

Keeping the momentum in European defence collaboration: an early assessment of PESCO implementation

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Executive summary

The Permanent Structured Cooperation (PESCO) is a new initiative by the European Union, designed to facilitate and accelerate defence cooperation. Between March and November 2018, the 25 participating member states launched 34 projects, with the core aim of addressing the EU's capability shortfalls. In May 2019, a call for a third round of project proposals will be launched.

The IISS undertook an early assessment of how PESCO projects are carried out, to assess whether the momentum on the ground has continued since the projects were announced at the political level. A strong pace of implementation would require detailed timelines, deadlines and financial plans, as well as clear links with EU capability requirements.

Questionnaires were sent to the projects' country-leads, and were complemented by interviews and secondary-source research. We looked at various dimensions of implementation: timelines, financial commitments, stakeholder involvement and the projects' relation to strategic autonomy. The results are mixed. While some projects are off to a strong start, there are common challenges for all:

- Projects that do not relate to armament programmes do not have clear deadlines. Yet, credible timelines are key to show commitment and keep momentum going.
- Almost all projects rely on the European defence industrial development programme (EDIDP) and future European Defence Fund (EDF) for financial resources. This raises the issue of whether the pot will be large enough for all, and how the European

Commission and member states will prioritise funding.

- The involvement of the Organisation for Joint Armament Cooperation (OCCAR) and the European Defence Agency (EDA) in some of the main projects raises the risk of PESCO duplicating existing institutional arrangements.
- While PESCO is heading in the right direction on capability shortfalls, current projects are far from covering all existing gaps.

Another key finding from this research is that projects most advanced on all dimensions are those that were already under way at the multilateral level before PESCO started. This suggests that PESCO for now is mainly an extraneous and reassuring label, and a means to provide extra funding to existing programmes.

This paper therefore shows that there is a risk that PESCO might be yet another missed opportunity on the road to more integrated European defence cooperation. To avoid this outcome, key recommendations include:

- Participating member states (pMS) and EU institutions should first agree to clearly prioritise and develop those projects that focus on capability gaps, and are certain to secure either EDIDP/EDF or member states' funding.
- PMS should accelerate the implementation of those priority projects.
- The third round of projects should very clearly address the most significant capability shortfalls that the EU faces.

Launching the Permanent Structured Cooperation

In 2016, the European Union launched what has been called a ‘winter package’, which included an Implementation Plan on Security and Defence, an Action Plan on Defence, and proposals for the implementation of the EU–NATO Joint Declaration.¹ This led to the activation of the Permanent Structured Cooperation (PESCO), a treaty-based framework, dormant since 2009. PESCO aimed at increasing the ability of member states to address security challenges and achieve stronger, more integrated defence cooperation. It seeks to assist European defence in becoming more efficient and capable of providing greater output through enhanced coordination and collaboration in defence investment, capability development and operational readiness.²

In March 2018, a formal decision adopting a list of 17 PESCO projects was reached – although a draft list of projects had already been approved in late 2017.³ The European Council adopted a second round of projects in November 2018 and a third round is expected to be launched in May 2019 – an indication that there is still the political appetite for it.

However, despite significant headway in setting up PESCO’s governance and structure, the extent to which progress is being made on PESCO’s implementation remains to be seen. Participating member states (pMS) submitted annual national implementation plans for review in January 2019. In May 2019, the EU’s High Representative for Foreign Affairs and Security Policy and Vice-President of the Commission Federica Mogherini is expected to present a report to the council, based on findings from the PESCO secretariat. Thereafter, the European Council will deem whether, and to what extent, pMS are fulfilling the binding commitments set out in Annex II of the Notification on PESCO.⁴ Implementing PESCO is crucial not only for the capability development and operational readiness it may deliver, but also for the dialogue and trust it may engender among member states.

With that in mind, this paper examines the pace and intensity of PESCO’s implementation so far. To address this question, we distributed questionnaires to the lead nations of each project, beginning in December 2018

and continuing until February 2019. We received a total of 18 questionnaire returns.⁵

The questionnaires covered three areas: project timelines; resources and stakeholders; and the project’s relation to European strategic autonomy. We expected a strong pace of implementation to include detailed timelines and deadlines; financial plans; and clear links with EU capability requirements. Accordingly, this paper proceeds in three sections. Firstly, for timelines, we examine whether pMS have planned milestones and deadlines, with a view to assessing how realistic and concrete projects are, and ultimately when they can be expected to be delivered. Secondly, questions on project budgeting allowed us to evaluate whether projects appear realistic both financially, and in terms of planning. A major aspect of this is whether pMS foresee funding from the European Defence Fund (EDF) in support of their projects, which may in turn be indicative of the extent to which EU defence instruments are operating coherently. Enquiry into stakeholder involvement revealed to what extent defence companies are in the loop, and whether projects go beyond involving pMS and industry. Finally, we address the topic of strategic autonomy. Do pMS perceive projects to help close the gaps in EU military capabilities and what are the implications for meeting the Union’s military level of ambition? Overall, our research shows mitigated results on all counts.

Project timelines for PESCO

Examining the timelines of each PESCO project potentially reveals a great deal about PESCO’s implementation. For one, it may hint at both the urgency and scale of the project. The former is especially important since it may disclose not only what Europeans consider to be their most serious capability shortfalls, but also which projects might be driven by politics, rather than capability requirements. Using timelines to examine the scale may serve to set and temper expectations related to the final delivery of the projects.

In addition, establishing timelines can help hold member states to account in relation to each other; to the High Representative for Foreign Affairs and Security Policy and Vice-President of the Commission Federica Mogherini and the European Council; and to a variety

of project stakeholders. Consolidated timelines indicate commitment to delivering the project. They also put a structure in place that may serve to keep the momentum among defence planners and procurement staff if political interest begins to wane.

PESCO under way?

Invariably, with the exception of the EU Test and Evaluation Centres project, work on projects is under way. The extent of the work generally remains unclear, however. In most cases member states are unable to identify milestones that have been met beyond providing the dates of project kick-off meetings.

In select instances, however, projects have already reached a handful of milestones. These tend to be larger projects aimed at delivering capabilities over a five- to ten-year period, that require weapons-system development and a significant degree of industry involvement. The Indirect Fire Support Capability (EuroArtillery) project, for instance, has held two working-group meetings, conducted negotiations with a range of stakeholders (including industry), and pMS are currently approving harmonised military requirements. The next step will be to submit these requirements to industry consortiums. Work related to the Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM) project kicked off in as early as February 2018 – before PESCO projects were formally launched. To date, pMS have developed a project plan that includes terms of reference, identified milestones and a programme of work. Of course, this is also the case with the European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone) project – which unveiled its first full-scale model at the Berlin Air Show in April 2018⁶ – and with the *Tiger* Mark III and the Beyond Line of Sight (BLOS) Land Battlefield Missile Systems projects. These cases highlight an important point – namely that capability-focused projects may carry the most momentum, particularly when lead nations and pMS have already taken a number of steps towards acquiring that capability outside the PESCO context. Consequently, a degree of progress that might now be associated with PESCO is instead a reflection of pre-existing pMS interest.

By the same token, some projects not requiring

substantial R&D efforts and industry involvement appear to have made significant progress – specifically those led by Germany. The Network of Logistic Hubs in Europe and Support to Operations; the EU Training Mission Competence Centre (EU TMCC); and the EU Force Crisis Response Operation Core (EUFOR CROC) have already convened several meetings each, with the latter also having completed an implementation study. Progress on the aforementioned projects is in many ways unsurprising, and appears a practical way for Germany to strengthen its collaborative credential and score political points, while also carrying forward projects that underline the integrationist and inclusiveness approach to PESCO.⁷

Project milestones

As with the extent to which work is under way, the depth and detail of the planned milestones varies across projects. One of the most striking findings from the questionnaires, however, is that the degree to which projects are feasible remains unknown in several cases. This is likely to be a serious impediment to more detailed planning, and importantly, costing. In many cases, this may be a conscious political move by pMS to lay down a full set of milestones only once European Defence Fund (EDF) funding is within sight. Five projects – Cyber Rapid Response Teams (CRRTs); Electronic Warfare Capability; One Deployable Special Operations Forces (SOF); Upgrade of Maritime Surveillance, and EuroArtillery – identify feasibility studies as planned milestones. The CRRT questionnaire feedback noted that the completion of a feasibility study will allow for the development of more detailed timelines.

One potential impediment to proper planning and subsequent implementation may be a lack of multi-lateral commitment from member states to projects, despite having signed up as participating members of a project. While plans to undertake a feasibility study within the near future are likely to open possibilities for more detailed planning, perhaps a more worrying barrier to implementation are Memorandum of Understanding (MoU) milestones. These are reminders of the unavoidably political nature of PESCO projects. The fact that MoUs are identified as milestones serves to strengthen conceptions of PESCO's links to

inclusiveness and integration. Joint EU Intelligence School (JEIS), CRRTs and One Deployable SOF all seek pMS MoUs within the next year, while the Cyber Threats and Incident Response Information Sharing Platform project aims to have legal agreements signed among pMS, and between pMS and industry, by May 2019. For projects whose work has not yet surpassed the early stages of securing political and legal agreement, it is likely that work has been driven almost exclusively by the lead nation up to this point.

Momentum is found in particular in PESCO projects that had already been adopted before PESCO was launched, or which were already on the requirements lists of pMS. For instance, EuroArtillery responded to Slovakia's 'development priorities'.⁸ Regarding the MAS MCM project, Belgium was already involved, with the Netherlands, in the European Defence Agency's (EDA) previous work on future mine countermeasure capabilities,⁹ and both countries have a common requirement for minehunters.¹⁰

Hence, having already achieved several milestones, both MAS MCM and EuroArtillery lay out detailed planning. The former is now focusing on publishing several approved European study tenders while the latter will shortly begin integrating ammunition into pMS weapon systems. Another of the capability-driven projects – the French-led *Tiger Mark III* upgrade – will release to industry development and production contracts by the end of 2019. One Deployable SOF pMS personnel will begin multilateral training in 2019. Importantly, the Co-basing project – widely viewed as a precursor to the high-profile Military Mobility project – has identified goalposts that seem achievable in the short term, although there is external pressure to further accelerate delivery.¹¹

When can PESCO be expected to deliver?

While project planning and achieving milestones is an important part of the implementation process, what ultimately matters is delivering an end product. Table 1 details the expected final delivery date for each PESCO project, as indicated in returned questionnaires.

As with milestones, stating final delivery dates is a vital step because of the accountability and commitment it engenders. On a practical level, failure to plan projects

to an end date will have ripple effects that adversely impact other institutional arms of the EU defence architecture, especially those related to planning.

Generally, there is a lack of confidence regarding final deliveries, and the political aspects of PESCO undeniably condition this. One questionnaire response warned that lengthy decision-making procedures may inhibit the possibility of pinning down a final delivery date. The most striking feature of Table 1 is the failure of Germany and France to communicate delivery dates for most of the PESCO projects they lead. Yet, it is doubtful whether PESCO can be successful without a push from France and Germany and an established time horizon for their key projects.

Stakeholders and resources: assessing financial and industrial commitments

Timelines and milestones are conditioned by those involved in the project and the tools at their disposal. This section discusses further practical aspects of PESCO's implementation: who are the stakeholders involved and how much will projects cost? Bringing together stakeholders from various national and institutional affiliations can be a challenging but necessary task to make PESCO projects succeed. This section will explore industry participation, and the role of other intergovernmental bodies to understand better the links between PESCO and other existing European defence collaboration efforts. The contribution of industry at the early stages of the projects that seek to develop new capabilities and platforms is crucial to go beyond the 'paper tiger' perception of PESCO.¹² In addition to the questionnaires and interviews, we included further open-source research on some of the most advanced projects, which had already begun prior to PESCO's activation – *Tiger Mark III*; Eurodrone and EU Beyond Line of Sight (BLOS) Land Battlefield Missile Systems.

Beyond intergovernmental coordination: reaching out to industry and European organisations

Projects that do not aim at developing new capabilities or equipment will need little industry involvement. The EU Radio Navigation Solution (EURAS), for example, aims to jointly define a military navigation warfare (NAVWAR) doctrine – the key stakeholders here are

Table 1. When do project leads envision the final project being delivered?

Project	Lead	Launch date	Final project delivery date
Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)	Belgium	February 2018	2025*
Deployable Modular Underwater Intervention Capability Package (DIVEPACK)	Bulgaria	April 2018	2024
Electronic Warfare Capability and Interoperability Programme for Future Joint Intelligence, Surveillance and Reconnaissance (JISR) Cooperation	Czech Republic	November 2018	Not yet defined
Co-basing	France	November 2018	December 2021
Energy Operational Function (EOF)	France	March 2018	Not yet defined
EU Beyond Line of Sight (BLOS) Land Battlefield Missile Systems	France	November 2018	Not yet defined
EU Radio Navigation Solution (EURAS)	France	November 2018	2020*
European Attack Helicopters <i>Tiger</i> Mark III	France	November 2018	Not yet defined
European Secure Software-defined Radio (ESSOR)	France	March 2018	Not yet defined
EU Test and Evaluation (T&E) Centres	France and Sweden	November 2018	Not yet defined
European Medical Command (EMC)	Germany	March 2018	Not yet defined
Network of Logistic Hubs in Europe and Support to Operations	Germany	March 2018	2020*
EU Training Mission Competence Centre (EU TMCC)	Germany	March 2018	Not yet defined
EU Force Crisis Response Operation Core (EUFOR CROC)	Germany	March 2018	Not yet defined
Geo-meteorological and Oceanographic (GeoMETOC) Support Coordination Element (GMSCE)	Germany	November 2018	Not yet defined
European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone)	Germany	November 2018	First delivery 2025 ¹³
Cyber Threats and Incident Response Information Sharing Platform	Greece	March 2018	2020
One Deployable Special Operations Forces (SOF) Tactical Command and Control (C2) Command Post (CP) for Small Joint Operations (SJO) – (SOCC) for SJO	Greece	November 2018	2024
Helicopter Hot and High Training (H3 Training)	Greece	November 2018	September 2019
Joint EU Intelligence School (JEIS)	Greece	December 2018	March 2021
Upgrade of Maritime Surveillance	Greece	March 2018	Not yet defined
Cyber Rapid Response Teams (CRRTs) and Mutual Assistance in Cyber Security	Lithuania	March 2018	2022–2024
Indirect Fire Support Capability (EuroArtillery)	Slovakia	February 2018	2030
Strategic Command and Control (C2) System for Common Security and Defence Policy (CSDP) Missions and Operations	Spain	November 2018	2022

*Initial operating capability.

military. Similarly, the Co-basing project, which aims to share operational resources (bases, support points) and to work on related legal and financial frameworks, implies contributions mainly from the armed forces and ministry of defence bureaucracies. But many other PESCO projects are expected to deliver capabilities in the form of weapon systems. For such projects to reach final delivery and the in-service stage, industry involvement is necessary. For new projects that were developed specifically within the PESCO framework, industry participation is not yet fully under way, although work to this end has started.

Industry actors have been identified and are presumably already involved in discussions in the Electronic Warfare Capability and the EuroArtillery projects. Several projects have planned 'industry days' in 2019 to start convening the relevant actors. This is the case, for example, with the Cyber Threats and Incident Response Information Sharing Platform and MAS MCM projects.

The issue of industry participation also shows how PESCO may contribute to a more rationalised European Defence Technological and Industrial Base (EDTIB). More cross-border cooperation will increase division of labour and reduce duplications among national defence industrial bases and could in the longer run lead to consolidation. The EuroArtillery project provides a good example of cross-border European defence-industry cooperation, with companies from the Czech Republic, Italy and Slovakia joining forces. Other projects show attempts to involve small and medium-sized enterprises (SMEs), which for instance will be invited to form a consortium for the One Deployable SOF project.

For projects that pre-date the PESCO framework, the involvement of industry is more intense, since some of the capabilities have already been developed or have already undergone study and design phases. Hence, for the *Tiger* Mark III upgrade, Airbus Helicopters, Thales and MBDA are involved.¹⁴ Airbus is the main manufacturer for the helicopter, while the other companies provide the weapons fit. Thales TDA Armaments, for instance, will develop laser-guided rockets.¹⁵ For the EU BLOS, MBDA has already developed the Missile Moyenne Portée (MMP) system and will become the coordinator of an industrial consortium to be built around this new project. Airbus is the prime contractor

for the Eurodrone project, with Dassault Aviation (France), Leonardo (Italy), and Aero Vodochody (Czech Republic) as subcontractors.¹⁶ Other companies are also involved for subsystems, such as Germany's Hensoldt, which designs avionics.¹⁷

For projects initiated in advance of the PESCO framework, PESCO's added value remains uncertain. PESCO could serve as a mechanism for bringing more countries on board, as was the case with the Czech Republic and the Eurodrone project, for example. It is unclear, however, whether Czech participation was already under consideration prior to adding this particular project to the PESCO list.

Projects with greater industry involvement, and which started before PESCO's activation, also often involve other intergovernmental European institutions. These are primarily the Organisation for Joint Armament Cooperation (OCCAR) and the EDA. For instance, OCCAR already manages the European Secure Software-defined Radio (ESSOR), a project launched in 2008.¹⁸ OCCAR also places contracts with industry on behalf of defence procurement agencies of the pMS for the *Tiger* Mark III upgrade. In fact, OCCAR has been managing the *Tiger* helicopter programme since 2001,¹⁹ and the new phase in the programme that falls under PESCO has already been in development since 2015.²⁰ The organisation also manages the Eurodrone programme. By August 2016, it had already contracted defence companies for the design phase of a definition study contract which was completed in late 2018.²¹ While OCCAR manages the procurement aspects of the programme, the EDA for its part is in charge of determining how the Eurodrone can be integrated into air traffic in European skies. It therefore manages the development of a mid-air collision avoidance system.²²

The involvement of OCCAR and the EDA, as well as the fact that these projects existed before PESCO was launched, bodes well for the momentum of these projects and increases the odds that they will come to fruition. An increased number of stakeholders does not seem to be an impediment to execution; it could on the contrary increase requirements for accountability, transparency and, ultimately, results. It does raise questions, however, about PESCO's added value and whether it risks duplicating functional institutional frameworks.

Financial resources: the European Defence Fund (EDF) up for grabs?

Scant data was available from lead nations on the topic of costings of the various projects. Out of the questionnaire responses we received, only a handful provided financial information. Even these were only preliminary estimates. The absence of more substantial financial data at this stage is surprising, given that the costs of projects tend to be an important factor in determining how realistic those projects are. Many pMS are waiting for confirmation of EDF funding to plan for feasibility studies.

We received financial data for only four projects. The Deployable Modular Underwater Intervention Capability Package (DIVEPACK) project is expected to cost €4.5 million (around US\$5m) for a unit prototype. This includes €380,000 (US\$427,000) for R&D and

€4.12m (US\$4.6m) for subsystems – the costs would be spread over several years. The Cyber Threats and Incident Response Information Sharing Platform was estimated at €2.24m (US\$2.5m). Costs for the EuroArtillery project are estimated to be €2.38m (US\$2.7m) for the ammunition integration into weapons systems, and €6.5m (US\$7.3m) for the common fire-control system integration and modernisation. Finally, One Deployable SOF would require a feasibility study estimated to cost between €300,000 and €500,000 (between US\$337,000 and US\$562,000). While the member states contacted specified that these were preliminary estimates, they show relatively modest financial requirements.

By way of comparison, the projects that started before PESCO's activation and on a bilateral or minilateral level tend to be more ambitious. In 2018, the French

Table 2. PESCO projects' anticipated costs and funding			
Project	Lead	Resources	European Defence Fund (EDF) Funding
Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)	Belgium	Costing under way	Yes
Deployable Modular Underwater Intervention Capability Package (DIVEPACK)	Bulgaria	Initial cost estimate of unit prototype = €4.5m (US\$5m). Note: over 2019–24; Bulgarian contribution only.	Yes*
Electronic Warfare Capability and Interoperability Programme for Future Joint Intelligence, Surveillance and Reconnaissance (JISR) Cooperation	Czech Republic	Costing under way	No
Co-basing	France	No data available	Yes**
Energy Operational Function (EOF)	France	No data available	No
EU Test and Evaluation (T&E) Centres	France and Sweden	No data available	No
EU Beyond Line Of Sight (BLOS) Land Battlefield Missile Systems	France	No data available	Yes
EU Radio Navigation Solution (EURAS)	France	No data available	Yes
European Attack Helicopters <i>Tiger</i> Mark III	France	No data available	Yes***
European Secure Software-defined Radio (ESSOR)	France	No data available	Not yet defined****
European Medical Command (EMC)	Germany	No data available	Not yet defined
Network of Logistic Hubs in Europe and Support to Operations	Germany	No data available	Yes
EU Training Mission Competence Centre (EU TMCC)	Germany	No data available	Not yet defined
EU Force Crisis Response Operation Core (EUFOR CROC)	Germany	No data available	No
Geo-meteorological and Oceanographic (GeoMETOC) Support Coordination Element (GMSCE)	Germany	No data available	Not yet defined

senate reported that the total programme costs for the *Tiger* helicopter was €6.9 billion (US\$7.7bn).²³ In 2002, the same source had estimated that development costs for the programmes amounted to €1.7bn (US\$1.9bn). Unit costs for these helicopters ranged between €16.7m and €19.6m (between US\$18.8m and US\$22m) depending on the variants.²⁴ It is not known yet, however, how much the Mark III upgrade included among the PESCO projects will cost. The Eurodrone project required an initial research study of €60m (US\$67m) over two years.²⁵ Germany paid for 31% as the lead nation, while the three other participating countries each shouldered 23% of the sum.

On the contrary, some projects will incur only minimal additional costs for participating member states. For instance, the Helicopter Hot and High Training (H3 Training) project implies flight-training conducted with

participating countries' own aircraft – which will therefore require no extra shared outlays in addition to those already planned at the national level.

Finally, as Table 2 below shows, almost all projects are expecting to receive EDF funding. Some consider applications for pre-EDF mechanisms such as the 2019–20 European defence industrial development programme (EDIDP) of work. Given that the picture on project costs is incomplete at this stage, it is not yet possible to determine whether the total sum of funds applied for would surpass the total EDF budget available at present. Should the terms of the Multiannual Financial Framework 2021–27 be approved, there will be €500m (US\$561m) for research and €1bn (US\$1.1bn) for capability development per year after 2020.²⁶ However, the fact that all PESCO projects seem to rely on the EDF for funding could become an issue: will projects that do not

Table 2. PESCO projects' anticipated costs and funding

Project	Lead	Resources	European Defence Fund (EDF) Funding
European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone)	Germany	No data available	Yes
Cyber Threats and Incident Response Information Sharing Platform	Greece	Estimated €2.2m (US\$2.5m) (total project costs)	Yes*****
One Deployable Special Operations Forces (SOF) Tactical Command and Control (C2) Command Post (CP) for Small Joint Operations (SJO) – (SOCC) for SJO	Greece	Costing under way, feasibility study estimated to cost up to €500,000 (US\$561,000)	Yes
Helicopter Hot and High Training (H3 Training)	Greece	No additional costs	No
Joint EU Intelligence School (JEIS)	Greece	Costing under way, but total is estimated below €1.5m (US\$1.7m)	Yes
Upgrade of Maritime Surveillance	Greece	Costing under way	Yes
Cyber Rapid Response Teams (CRRTs) and Mutual Assistance in Cyber Security	Lithuania	No additional costs	Yes
Indirect Fire Support Capability (EuroArtillery)	Slovakia	Precise Guided Munition Integration of ammunition: estimated €2.38m (US\$2.7m). Common Fire Control System Integration/ Modernisation: estimated cost = €6.5m (US\$7.3m).	Yes
Strategic Command and Control (C2) System for Common Security and Defence Policy (CSDP) Missions and Operations	Spain	Costing under way	Yes

* Bulgaria is in the process of submitting a DIVEPACK supporting project (Comprehensive Underwater Intervention Information System – CUIIS) under the EDIDP which, if approved, may cover substantial part of the R&D costs for the DIVEPACK project.

** Not directly but related projects such as Military Mobility could take benefits of EDF funding.

*** For subsystems.

**** For the completion of the project, funds will be used: national contribution, EDIDP, potential industrial participation.

***** Seek to also establish cooperation with industry stakeholders eligible for EDIDP funding.

receive funding still be supported by member states or will the financial incentive prove to be indispensable?

This could become all the more problematic if some of the larger projects mentioned above apply and take a large share of the total available sums, thereby making it likely that smaller projects have to be abandoned for lack of financial support. The release of the work programme for the EDIDP on 19 March 2019 tends to confirm these hypotheses. Direct funding could be allocated to the Eurodrone and ESSOR projects, with €137m out of €500m (US\$154m out of US\$561m) for 2019–20 dedicated to what the European Commission calls ‘flagship initiatives’.²⁷ In other words, more than 25% of the EDIDP would be assigned to only two projects. This first insight into the link between PESCO and the EDF also sheds light on the rationale for why some pre-existing projects sought to acquire the PESCO label. Indeed, ESSOR (essentially a radio software common to European land forces) was the object of a contract between OCCAR and six European defence companies, grouped in the consortium a4ESSOR, since 2009. Well under way for a decade, the project might have been included in PESCO specifically to be in a position to receive additional funding from the EDIDP/EDF stream.²⁸

The competition between larger and smaller projects for funding may mean tough choices for those decision-makers who will attribute funding: show support for larger projects that would potentially deliver game-changing capabilities for European armed forces, or instead, driven by political and diplomatic considerations, spread the total EDF sum over a larger number of smaller projects to show widespread support. Award criteria for the EDIDP work programme include technological advancement and innovation, application to military needs, industry competitiveness and integration, and contributions to industrial autonomy.²⁹ Arguably, most PESCO projects could meet these rather wide-ranging criteria.

Strategic autonomy: PESCO’s impact on defending Europe

PESCO was designed to stimulate European defence cooperation and build defence capabilities that would fill member states’ ‘strategic capability gaps’, in line

with the European Union’s vision for strategic autonomy that was laid out in the 2016 Global Strategy.³⁰ As plans have begun to take shape, we asked pMS to indicate how, in their view, the implementation of the current PESCO projects addresses the continent’s strategic autonomy goals.

Strategic autonomy comes in different forms and levels. It encompasses operational, political and industrial aspects to various degrees, which in turn reflect a spectrum of dependencies from across the Atlantic. This section assesses PESCO projects’ contribution to European strategic autonomy, focusing on the operational aspect which is the basis for the continent’s ability to ‘go it alone’. In particular, it assesses how PESCO projects respond to the 2018 Capability Development Plan (CDP) and address the EU’s level of ambition (LoA). To be autonomous, Europe would need to have interoperable and available forces and possess all capabilities required to conduct the missions it aspires to. Therefore, to have a meaningful impact on the EU’s ability to conduct its LoA-related operations, PESCO projects should address the capability and operational hurdles hindering the EU’s ability to operate in theatre.³¹

Addressing the capability gaps: PESCO to the rescue?

While pMS are developing capabilities aimed at assisting the EU in filling some of its strategic gaps, given the absence of high-spectrum capability projects, dependencies across the Atlantic will remain. Indeed, as some pMS admitted, their projects do not meet the high-impact capability goals set by the EU. This is a sobering realisation as it is precisely those high-impact capabilities that would make a difference across numerous scenarios and therefore act as force multipliers.

Table 3 demonstrates the 2018 CDP priorities that PESCO projects would be addressing should they get delivered. In instances where countries did not identify a specific priority, we referred to a joint European Leadership Network (ELN) and International Institute for Strategic Studies (IISS) study that matches adopted PESCO projects to the 2018 revised CDP priorities (marked with asterisk).³²

Evidently, most of the CDP priorities have been touched upon. In this respect, PESCO projects demonstrate intention to address shortfalls, if the projects

Table 3. 2018 Capability Development Plan (CDP) priorities met if PESCO projects delivered

Project	Country	2018 CDP priority
Electronic Warfare Capability and Interoperability Programme for Joint Intelligence, Surveillance and Reconnaissance (JISR) Cooperation	Czech Republic	Information superiority
Strategic Command and Control (C2) System for Common Security and Defence Policy (CSDP) Missions and Operations	Spain	Information superiority*
Cyber Threats and Incident Response Information Sharing Platform	Greece	Enabling capabilities for cyber responsive operations
One Deployable Special Operations Forces (SOF) Tactical Command and Control (C2) Command Post (CP) for Small Joint Operations (SJO) – (SOCC) for SJO	Greece	Enabling capabilities to operate [autonomously] with the EU's LoA ³³
Helicopter Hot and High Training (H3 Training)	Greece	Enabling capabilities to operate [autonomously] with the EU's LoA ³⁴
Joint EU Intelligence School (JEIS)	Greece	Information superiority
Upgrade of Maritime Surveillance	Greece	Information superiority; space-based information and communication services enabling capabilities for cyber responsive operations
Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)	Belgium	Naval manoeuvrability *
Indirect Fire Support Capability (EuroArtillery)	Slovakia	Ground-combat capabilities
Deployable Modular Underwater Intervention Capability Package (DIVEPACK)	Bulgaria	Information superiority, naval manoeuvrability
Cyber Rapid Response Teams (CRRTs) and Mutual Assistance in Cyber Security	Lithuania	Enabling capabilities for cyber responsive operations
Co-basing	France	Enhanced logistic and medical supporting capabilities; naval manoeuvrability
European Secure Software-defined Radio (ESSOR)	France	Information superiority
EU Radio Navigation Solution (EURAS)	France	Space-based information and communication services
EU Beyond Line of Sight (BLOS) Land Battlefield Missile Systems	France	Ground-combat capabilities
European Attack Helicopters <i>Tiger</i> Mark III	France	Air superiority
EU Test and Evaluation (T&E) Centres	France and Sweden	Cross-domain capabilities contributing to achieve EU's LoA
Energy Operational Function (EOF)	France	Enhanced logistic and medical supporting capabilities
EU Training Mission Competence Centre (EU TMCC)	Germany	Cross-domain capabilities contributing to achieve EU's LoA*
EU Force Crisis Response Operation Core (EUFOR CROC)	Germany	Cross-domain capabilities contributing to achieve EU's LoA*
European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone)	Germany	Air superiority
European Medical Command (EMC)	Germany	Enhanced logistic and medical supporting capabilities*
Network of Logistic Hubs in Europe and Support to Operations	Germany	Enhanced logistic and medical supporting capabilities*
Geo-meteorological and Oceanographic (GeoMETOC) Support Coordination Element (GMSCE)	Germany	Information superiority*

*Matches with 2018 CDP priorities.

are implemented. If they are, and all other things being equal, Europeans would be more prepared to conduct military operations in line with their level of ambition. But many shortfalls would still persist, as would

Europe's dependency on the United States for critical military capability.

Although Europe's defence spending is on the rise,³⁵ discussions with government interlocutors suggested

that budget constraints could still negatively affect the implementation process. The annual national implementation plans would serve as a first test, with the expectation being that some projects may potentially be dropped at that point. At this early stage in the process, it is likely that pressure from other governments, or from European institutions and the EU high representative for foreign affairs and security policy and vice-president of the European commission, will not be strong enough to prevent PESCO projects from being quietly shelved, or from being left to wither away by lead nations – in particular if work has not progressed beyond preparatory tasks.

Missions and operations

The EU aspires to be in a position to carry out operations in the areas of peace enforcement; conflict prevention; stabilisation and support to capacity-building; rescue and evacuation; and support to humanitarian assistance.³⁶ Although most governments claim their PESCO projects would assist the EU in its quest for operational autonomy, there does not seem to be a clear shared idea of how this would happen. This betrays a lack of common understanding that could potentially have an impact on the direction of PESCO and the ambition of the individual projects. Definitional clarity over the term ‘strategic autonomy’, if achieved, might allow for a more coherent approach in the future. At the moment, some countries emphasise their projects’ contributions to EU operations as a whole or in a certain domain, while others focus on the industrial aspect of autonomy.

Regarding missions and operations, only a limited number of pMS identified a LoA-related scenario in which their project would be of added value. Spain considers that its Strategic Command and Control (C2) System for Common Security and Defence Policy (CSDP) Missions and Operations project would help in conducting the EU Global Strategy scenarios, while Greece’s One Deployable SOF is meant to be relevant in missions involving combat forces in crisis management and peace operations; rapid deployment for rescue or evacuation operations; and military support for humanitarian-assistance missions. On the other hand, the Czech Republic’s Electronic Warfare Capability

project and Bulgaria’s DIVEPACK project were claimed by their respective governments to address all five scenarios.

Safeguarding Europe’s territorial integrity is not included in the existing illustrative scenarios describing the EU level of ambition, but is mentioned in the European Council conclusions on implementing the Global Strategy.³⁷ Interestingly, Greece was the only country to explicitly mention this task in the context of its Upgrade of Maritime Surveillance project. France indicated that its *Tiger Mark III* and EU BLOS project would assist to protect the EU more broadly. In fact, Greece and France were the only countries to explicitly envision their projects as contributing to the protection of European citizens.

Responding to external conflicts and crises was noted in several projects which are again led only by France and Greece.³⁸ Other countries, like the Czech Republic³⁹ and Lithuania⁴⁰ argued that their projects would contribute to achieving strategic autonomy in certain domains, namely electronic warfare and cyber. It has to be stressed that a contribution to strategic autonomy should not be mistaken for getting significantly closer to achieving strategic autonomy.

The Czech Republic and Lithuania made direct references to regional and international actors. Prague states its intention to link its Electronic Warfare Capability project to related ongoing NATO activities, while Lithuania underlined how its project would contribute to both EU needs and the capacity to act with external partners.

EU forces and interoperability

An integral part of meeting the EU’s level of ambition involves EU forces ‘effectively and efficiently operating together, coherently, to achieve tactical, operational and strategic objectives’. To that end, pMS agreed to ‘take concrete measures to enhance the availability, interoperability,⁴¹ flexibility and deployability of their forces’.⁴² The European Union Military Staff (EUMS) is tasked with enhancing their operational effectiveness and creating operational formations, while it focuses on ensuring member states’ forces and capabilities are connected and useable for EU operations and missions.

The DIVEPACK, Electronic Warfare Capability, One Deployable SOF and most of France’s projects indicated

that interoperability of the EU's armed forces would be enhanced as a result of the projects' delivery. Indeed, Paris explicitly mentioned that its ESSOR project aims to improve interoperability between European armed forces through the common architecture of Software-defined Radio (SDR) and waveforms. In turn, this is expected to allow for a faster and more secure military manoeuvre in coalition.

Defence industrial autonomy

Although industrial dependency is deemed a core component of strategic autonomy, Belgium, Greece and Spain were the only countries to make note of this, arguing that their projects would have an impact on the EDTIB. European industrial autonomy has been a thorny issue, with 'buying European' being unpopular across the Atlantic. The US reportedly launched a campaign to 'delay the adoption or even completely torpedo the [EDF] initiative'.⁴³

There are ongoing discussions around limiting access to companies from third countries, in particular the United States, which applies extraterritorial export-control regulations. Indeed, the US International Traffic in Arms Regulations (ITAR) export-control regulations are increasingly seen as a threat by European contracting authorities. While no state can afford to essentially 'blacklist' US products or arms manufacturers altogether, Europeans arms manufacturers are increasingly keen to avoid using ITAR components. ITAR-free PESCO projects could have more export opportunities on the global defence market, once fully developed.

Conclusion: a need to accelerate plans and clarify priorities

PESCO is still in its early days and pMS have not yet fleshed out detailed project plans across the board. Timelines and budgets of most projects remain unclear at this stage. Where movement exists, it is largely limited to projects that pre-date PESCO and were already under way before the initiative was launched. Those projects have a degree of buy-in from industry and leverage important stakeholders such as the OCCAR.

PESCO projects seem to face common challenges related to stakeholder coordination, funding and, importantly, an understanding of what projects are actually

meant to achieve. From the three criteria we have investigated, there are signs that PESCO remains a limited enterprise for the time being. Regarding timelines, the fact that the final delivery dates for so many of the non-capability related projects remain undefined ought to be of concern. A majority of projects at this stage do not appear to have credible plans and timelines. Yet, final delivery dates are crucial to signal commitment among partners and accountability to the wider public.

On resources, the potential lack of funding for a number of projects could become a major threat to PESCO's implementation. Financial commitment is only strong where it refers to projects that were already under way – for now it actually comes from national sources, so domestic defence budgets will remain crucial to adequately fund most projects. The number of pMS appearing to bide their time in the hope of EDF funding is therefore worrying. Thus, the budget implications of most projects remain unclear for now, as does the process of prioritising projects, if the EDF (for now, the EDIDP) were to be oversubscribed. To ensure PESCO delivers on some level, despite financial challenges, coordination among pMS and EU institutions to prioritise projects based on the most serious capability shortfalls may prove to be a way forward.

Finally, on strategic autonomy, pMS struggle to articulate not only how projects relate to strategic autonomy, but also how their projects would help in relation to EU missions. Using the CDP – with which PESCO projects do generally align – may provide benchmarks for making systematic judgements on these issues. Although PESCO projects are headed in the right direction, they do not cover the EU's current capability shortfalls.⁴⁴

These risks raise the real possibility that PESCO may become yet another missed opportunity on the long road to more integrated European defence cooperation. To avoid this eventuality, PESCO projects that are significant enough to receive pMS and EU financial support should be prioritised, even if this means dropping less ambitious projects. The EU level of ambition and the CDP provide a yardstick that at the very least can give orientation.

At this early stage of PESCO, our results lead to several recommendations. PMS and EU institutions should first agree to clearly prioritise and develop those

projects that focus on capability gaps and are certain to secure either EDIDP/EDF or member-state funding. Without such prioritisation, energy and resources could be wasted on lower-priority projects. Secondly, and relatedly, with priorities clarified, pMS should accelerate the implementation of those most important projects.

And as a third call for proposals that will be launched in May 2019, new initiatives should very clearly address the most significant capability shortfalls that the EU faces – otherwise, European defence cooperation’s inefficiency and duplications will persist, meaning that PESCO’s ambition will largely be missed.

Appendix

Table 4. Full list of PESCO projects and participating member states				
Project	Lead country	Launched	Questionnaire returned	Other participating countries*
Chemical, Biological, Radiological and Nuclear (CBRN) Surveillance as a Service (CBRN SaaS)	Austria	November 2018	No	France, Croatia, Hungary, Slovenia
Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)	Belgium	March 2018	Yes	Greece, Latvia, Netherlands, Poland, Portugal, Romania
Deployable Modular Underwater Intervention Capability Package (DIVEPACK)	Bulgaria	November 2018	Yes	Greece, France
Electronic Warfare Capability and Interoperability Programme for Future Joint Intelligence, Surveillance and Reconnaissance (JISR) Cooperation	Czech Republic	November 2018	Yes	Germany
Integrated Unmanned Ground System (UGS)	Estonia	November 2018	No	Belgium, Czech Republic, Finland, France, Germany, Hungary, Latvia, the Netherlands, Poland, Spain
EU Test and Evaluation Centres	France, Sweden	November 2018	Yes	Spain, Slovakia, Sweden
EU Beyond Line of Sight (BLOS) Land Battlefield Missile Systems	France	November 2018	Yes	Belgium, Cyprus
European Attack Helicopters <i>Tiger Mark III</i>	France	November 2018	Yes	Germany, Spain
European Secure Software defined Radio (ESSOR)	France	March 2018	Yes	Belgium, Germany, Finland, Italy, Luxembourg, the Netherlands, Poland, Portugal, Spain
Energy Operational Function (EOF)	France	March 2018	Yes	Belgium, Italy, Spain
Co-basing	France	November 2018	Yes	Belgium, Czech Republic, Germany, the Netherlands, Spain,
EU Radio Navigation Solution (EURAS)	France	November 2018	Yes	Belgium, Germany, Italy, Spain
European Union Training Mission Competence Centre (EU TMCC)	Germany	March 2018	No**	Austria, Czech Republic, France, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Romania, Spain, Sweden
EU Force (EUFOR) Crisis Response Operation Core (EUFOR CROC)	Germany	March 2018	No**	Cyprus, France, Italy, Spain
European Medium Altitude Long Endurance Remotely Piloted Aircraft Systems – MALE RPAS (Eurodrone)	Germany	November 2018	No**	Czech Republic, France, Italy, Spain
European Medical Command	Germany	March 2018	No**	Belgium, Czech Republic, France, Italy, the Netherlands, Romania, Spain, Slovakia, Sweden

Table 4. Full list of PESCO projects and participating member states

Project	Lead country	Launched	Questionnaire returned	Other participating countries*
Network of Logistic Hubs in Europe and Support to Operations	Germany	March 2018	No**	Belgium, Bulgaria, Croatia, Cyprus, France, Greece, Hungary, Italy, Lithuania, the Netherlands, Poland, Slovenia, Slovakia, Spain
Geo-meteorological and Oceanographic (GeoMETOC) Support Coordination Element (GMSCE)	Germany	November 2018	No**	France, Greece, Romania
Helicopter Hot and High Training (H3 Training)	Greece	November 2018	Yes	Italy, Romania
Joint EU Intelligence School	Greece	November 2018	Yes	Cyprus
Upgrade of Maritime Surveillance	Greece	March 2018	Yes	Bulgaria, Croatia, Cyprus, Ireland, Italy, Spain
Cyber Threats and Incident Response Information Sharing Platform	Greece	March 2018	Yes	Austria, Cyprus, France, Hungary, Italy, Portugal, Spain
One Deployable Special Operations Forces (SOF) Tactical Command and Control (C2) Command Post (CP) for Small Joint Operations (SJO) – (SOCC) for SJO	Greece	November 2018	Yes	Cyprus
European Training Certification Centre for European Armies	Italy	March 2018	No	Greece
Deployable Military Disaster Relief Capability Package	Italy	March 2018	No	Austria, Croatia, Greece, Spain
Armoured Infantry Fighting Vehicle/ Amphibious Assault Vehicle/Light Armoured Vehicle	Italy	March 2018	No	Greece, Slovakia
Harbour & Maritime Surveillance and Protection (HARMSPRO)	Italy	March 2018	No	Greece, Poland, Portugal
Counter Unmanned Aerial System	Italy	November 2018	No	Czech Republic
European High Atmosphere Airship Platform (EHAAP) – Persistent Intelligence, Surveillance and Reconnaissance (ISR) Capability	Italy	November 2018	No	France
European Military Space Surveillance Awareness Network (EU-SSA-N)	Italy	November 2018	No	France
Cyber Rapid Response Teams and Mutual Assistance in Cyber Security	Lithuania	March 2018	Yes	Croatia, Estonia, Finland, France, the Netherlands, Poland, Romania, Spain
Military Mobility	Netherlands	March 2018	No	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden
Indirect Fire Support Capability (EuroArtillery)	Slovakia	March 2018	Yes	Italy, Hungary
Strategic Command and Control (C2) System for the Common Security and Defence Policy (CSDP) Missions and Operations	Spain	March 2018	Yes	France, Germany, Italy, Portugal

*According to the EU PESCO official website and the respective project pages.

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