year (PEY) 2022; Project Completion Year (PCY) 2025.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project is recommended for the main focus from the capability perspective. The project aims to increase the provision of classified governmental imagery enabling the exchange of information for decision-making and contributing to the intelligence picture at political, strategic, operational and tactical levels. The potential impact on the coherence of the EU capability landscape is estimated to be low. The project is addressing the EU Capability Development Priority “Space-based Information and Communication Services” and its timeline is aligned with the AoA as laid down in the agreed SCCs. The project could be considered to contribute to the focus area Defence in Space as laid down in the CARD Report and directly addressing CARD recommendations for possible future projects. Overall, the EU tools CDP/SCC/CARD have been used as an orientation to guide the project generation.

Operational viewpoint: From the operational viewpoint, the proposal is expected to have a HIGH impact on the fulfilment of the EU CSDP military LoA and supports mitigation of the HICG Joint ISR. It may contribute to strengthening the Union’s operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- The project would benefit from further clarification on the overall magnitude. This is recommended through the development of a business case and a more detailed roadmap which describes the deliverables in terms of facilities and infrastructure as well as the associated financial aspects.
- EDF could be considered for the financial support of the development of the platform/capability and European Peace Facility for the financial support in operations and missions (in-service support).

From the operational viewpoint: N/A

ANNEX B

PESCO project proposals assessment report

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project proposal is directly addressing the EU Capability Development Priority “Space-based Information and Communication Services” and more particularly the module “Earth Observation” by improving Space Based Earth Observation (SBEO) data access and analysis, processing and exploitation.
- **SCC/AoA:** The project refers to and addresses the dedicated activities mentioned in the agreed Avenues of Approach as laid down in the SCC Space-based Information and Communication Services - Earth Observation: the short term activities “Develop, access, as guaranteed and direct as possible, to existing defence (or governmental) SBEO data/products and/or systems through the EU SatCen” and “Create an EU shared catalogue/archive of defence (or governmental) imagery/products through EU SatCen”.
- **OSRA:** Although not mentioned in the project description, related R&T activities could be found within CapTech Simulation-Space, TBB136: “Defence Satellite Reconnaissance Systems” covers Earth Observation techniques to gather and analyse information on activities, forces and facilities to be used for defence intelligence purposes.
- **KSA:** There is no direct link with an existing or planned KSA report.
CARD: The project proposal is directly addressing the Focus Area “Defence in Space” at sub-system level as well as the collaborative opportunity “Earth Observation” mentioned in the 2020 CARD Aggregated Analysis. The analysis indicated that the assessment of the Earth Observation area falls into the category of most pressing and most needed capabilities and is high on the priority list regarding potential for collaboration. Its implementation would contribute to the short-term impact goal of the referred Focus Area which calls for, among others, the provision of effective EU geospatial/Imagery Intelligence data/services to the EU pMS and their defence forces. This project could also aim at implementing CARD Council recommendations where they refer to the “access to space services” related to possible future projects in areas such as Pooling & Sharing of SBEO catalogue/archive data through EU SatCen.
- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Low at this stage. The project proposal aims at increasing the exchange of classified governmental imagery and develop guaranteed access to classified products (up to EU Secret) of Space Based Earth Observation (SBEO) systems, while creating an EU shared catalogue, archive of classified governmental imagery, products. This would be carried out through the EU SATCEN for the project members. The project would contribute to the intelligence picture at political, strategic, operational and tactical levels, but also to a more coordinated approach in the space domain as intended by the Focus Area “Defence in Space”. It would reinforce the important role of the SATCEN as an EU Agency in support of CSDP actions and could thus prevent the duplication of efforts, in

ANNEX B

PESCO project proposals assessment report

case more Member States decide to join the project, notably those pMS that do not own SBEO systems. In this case the impact on the coherence should be reconsidered.

- **Potential impact on the EDTIB:** The impact on the EDTIB and on the competitiveness of the European defence industry cannot be assessed at this stage: there is no information on the industries/entities potentially involved nor technological advances potentially addressed. Potential impact on the EDTIB could stem from the following objectives that could involve industry: development of an EU capability allowing to securely share EU imageries, and implementation of a federated system for classified imagery originating from Member States and commercial providers.

Maturity

- **Harmonised Requirements:** No harmonised requirements have been developed yet. However, there is SBEO Business Case Analysis for an EU SSI being conducted that is expected to provide its results by March 2022. It will be the basis for the harmonisation of requirements.
- **Coherence with ongoing activities in an EU context:** There are potential synergies with ongoing PESCO Projects such as Geo-meteorological and Oceanographic (GeoMETOC) Support Coordination Element (GMSCE) and Timely Warning and Interception with Space-based TheatER surveillance (TWISTER). In addition, synergies should be further investigated with other ongoing activities under EDA PT Space-based Earth Observation and EDA PT Military Positioning, Navigation and Timing, as well as under EU SatCen's activities on complementing Copernicus products and commercial imagery acquisitions.

Coherence of effort and output

- **NATO priorities:** The project could support the implementation of the NATO Capability Target E-7102. While Space-based Earth Observation is not highlighted as a NATO Major Shortfall Area, the capability could be indirectly related to the MSA 'Joint ISR'.
- **Collaborative activities in a NATO context:** In the FNC context, the project could be linked to the cluster GeoMETOC Support; it is envisaged that CoHGI will take into account the results of GeoMETOC Support. Potential synergies and possible redundancies with the upcoming NATO centre of excellence dedicated to space should be explored and monitored.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment. SBEO BC analysis study will provide a rough order of magnitude of costs. A precedent EDA study (MTEOR 2) has identified initial costs but with a limited set of implemented requirements. 2,5M for acquisition, 0.5M/year for in-service support.
- **Budget Allocation:** No planned or estimated budget allocation of the project is provided, no related timelines, and no estimation of contributions from pMS and industry.
- **EDIDP/EDF:** No decision has been taken yet on the possibility to request financial support within the framework of the EDF. However, EDF could support the

ANNEX B

PESCO project proposals assessment report

development of the platform/capability and European Peace Facility could support operations (in-service support).

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is not directly consistent with the Requirements Catalogue (RC19) but is likely to increase the efficiency of capabilities identified as requirements in the INFORM Capability Area. The project aims at providing an easy and responsive access to existing Space Based Earth Observation data/products and/or systems, within the framework of the EU CSDP and to EU operational users like EEAs or EU OHQs and Member States.
- **Progress Catalogue:** The proposal is not directly consistent with the Progress Catalogue (PC20). There are no specific shortfalls or HICGs directly related to this project proposal, but the project is likely to increase the efficiency of existing available capabilities, which would provide high benefit while lowering costs. In its current form, the project does not seem to address any Operational Collaborative Opportunity.

Operational Benefits

- **Deployability of Capabilities and Forces:** By nature, this project will not provide any deployable capabilities but will increase efficiency of existing assets.
- **Availability of Capabilities and Forces:** Innately the project will not provide any new deployable capability but should make intelligence product easily available to CSDP missions and operations in the short to medium term.
- **Interoperability of Capabilities and Forces:** The project might indirectly support interoperability by providing a new framework in which to exchange intelligence products.
- **Addresses MS' Lessons Identified and Learned:** This project directly addresses some shortfalls identified among Lessons Learned from operations and missions.
- **Impact on the Fulfilment of the Level of Ambition:** The project is likely to provide increased efficiency to capabilities related to the HICG Joint ISR. Based on the consistency with RC19 and PC20 the proposal may be assessed as having an indirect HIGH IMPACT on the achievement of EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, it is assessed that the proposed project has the potential to contribute to 8 of the more binding commitments (6, 7, 9, 10, 15, 16, 17, 18).

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

4.1.44 – Defence of Space Assets (DoSA)

- Level of Interest: Possible Project Coordinator: 1, Potential Project Members (including the coordinator): 5, Potential Observers: 1
- National budget involved from proposing MS: Not provided.
- Maturity: It is not clear whether an initial set of requirements exists, however one of the aims of the project is to enhance the harmonisation of requirements.
- Lines of Development: Doctrine, Interoperability.
- Key milestones: Project Execution Year (PEY) 2024; Project Completion Year (PCY) 2025.

A. Recommendations

Conclusions

The project is recommended for the main focus at this stage both from the capability perspective and the operational viewpoint.

Capability perspective: The project is recommended for the main focus from the capability perspective. The project aims at increasing the EU's space operational efficiency in space through defining essential blocks which will enhance safety and resilience and maximise safe use of space. Capability wise, the project concentrates on doctrine and CONOPS, protection capabilities and an EU supply chain. The project addresses the CDP "Space-Based Information and Communication Services (SBICS)" and could contribute to the CARD Focus Area "Defence in Space". At this stage, the project would have up to medium impact on the EU capability landscape as the current subscribed project members have around 50% of the EU space assets, and it will further benefit by clarifying the specific capability that will be delivered. Moreover, the description of deliverables (e.g. CONOPS) over time and the financial planning including the expected contribution from project members were provided in the Clarification WS.

Operational viewpoint: From the operational viewpoint, the project is likely to augment the efficiency of capabilities related to the HICGs Joint ISR and CIS. Based on its consistency with RC and PC, the proposal is expected to have an indirect High impact on the fulfilment of the EU CSDP military LoA. It can contribute to strengthening the Union's operational effectiveness, enhancing the availability and interoperability of forces and capabilities for CSDP missions and operations.

Next Steps

From the capability perspective the following steps are recommended to further improve the project proposal:

- In addition to the presented possible synergies with other PESCO projects, there is a need to further specify the relationship between DoSA and the CARD Focus Area "Defence in Space". Also, regarding the coherence with the EU landscape, there is a need to investigate how the findings of this project can serve as an input for the EDA Project Teams.
- The project needs further clarification on what specific capability will be delivered and on how the activities of the Avenues of Approach it refers to would be linked to the

ANNEX B

PESCO project proposals assessment report

declared capability related objectives of the project. Clarification was provided on the short-term activities of the Avenues of Approach that were taken into consideration for the project, including the respective TBBs.

- In addition to the presented estimation of the annual flow funding after the completion of the project, an initial business case, including an estimated budget over time and expected contributions from project members, needs to be developed. This would go along with the further specification of the deliverables against the time.
- The updated subscribed project members space assets are around 50% of the PESCO pMS space assets. Further participation would increase the potential impact on the coherence of the EU capability landscape.

From the operational viewpoint: the next steps regarding the project will allow defining requirements. The link with the existing project TWISTER might be further developed to potentially establish the link with the Operational Collaborative Opportunity FORCE PROTECTION.

B. Capability Perspective

Contribution to the Coherence of the European Capability Landscape

- **EU CDP:** The project is addressing in general terms the EU Capability Development Priority “Space-Based Information and Communication Services (SBICS)” and it aims to increase the EU’s operational efficiency in the Space domain.
- **SCC/AoA:** The project proposal refers to several activities mentioned in the SCC on SBICS in the short, medium and long-term. Therefore, the EU tools (CDP/SCC) can be considered as having contributed to the generation of this project proposal. However, the project proposal needs further clarification how the activities of the Avenues of Approach it refers to would be linked to/complemented by the declared capability related objectives of the project.
- **OSRA:** Although not mentioned and referred to in the project description, related R&T can be found within CapTech Simulation-Space, namely, TBB135 “Recognized Space Picture (RSP)” covers required research to simulate the behaviour of objects in orbit and structure the coordination, functionality and management of the information of the systems performing the tasks of detection, tracking and identification. TBB136: “Defence Satellite Reconnaissance Systems” also covers Earth Observation techniques to gather and analyse information on activities, forces and facilities to be used for defence intelligence purposes.
- **KSA:** The project proposal has the potential to contribute to strengthen EDTIB capacities in the space domain, by addressing existing challenges, e.g., the provision of an EU supply chain for space protection blocks and the development of standards and requirements. The project proposal is potentially linked with different KSA reports, such as Positioning, Navigation and Timing, SatCom and Space Situational Awareness.
- **CARD:** The project proposal directly addresses the Focus Area “Defence in Space” as laid down in the CARD Report. Also, the project description refers to four collaborative opportunities, identified in the 2020 CARD Aggregated Analysis: Earth Observation, Satellite Communication, Space Situational Awareness and Positioning, Navigation and Timing. Furthermore, all four areas have been identified as most pressing and most

ANNEX B

PESCO project proposals assessment report

needed in terms of capability development potential, and the Satellite Communication has been assessed also as most promising from a collaboration perspective. It was clarified that the project will contribute to the identification of the capabilities needed to protect space assets, increase their resilience and to conduct military operations in Space. It was also clarified that the project “Defence in Space” focuses on the development of CONOPS for military operations in Space and the protection of space assets, increasing resilience, while the Focus Area “Defence in Space” has a broader focus. The project was renamed to Defence of Space Assets by the project coordinator to avoid the risk of confusion. The project chiefly aims at the protection of space assets, and its contributing links to the collaborative opportunities at project level mentioned in the CARD Aggregated Analysis require further specification.

- **EU Global Strategy:** The project proposal is deemed to contribute to three strategic priorities - 1. Respond to external conflicts and crises 2. Capacity building of partners and 3. Protecting the Union and its citizens.
- **Potential impact on the coherence of the European capability landscape:** Up to Medium at this stage. With its declared objectives, the project proposal would increase the level of protection, safety and resilience in the space domain; and it would make EU operated space assets services more efficient and effective. The potential impact of this project proposal on the coherence of the capability landscape could be up to medium considering that the current subscribed project members space assets are reaching more than 50% of the PESCO pMS space assets. However, to further unfold the full potential of the project, it would benefit from a higher number of project members who are in the possession of own space assets.
- **Potential impact on the EDTIB:** The impact on the EDTIB and on the competitiveness of the European defence industry cannot be well assessed at this stage: there is no information on the industries/entities potentially involved nor technological advances potentially addressed. Potential impact on the EDTIB could stem from the following objectives: i) development of technologies for space asset local protection, detection and identification systems, ii) development of standards and requirements, and iii) provision of an EU supply chain for space protection blocks.

Maturity

- **Harmonised Requirements:** It is not clear whether an initial set of requirements exists, however, the aim of the project is to share doctrines and CONOPS for military space command and define the requirements for future passive defence of European space assets. Enhanced harmonisation of requirements will be one of the project deliverables. It was clarified that the TBB roadmaps will be taken into account for the identification of the technological priorities.
- **Coherence with ongoing activities in an EU context:** There are potential synergies to be explored with ongoing PESCO projects such as EU Radionavigation Solution (EURAS), European Military Space Surveillance Awareness Network (EU SSA-N) and Timely Warning and Interception with Space-based TheatER surveillance (TWISTER). The project proposal is coherent/complementary with ongoing EU space activities such as the action plan on synergies between the space, civil and defence industries, the

ANNEX B

PESCO project proposals assessment report

implementation of the EU space programme and its components, and the SSA/STM discussions and studies taking place at EU level.

Coherence of effort and output

- **NATO priorities:** The project could be contributing to addressing the following NATO Main Shortfall Areas: Readiness, Training and Exercises, Interoperability.
- **Collaborative activities in a NATO context:** Based on available information, potential synergies and possible redundancies should be explored with the activities of the upcoming NATO Centre of Excellence dedicated to space and the Multinational Capability Development Campaign Project (2021-22 programme of work) 'Common Guidelines for Space Doctrine and Education (SPACE)', in particular as regards Training and Exercise elements of the project.

Financial Support

- **Initial Business Case:** No information is provided on the value of the investment. It is only mentioned that the initial investment will mainly consist of in human resources and feasibility studies support.
- **Budget Allocation:** It was clarified that the project will require funding on a voluntary basis to fund studies and the provision of experts to discuss and agree the priorities. It was also clarified that an estimated annual flow funding of 50M € will be required after the execution of the project.
- **EDIDP/EDF:** It was clarified that there is an intent to request financial support within the framework of the EDF for respective studies.

C. Operational Viewpoint

Bridging Operational Gaps

- **Requirements Catalogue:** The proposal is consistent with the Requirements Catalogue (RC19). The proposal is likely to permit development of various capabilities linked to Space mainly in the INFORM C3 and potentially PROTECT capability areas.
- **Progress Catalogue:** The proposal is consistent with the Progress Catalogue (PC20). The project is likely to augment the efficiency of capabilities related to the HICGs Joint ISR, CIS. Based on its consistency with RC and PC, the proposal is expected to have an indirect High impact on the fulfilment of the EU CSDP military LoA. In its current form, the project does not seem to address any Operational Collaborative Opportunity but the link with the existing project TWISTER might be further developed to potentially establish the link with the Operational Collaborative Opportunity FORCE PROTECTION.

Operational Benefits

- **Deployability of Capabilities and Forces:** Considering Space capabilities the deployability issue appears less relevant.
- **Availability of Capabilities and Forces:** Capabilities to be developed are likely to be committed to the Force Catalogue and made available for future CSDP military

ANNEX B

PESCO project proposals assessment report

missions and operations. Nonetheless, it is unclear when this project will provide capabilities available to CSDP missions and operations.

- **Interoperability of Capabilities and Forces:** Multinational development of such tools is likely to support future interoperability.
- **Addresses MS' Lessons Identified and Learned:** This proposal does address some Lessons from CSDP and non-CSDP Operations and Missions, as identified in the Progress Catalogue (PC20).
- **Impact on the Fulfilment of the Level of Ambition:** Based on the consistency with RC19 and PC20, the proposal is expected to have an indirect High impact on the fulfilment of the EU CSDP military LoA.

D. Contribution to the 20 more binding commitments

From the capability perspective, based on the information provided, it is assessed that the proposed project has the potential to contribute to 12 of the more binding commitments (3, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20). As regards commitment 18 to use EDA as the European forum for joint capability development (...), it could be clarified by the project coordinator what the intended role for the EDA would be, as mentioned in the proposal.

From the operational viewpoint, based on the information provided, the project proposal in its current form does not appear to contribute to the more binding commitment 14. It appears to contribute to the more binding commitments 12 and 13.

ANNEX B

PESCO project proposals assessment report

List of Acronyms

Abbreviation	Explanation
AoA	Avenue of Approach
ASW	Anti-Submarine Warfare
C4ISR	Command, Control, Communications, Computer, Intelligence, Surveillance, Reconnaissance
CARD	Coordinated Annual Review on Defence
CapTech	Capability Technology Group
CAT B	Category B
CCDCoE	Cooperative Cyber Defence Centre of Excellence
CD	Cyber Defence
CIS	Communication and Information Systems
CODABA	Collaborative Database
CoE	Centre of Excellence
CSDP	Common Security and Defence Policy
C-UAS	Counter Unmanned Aerial Systems
DOTMLPFI	Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Interoperability
EAG	European Air Group
EDA	European Defence Agency
EDF	European Defence Fund
EDIDP	European Defence Industrial Development Programme
EDTIB	European Defence Technological and Industrial Base
ETEE	Education, Training, Exercises and Evaluation
ESDC	European Security and Defence College
E&T	Education and Training
EU	European Union
EU CDP	EU Capability Development Plan
EU LOA	EU Level of Ambition
EUMC	European Union Military Committee
EUMS	European Union Military Staff
EW	Electronic Warfare
FNC	Framework Nation Concept
GMT	Generic Military Task
GMTL	Generic Military Task List
HICG	High Impact Capability Goals
ISTAR	Intelligence, Surveillance, Target Acquisition and Reconnaissance
ISR	Intelligence, Surveillance and Reconnaissance
KSA	Key Strategic Activity
LoA	Level of Ambition
LoD	Lines of Development
MS	Member State

ANNEX B

PESCO project proposals assessment report

M&S	Modelling and Simulation
MSA	Main Shortfall Area
NATO	North Atlantic Treaty Organization
OEM	Original Equipment Manufacturer
OSRA	Overarching Strategic Research Agenda
PADR	Preparatory Action on Defence and Research
PC	Progress Catalogue
PCY	Project Completion Year
PEY	Project Execution Year
PESCO	Permanent Structured Cooperation
pMS	participating Member States
PNT	Positioning, Navigation and Timing
RC	Requirements catalogue
RPAS	Remotely Piloted Aircraft Systems
R&D	Research and Development
R&T	Research and Technology
SBEO	Space-Based Earth Observation
SCC	Strategic Context Case
SD	Smart Defence
NATO STO	NATO Science and Technology Organization
SWOT	Strengths, Weakness, Opportunities, Threats
TBB	Technology Building Block
T&E	Training and Education
UAS	Unmanned Aerial Systems