

EDM

EUROPEAN DEFENCE MATTERS

Quantum Leap

How PESCO could shape European Defence

> INDUSTRY TALK

Leonardo CEO
Alessandro Profumo
shares his views

> POLITICAL VIEW

Bulgaria's Deputy Prime Minister
and Defence Minister on EU defence
cooperation, NATO and more

> IN THE FIELD

How European
cooperation in C-IED
literally saves lives

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Drilling down into PESCO

Were there an 'EU Acronym of the Year' contest, PESCO would be well-positioned to grab the prize. *The Permanent Structured Cooperation* established last December has become a familiar term beyond the military community, standing for a new determination to enhance European defence and reinvigorate EU integration as a whole. In this issue of *European Defence Matters*, we look at PESCO from various angles through inspiring contributions from key actors from the academic, military-political and operational domains.

We start with an analysis by Gustav Lindstrom, the new Director of the EU Institute for Security Studies (EUISS), before giving the floor to the Defence Policy Directors of the eight EU Member States (France, Germany, Spain, Italy, Netherlands, Belgium, Czech Republic, Finland) who initiated and supported the initial proposal for PESCO's binding commitments, which served as a basis for its establishment with 25 participants.

Pedro Serrano (EEAS), Lt General Esa Pulkkinen (EUMS) and Jorge Domecq (EDA) jointly reflect on the conditions PESCO must meet to be successful. One of them is to deliver projects that respond to Europe's existing capability shortfalls. We ask General Mikhail Kostarakos, departing chairman of the EU Military Committee (EUMC), what operational impact PESCO could have on future CSDP operations. Focusing on the Military Mobility project, we also talk to the Netherlands's Chief of Defence, Admiral Rob Bauer.

Alessandro Profumo, CEO of Leonardo, is our guest at the 'Industry Talk' where he shares his views on topics such as the European defence industry, the recent EU defence initiatives and defence research. We also sit down with Krasimir Karakachanov, Bulgaria's Defence Minister, to talk about the defence initiatives, EU-NATO cooperation and more. A meeting with Irish Lt Col Ray Lane, a (now retired) expert in Improvised Explosive Device Disposal, gives an insight into the C-IED domain where cooperation spearheaded by EDA produced remarkable results over the past 10 years. The Preparatory Action on Defence Research, helicopter exercise HOT BLADE 2018 and EDA's Airworthiness, Standardisation & Certification Unit are other topics covered in the following pages.

We hope this magazine will provide valuable food for thought and information about EDA's work. Should you have comments or recommendations, please get in touch: info@eda.europa.eu

Helmut Bröls
Editor-in-Chief

Breaking new (common) ground

"We are definitely turning to a historic moment in European defence", said Federica Mogherini, the HR/VP and Head of EDA, when PESCO's notification was signed on 13 November 2017. Less than a month later, the Permanent Structured Cooperation was established, greeted with high expectations.

Whether PESCO can become the longed-for Quantum Leap for European defence depends on how it is implemented. "We managed to give birth to a baby (...) and now we have the collective responsibility to take care of this baby, keep the attention focused on the implementation of the decisions taken and deliver on the commitments that Member States participating in PESCO took", HR/VP Mogherini stated when the first list of 17 PESCO projects were approved last March. There lies the crux of the matter: PESCO is not an end in itself but a tool that, if well used, can be a step change.

In the following 24 pages, we have a closer look at PESCO's potential to propel European defence, Member States' visions and expectations towards it, its interaction with other EU defence initiatives, and the conditions that must be met to make it a success.



"PESCO going forward: Building on a solid foundation"

Academic view by Gustav Lindstrom (EUISS)

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PESCO Drivers take the floor

The Defence Policy Directors of eight Member States share their views and expectations on PESCO;

- Philippe Errera, France
- Dr Géza Andreas Von Geyr, Germany
- Gianni Candotti, Italy
- Elena Gómez Castro, Spain
- Pascal Heyman, Belgium
- Rudolf Štědrý, Czech Republic
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"PESCO is more than just projects"

Joint article by Pedro Serrano (EEAS), Lt General
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"PESCO can change the way Europeans handle their defence"

Interview with EUMC chairman, General Mikhail
Kostarakos

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"Planning and cooperation will secure availability of transport capabilities"

Interview with Chief of Defence of The Netherlands,
Admiral Rob Bauer

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The launch of PESCO in December 2017 and the subsequent adoption of the first 17 projects in March 2018 were rightly celebrated as unprecedented and promising steps towards a more collaborative European defence. By no means should PESCO's success be taken as a given as a lot will depend on how and under which circumstances it is implemented, argues **Gustav Lindstrom**, the new Director of the EU Institute for Security Studies (EUISS), in an exclusive piece for *European Defence Matters*.

PESCO going forward: Building on a solid foundation

The establishment of Permanent Structured Cooperation (PESCO) in late 2017 was a milestone in the EU's efforts to boost security and defence capabilities as well as operational capacity.

Unlike other forms of cooperative arrangements, PESCO calls for 20 binding commitments for the 25 participating EU Member States. A substantial amount of political capital was expended to ensure wide participation and to identify an initial set of 17 projects adopted in March 2018. The launch of PESCO, combined with the introduction of other tools such as the Coordinated Annual Review on Defence (CARD), raises expectations for quick and substantial gains in the EU's security and defence arena. These expectations should probably be tempered, as PESCO will need time to fully mature and produce tangible results. As PESCO goes forward, at least four issues will require

continued attention to ensure it reaches its full potential in the coming years.

Synchronisation with CARD and EDF

First, it is important to remember that PESCO represents just one piece within a larger security and defence puzzle. It is still evolving and needs to be synchronised with the CARD process as well as the European Defence Fund (EDF) launched in mid-2017. There is already an implicit understanding that the Coordinated Annual Review on Defence – which among others aims to support EU Member States' efforts to foster capability development addressing shortfalls – could serve as a basis for identifying future PESCO projects. Likewise, the European Defence Fund could support projects financially, making their completion more likely. The challenge is that these and other tools and instruments are maturing at different rates. The CARD process will not be fully

implemented until 2019. The EDF will not reach full funding levels until after 2020. As a result, the full extent of these benefits will not be visible till after 2020. Other developments in 2019, such as the ongoing Brexit process, European Parliamentary elections, and the end of the current European Commission's mandate are likely to impact progress from now on until the end of 2019.

Common vision on future threats

Second, and related to the first point, there is still room to strengthen the 'joint vision' among EU policymakers and planners, especially concerning emerging security challenges and their implications for EU capability development.

Formally enhancing such reflections should help answering questions such as "what future security challenges confront the EU?" and "what are the security implications



"PESCO will need time to fully mature and produce tangible results"

17 collaborative projects adopted so far vary greatly in their focus and strategic outreach. Some can be traced to projects initiated prior to the launch of PESCO, such as the requirement for a European Secure Software Defined Radio. The table on page 8 summarises the initial batch of 17 collaborative projects organised into four indicative categories: capability needs (including those identified in CSDP operations); logistical / training needs; maritime surveillance needs and cybersecurity needs. The majority of PESCO projects are linked to operational needs, with several stemming from lessons identified in the field.

As PESCO matures, sustained leadership will be important to ensure a good mix of strategic (such as the EUFOR Crisis Response Operation Core which aims to contribute to the creation of a coherent full spectrum force package) and operational projects (e.g. Military Mobility). A promising sign is the current identification of needs in non-traditional areas such as cybersecurity. Looking ahead, identifying needs in such areas will be increasingly vital to ensure that the EU has a broad toolbox to address a wider variety of security challenges.

Adapting PESCO to a broadened security concept

Lastly, as PESCO moves forward, it will need to adapt to a changing security environment to remain germane. We already see a broadening of security concepts to include issues such as food security, health security, energy security, space security and water security. For PESCO, it will be increasingly critical to develop capabilities that can be applied to such domains under the general auspices of the EU's integrated approach.

Specific areas that will also require sustained attention are the possible security implications arising from advances in technology. Many of these advances are →

of emerging trends, and how do they affect EU capabilities needs or operational requirements?"

It may also help guide ongoing processes, such as the formulation of general conditions under which third states could be invited to participate in individual PESCO projects.

Indeed such reflections, which to some extent are already contained in the Capability Development Plan (currently under review), should serve as the preliminary step or basis for the Coordinated Annual Review on Defence that primarily focuses on the monitoring of national defence spending plans to help identify new collaborative initiatives. Presently, there is clarity on strategic priorities – e.g. via the EU Global Strategy and the Implementation Plan on Security and Defence, also as written in the Council Conclusions on 14 November 2016.

There are also shared views on capability requirements, for example as expressed in the Capability Development Plan, the Headline Goals, and the Long-Term Vision. There is, however, limited coherence across these different guideposts to extract a common vision on how evolving external threats and challenges will affect future EU security and defence postures. Greater clarity in this area could promote a more proactive PESCO, including one that helps the EU address future operational needs.

This is particularly relevant as PESCO also includes an operation-oriented focus, a domain that is currently on the backburner to give priority to capability development.

The right mix of strategic and operational projects

A third issue that will impact the evolution of PESCO are the projects themselves. The


Indicative Categories of Initial Collaborative PESCO Projects

Focus Area	Collaborative Project
Capabilities / Needs from Operational Lessons Identified	<ul style="list-style-type: none"> • European Medical Command • European Secure Software defined Radio • Deployable Military Disaster Relief Capability Package • Energy Operational Function (EOF) • Strategic Command and Control System for CSDP Missions and Operations • Armoured Infantry Fighting Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle • Indirect Fire Support • EUFOR Crisis Response Operation Core
Logistical / Training	<ul style="list-style-type: none"> • Network of logistic Hubs in Europe and support to Operations • Military Mobility • EU Training Mission Competence Centre • European Training Certification Centre for European Armies
Maritime surveillance	<ul style="list-style-type: none"> • Maritime Autonomous Systems for Mine Countermeasures • Harbour & Maritime Surveillance and Protection • Upgrade of Maritime Surveillance
Cybersecurity	<ul style="list-style-type: none"> • Cyber Threats and Incident Response Information Sharing Platform • Cyber Rapid Response Teams and Mutual Assistance in Cyber Security

already known, such as developments in additive manufacturing, artificial intelligence, nanotechnology, biotechnology and cyberspace.

Much less understood are their possible security implications as well as how these areas are linked. For instance, 3D printing may be leveraged to produce improvised explosive devices that are more difficult to detect. Trends towards the Internet of Things, whereby a greater number of gadgets are connected to the Internet, may magnify weaknesses in critical infrastructures and services – including societal transitions to smart cities, smart grids, and smart transport systems. Closer to the defence domain, developments in artificial intelligence – combined with advances in nanotechnology and computing power – are leading to concern over possible lethal autonomous weapons systems.

From another perspective, we are seeing a return to great power politics. While this has the greatest implications for NATO, it also calls on the EU to maintain a credible defence posture. For PESCO, this means continued calibration and ensuring consistency with NATO capability development, especially in light of the 2016 EU-NATO joint declaration that identifies numerous areas for cooperation – many focusing on the need to address hybrid threats.

Overall, PESCO provides a flexible tool to facilitate the development of capabilities and meet the operational needs of today and tomorrow. As it is a tool rather than an end in itself, it can evolve and adapt to changing circumstances. This adaptability, combined with gradual maturity, positions PESCO to positively contribute to more proactive and sustainable EU defence cooperation within the next few years. 



Gustav Lindstrom has been the Director of the EU Institute for Security Studies (EUISS) since January 2018. Previously, Dr Lindstrom served as the Head of the Emerging Security Challenges Programme at the Geneva Centre for Security Policy (GCSP). While at the GCSP, he also served as Head of the Euro-Atlantic Security Programme, Director of the European Training Course, co-chair of the Partnership for Peace Consortium (PfP-C) Emerging Security Challenges Working Group, and as a member of the Executive Academic Board of the European Security and Defence College. Prior to his tenure at the GCSP, he was a Research Fellow and later a Senior Research Fellow at the EUISS. He has also worked with the RAND Corporation and the World Bank. His areas of expertise include CSDP, cybersecurity and emerging security challenges. Dr Lindstrom holds a doctorate in Policy Analysis from the RAND Graduate School and MA in International Policy Studies from Stanford University.



PESCO is a Member States driven initiative which, even though it had been foreseen in the Lisbon Treaty since 2009, was established only in 2017. One of the milestones in the genesis of PESCO was the joint letter sent on 21 July 2017 by the Defence Ministers of Germany, France, Italy and Spain to HR/VP Federica Mogherini with a common proposal – also supported by Belgium, the Czech Republic, Finland and The Netherlands – for PESCO's binding commitments. It served as a basis for PESCO's subsequent establishment with 25 participants.

Hereafter, we give the floor to the Defence Policy Directors (DPDs) of each of the eight afore-mentioned countries (in alphabetical order, starting with the initial four) to get their views, visions and expectations regarding PESCO.

PESCO Drivers: The floor is yours...





Europe faces a highly unstable and uncertain strategic environment, subject to sweeping changes. It has to deal with the greatest concentration of challenges since the end of the Cold War, including a persistent terrorist threat, continuing vulnerabilities in the Sahel-Sahara region, enduring destabilisation in the Middle East, major migration crises, the resumption of open warfare on its doorstep and displays of force on its territory stemming from Russia's intimidation strategy.

These destabilising factors need to be tackled to better protect our citizens. European nations must take on greater responsibility for their own security, hence the necessity to better coordinate our efforts and to foster our capacity to better anticipate, prepare, plan and act together when and where necessary.

This is exactly what we have started building over the past years, with historic progress in recent months. The increases in European defence budgets and the successful adaptation of NATO's deterrence and defence posture, represent indispensable adjustments. In the EU, the initiatives we launched, or helped launch, such as PESCO, the EDF and CARD, form a consistent system of incentives for EU Member States to increase their defence cooperation. Taken all together, they will form the European Union's contribution to developing greater European strategic autonomy.

In particular, by launching PESCO, all 25 participating Member States agreed legally binding commitments and pledged to play a more active role in European defence. PESCO encourages a shared and common effort over the long run.

In 2017, we laid down the foundations for its framework. Thanks to the strong involvement of Member States as well as to the key support provided by EDA and EUMS, we were able to launch PESCO in a timely manner. But this was only the first step. We now need to give PESCO substance. Our primary concern is to ensure that it moves at the speed of relevance. In this perspective, France sees two priorities.

First, we must meet the commitments we have taken on. PESCO participants pledged to meet 20 legally binding and ambitious commitments. They embody our shared ambition for European defence. To this end, assessment mechanisms, such as those proposed by EDA, will play a critical role. PESCO must be a lever, not just a label.



Philippe Errera,
Director General for International
Relations and Strategy,
Ministry of Armed Forces, France

"We need coherent projects leading to concrete results"

Second, simultaneously, projects will be the real test of PESCO. The numerous proposals made by partners since last summer are a sign of their enthusiasm and dynamism. The first 17 projects are now being operationalised and we must ensure that they deliver concrete results. In the coming years, the key issue will be to avoid dispersing our strengths. To this end, we must ensure that we build a coherent set of projects.

PESCO is not an island, and it does not stand alone. It was designed in complementarity with the European Defence Fund and CARD. It is also reinforced by other endeavours developed on a bilateral and ad hoc basis.

The European intervention initiative (EI2), in particular, will help develop and promote shared assessments and joint action when European security interests are threatened, whatever the framework in which European nations choose to act. It will further our shared strategic culture, drawing on PESCO's political momentum, potentially both supporting current PESCO projects and drawing on them.

These initiatives are also fully consistent with NATO. A strong European pillar within a strong transatlantic alliance is more necessary than ever.

We, as Europeans, have been hard at work. We have set new goals and launched new initiatives. By doing so, we created expectations from our citizens and international partners. Disappointing them will only reinforce those who think the EU only produces speeches and acronyms. The mantra for the coming year must be: "make it real". We must turn the promises we made last year into action.



Europe has accomplished something many believed was impossible: with PESCO, CARD, the EDF and other CSDP initiatives, we have taken our cooperation to a new level. We now have a historic opportunity to overcome old European small-state mentalities and pursue a completely new approach within the EU. We would call this the establishment of a European Defence Union. We have to join forces. Otherwise even the largest and strongest European National Forces will become irrelevant. In the long run, cooperation is a must.

PESCO is a milestone in two respects. First, it is an integrative step that enhances commitment in terms of European defence policy. Second, it focuses on operations and will significantly contribute to fulfilling the EU Level of Ambition. Thanks to PESCO, we are leaping into cooperation at EU level. This means that collaboration between EU Member States is no longer ad hoc, but formal, sustainable and binding. This is a unique opportunity. The key thing now is to achieve real and tangible results. The new CSDP initiatives (CARD, PESCO, EDF) are great accomplishments but they are merely a starting point. Our aim must be to fill PESCO with life.

2018 is the year we begin to implement PESCO. It is particularly important at this stage to fulfill the 20 PESCO commitments in a visible way. However, the successful implementation and development of the PESCO projects is equally important. Both will be a litmus test through which PESCO will be judged. Ensuring coherence among all CSDP initiatives will also be key. It will be important to make sure they all are interconnected, have compatible aims and are mutually reinforcing. This is the only way PESCO will improve the quality of EU defence cooperation and add value, so that the EU can become strategically more autonomous. What we want to achieve is interoperable capabilities and coherent formations to which all EU Member States contribute. These joint military assets will strengthen the military dimension of the EU's crisis management efforts.

Successful implementation and added value will not be achieved overnight, though. Like all reforms, our efforts to strengthen the CSDP will take time. Instead of rushing and potentially risk failure, we must proceed prudently and intelligently. As we go down this path, we will learn and also adapt our course as necessary. We should always bear in mind the big picture and make adjustments at EU level where needed, as for example recently with the establishment of a Military Planning and Conduct Capability (MPCC) for EU operations. It is also part of our responsibility to take a look at our own defence structures



Dr Géza Andreas Von Geyr,
Director General for Security
and Defence Policy,
Ministry of Defence, Germany

From PESCO to a European Defence Union

and continually ask ourselves what our national systems can deliver – without overburdening our Armed Forces.

The aim of our efforts is to establish a European Defence Union. PESCO is the starting point, as well as a forum and political framework within which progress can be achieved. Other initiatives are important building blocks for even closer cooperation. The purpose of a European Defence Union will be to ensure that the EU is capable of joint action, together with partners, whenever such action is required to safeguard Europe's security. We are thereby also living up to the responsibility that Germany and Europe bear in these uncertain times.

There will be no second defence alliance with parallel structures to NATO – no duplication! On the contrary: a Europe that remains capable of action and that has at its disposal a wide range of conflict resolution tools – both civilian and military – supplements and strengthens NATO. It is very important to us to ensure that EU and NATO activities remain complementary. We will make sure that PESCO projects also fill NATO's capability gaps, especially in the sphere of capability development. Capabilities developed through PESCO projects will remain with the respective EU Member States as part of each country's single set of forces. That way, all Member States participating in a project can, at any time, make these capabilities available to NATO, the UN, the OSCE or use them in an entirely different context.

Germany will continue to follow an inclusive approach ensuring all Member States remain part of the effort. Everyone agrees: we must do more to ensure our own security and that of Europe. We must therefore end the fragmentation of European defence. There is no credible alternative to thinking and acting from a European perspective and bundling our forces across national boundaries.

Federal Defence Minister Ursula von der Leyen got to the heart of it: "We want to stay transatlantic, but we also want to become more European."



Today's geopolitical context requires strong EU leadership displayed both towards our citizens and the outside world. This leadership has to translate into more European involvement and willingness by our governments to work towards the common security and defence goals set by EU Global Strategy.

Italy has always been in favour of strengthening the EU Common Security and Defence Policy (CSDP) in terms of capabilities in order to be able to respond to external crises and build partnerships more effectively. It should be our objective to develop more coherence, continuity, coordination and collaboration in order to move from the current state of cooperation to real integration within a binding political framework, capable of boosting the process.

In this context, Italy sincerely believes that PESCO will significantly contribute to meeting the EU's new Level of Ambition, including on capabilities and operational needs. Considering the challenging depicted scenario, and also having in mind the competitiveness of Europe's defence industry on a global scale, we fully support the necessity for the EU to collectively foster the development of the full range of its own, independent technological and operational capabilities.

This will translate into a coherent full spectrum set of forces with high-end equipment ready to be deployed in the most demanding EU missions and operations, potentially across all the domains: land, sea, air, cyber and space.

We firmly believe that this will be facilitated by the development of common Member States' defence capabilities and the implementation of the PESCO essence, throughout:

- multinational procurement projects (with the involvement of small and medium sized enterprises)
- cooperation among existing capabilities
- the exploitation of specific best practices applied in Member States
- the evaluation of real shortfalls in order to pinpoint possible solutions.



Gianni Candotti,
Defence Capabilities & Policy Director,
Defence General Staff,
Ministry of Defence, Italy

From cooperation to real integration

Furthermore, we think that PESCO's concrete capability output will also be facilitated throughout a proper implementation and exploitation of the Coordinated Annual Review on Defence (CARD). CARD's correct application and its respect by all Member States will help to avoid duplication of efforts, guarantee full transparency on the EU Capability Development Plan (CDP) and ensure coherence with the NATO Defence Planning Process framework.

Nevertheless, the development of financial instruments, including the so-called 'toolbox', will offer more opportunities for dedicated investments, favouring small and medium industrial companies in particular.

Italy believes that the positive political momentum created by PESCO and the willingness to optimise the project selection criteria and governance rules will eventually produce remarkable results. In that regard, Italy is convinced that a strict focus on identified EU capability shortfalls combined with Member States' strong commitment will allow PESCO to be output-oriented and priority-driven, strongly supporting the overarching CSDP goals.

Italy proposed a series of projects for the first 'PESCO wave' of which four have eventually been selected and approved. Since we are convinced of the importance of such cooperation, we adhered to another 11 projects thereby expressing our willingness to actively cooperate with other Member States, providing at the same time a solid boost to the initiative. Ad-hoc kick-off meetings have been already conducted for the four Italian projects and further workshops are on the way.



It was at the dawn of the XXIst century when the EU started developing a security and defence policy and, in 2018, with the Permanent Structured Cooperation (PESCO), it reaches the age of majority. 25 Member States have signed up to PESCO. It is those of us "whose military capabilities fulfil higher criteria and which have made more binding commitments with a view to the most demanding missions" (article 42.6 TUE). This represents an extraordinary milestone, with a direct impact in the operational and capability realms of the Europe of Defence. The capability development will provide a comprehensive toolbox to effectively address the increasing operational challenges and will reinforce the role of the EU as a sound security provider and a global actor. The strong bond between these two pillars, has been a major driver in our national approach to PESCO.

PESCO will be the key driver of defence cooperation as it provides opportunities with long term impact, projects clearly owned and led by different Member States and which will be jointly developed.

- Overall, PESCO will contribute to close the gap between current capabilities and those required to meet the level of ambition set by the European Union Global Strategy.
- Secondly, it will enhance the effectiveness of CSDP missions and operations.
- Thirdly, PESCO will foster a more systematic, coordinated and synergic approach to capability development, enhancing the interoperability of our armed forces. This will need to go hand in hand with the stimulation of the European Defence Technological and Industrial Base (EDTIB), and will contribute to an improved architecture within the wider European industrial policies.
- Finally, it will provide wide room for improved understanding and cooperation with third countries and defence organisations. More specifically, through the strengthening of the 'European pillar' of the Alliance, we can expect a positive impact on EU-NATO cooperation.

The greatest challenge rests on the fact that we need to build and adapt while business continues and other initiatives out of CSDP, like the European Defence Fund are still being shaped. We have worked hard and have been able to deliver at the speed of relevance, and now we must make sure that we set up the right rules and procedures to bed down the initiative. The Council recommendation adopted on the 6th of March sets the right path and ambitious timelines.



Elena Gómez Castro,
Defence Policy Director,
Ministry of Defence, Spain

PESCO: CSDP reaches the age of majority

A sound sequencing of commitments, a precise specification of objectives, along with efficient evaluation criteria for the eligibility of projects, will increase transparency while better aligning all actors. Furthermore, a common set of governance rules will ensure the coherent implementation of PESCO projects that provide true added value, addressing identified deficiencies in the Capability Development Plan.

The strong political momentum generated by PESCO needs to be maintained. Along with France, Germany and Italy, Spain has tried to provide constructive ideas and will continue doing so. We have always believed that only by acquiring new commitments, by jointly providing better capabilities and by engaging in the most demanding missions will we be able to remain credible and reliable in providing security to our citizens.

As the top ranking contributor to CSDP operations and missions, Spain has spared no efforts, providing around 30% of the total men and women in uniform under EU flagged operations and a dozen mission commands over the last decade, Spanish troops have been deployed in all EU military missions and operations since 2003.

Considering that Command and Control is key to achieve strategic autonomy, Spain decided to take a step forward taking the lead of a PESCO project to provide the EU with a Command and Control (C2) autonomous capability, while participating in another 11 projects. This project will assist the strategic commanders, enhancing their capabilities in three areas: 1) military decision making process; 2) planning and conduct of missions and operations; and 3) coordination among deployed EU forces.

Success of PESCO will only depend on the participating Member States commitment to deliver a two-fold output: CSDP missions and operations and capability development.

A strong, credible, reliable and responsible EU. That is our goal. That is what our societies demand and what you expect of someone who has reached the age of majority.



Over the past year, Defence Policy Directors have worked hard to activate the provisions of the EU Lisbon Treaty, which led to the Council decision of December 2017 and the emergence of the Permanent Structured Cooperation. I am proud to have been part of a great team of colleagues that achieved such an outstanding result in so little time.

PESCO has the potential to be a game changer but its success will be highly dependent on participating States living up to their commitments, which include increased defence spending, and its progress not being hampered by fastidious bureaucratic processes and excessive control.

A common vision requires agreement on what PESCO means but it is equally important to understand what it is not. PESCO's aim is not 'doing differently with the same' but 'doing more with more'. It is also not about the creation of a 'European army'. That, for many reasons, would be a 'false good idea'. Instead, I see PESCO as an incubator for new initiatives that will boost European defence capabilities and operational capacities alike.

No antagonism between EU and NATO

PESCO also by no means constitutes an EU answer to NATO. Comparing it with NATO work strands would not only be irrelevant but ignore the very reason for its creation in the first place. By enhancing European defence efforts, PESCO will make Europe's contribution to NATO more substantial and more effective. Antagonising the EU and NATO is a futile debate. The EU has its own level of ambition and set of tasks. For EU Member States that are at the same time NATO Allies, there should be no doubt that NATO remains the corner stone of collective defence. I do hope that we can remain pragmatic and stay clear of principled and pointless debates about a separate 'strategic autonomy'.



Pascal Heyman,
Diplomatic Director of the
Minister of Defence and Defence
Policy Director, Belgium

If well managed, PESCO can be a game changer

PESCO has been devised as an inclusive process and rightfully so. While the agreed commitments are both demanding and binding, a high level of ambition should above all be reflected in the actual output, because that is what ultimately will make the difference between success and failure. Projects should constitute the mainstay of the work; they should be derived from the Capability Development Process and focus on addressing existing capability shortfalls. That is the principle that should guide our choices when we decide on the second batch of projects later this year.

EDA uniquely positioned to steer process

EDA, with its Member States as key stakeholders, is uniquely positioned to steer this process forward for capability-related projects, while the European Military Staff (EUMS) should be in the lead for operational projects.

As we have witnessed so far, the most effective defence cooperation initiatives are the result of bottom-up work between trusted partners. PESCO could reinforce and connect such efforts.

While stimulating the development of a European defence technological and industrial base is among its objectives, PESCO should not become primarily driven by industrial agendas, nor should it constitute any attempt to close European defence markets for third states, which could deliver substantial added value through capabilities, specific expertise or financial contributions. We owe it to the European taxpayer to strive for the 'best bang for the buck' and our military deserve no less from us.



The Czech Republic sees the activation of PESCO as a stepping stone towards a more credible and efficient European defence cooperation.

Participation in PESCO requires accepting 20 rather specific commitments. By doing so, all 25 participating Member States demonstrated that they are ready to share the burden and create conditions for a greater EU role in crisis management.

The impact and long-term viability of PESCO will largely depend on the ability and readiness of PESCO Member States to fulfill PESCO's binding commitments and devote adequate financial and human resources to this purpose. Its success will also be determined by Member States' ability to propose and implement a balanced mix of both capability-oriented projects (which take into account the capability priorities defined in the Capability Development Plan, CDP) and operational projects. PESCO projects provide us with an opportunity to address European capability shortfalls, harmonise the European defence capability landscape and enhance interoperability and deployability of our forces.

After a rather swift PESCO launch in December 2017, we should not be surprised if it produced only relatively small practical outcome in the short term. Setting up the right procedures at EU level, taking all required measures at home, and preparing well thought out projects are all prerequisites for future success. Furthermore, we have to deliver on all 20 commitments, not only on those involving selected PESCO projects.

PESCO projects, even though answering EU needs, should always take into account that the purpose of developing better defence capabilities for Europe is to be able to better respond to current and future security challenges and threats. In this context our effort should truly contribute to strengthening the European pillar of NATO as well. We cannot allow any duplication with NATO, as the capabilities developed through PESCO and other existing EU defence initiatives will in the end serve all relevant actors, including the European countries themselves, the EU and NATO.



Rudolf Štědrý,
Former acting Defence Policy Director,
now Deputy Defence Policy Director,
Ministry of Defence, Czech Republic

PESCO's success depends on respect of commitments

In this regard, it would be a mistake to a priori exclude third countries from participation in PESCO (and EDF) projects as their ad hoc inclusion can provide a real added value and will contribute to the convergence of the European capability landscape.

Recent EU defence initiatives (be it PESCO, EDF or CARD) put us in front of the challenge of how to ensure coherence and complementarity among them to avoid any unnecessary duplication of efforts, manpower and resources within the EU institutions but also within nations. This is particularly relevant for the discussions on the set up and functioning of the EDF and CARD where we should fully use the existing structures and expertise of EDA, as a central intergovernmental platform for multinational defence cooperation and capability development.

As European citizens wait to see concrete results on how the EU can act to secure its interests and provide for their security, PESCO can be seen as a starting point for the EU to become a credible security actor and, ideally a model by which the EU will deliver tangible results in the area of defence, boosting the confidence of its citizens about its capabilities.

PESCO implementation, in itself, is a daunting task and it would not be wise to let us be distracted, or even worse divided, by discussions on further integration leading to a possible European Defence Union. PESCO is here, and it is now the joint responsibility of all the PESCO Member States, with the support of EU institutions, to bring it to life and make it a long-term success.



For Finland, defence cooperation is important from the standpoint of defence capability and threat prevention. Membership of the European Union is for us a key security policy solution. This is why we continue to invest in the development of the EU's defence policy. The Union has an important role to play as a facilitator and enabler for defence cooperation.

In this regard, the launching of PESCO is a major step. We expect PESCO to become a driving force for defence investment, capability development and operational readiness. It is a broad framework for defence cooperation, set to tighten along the years. For us, joining PESCO was an easy decision to take.

The inclusive format of 25 participating Member States is not the small group of able and willing Member States some anticipated. However, the fact that almost everyone wanted to join proves a willingness to work together. The binding commitments are at the heart of an inclusive PESCO and, in the long run, the element that sets it apart from previous defence initiatives. The commitments ensure that PESCO is here to stay. The Member States have pledged to report on progress in their annual National Implementation Plans.

While PESCO is an important defence policy project, it has to be more than that. To succeed, PESCO must bring practical added value to the Defence Forces of the Member States. The commitments need to be translated into demand-driven projects. This is key to maintaining the necessary political momentum, but also more challenging than many realize. The political urgency easily clashes with planning timelines. The defence plans and budgets are not set in stone, but for all practical purposes they are tied until the 2030s with little room for improvisation. It is thus crucial to involve the Defence Forces in all decision-making.



Janne Kuusela,
Director-General, Defence Policy
Department,
Ministry of Defence, Finland

Binding commitments are at the heart of an inclusive PESCO

There are two sides to PESCO. First, it should help the Member States' Defence Forces to achieve their objectives by providing incentives for cooperation. Second, it should bring these objectives closer to each other. A strategic and phased approach is required. We should both continue to set goals at the political level and respond to the needs from the bottom-up. Military Mobility is a good example of a PESCO project that can support our defence capabilities and help protect the Union and its citizens.

PESCO must be seen together with the other new EU defence initiatives which complement each other. For example, the European Defence Fund supports the capability pillar of PESCO by boosting the development of equipment and technology. To ensure coherence, the initiatives need to build on the priorities of the revised Capability Development Plan. The big picture is about strengthening European defence, making cooperation the norm and building the capabilities of the future.



When our Defence Minister, Ank Bijleveld-Schouten, published her Defence White Paper last March, she introduced it as a realistic and future-oriented outline for the Dutch Armed Forces. On European defence cooperation, the White Paper is clear: the Netherlands is and will remain one of the leading nations within PESCO.

We see PESCO as a valuable tool to intensify and structure European defence cooperation. PESCO creates additional political momentum for developing a stronger European defence and, in doing so, a stronger European pillar within NATO. PESCO allows a smaller group of countries to be more ambitious and to move forward more swiftly in the field of missions and capability development. PESCO is therefore a means to keep European defence cooperation at the top of the European agenda in order to bring it to the next level in terms of output.

'Less is more'

That next level has to be tangible. We have to be pragmatic and set realistic and achievable ambitions. As many of my colleagues will know, we believe that in this case 'less is more'.

We can only reach the next level with a step-by-step approach. This approach is also followed in the PESCO project we lead: Military Mobility. This summer, we aim for a Military Mobility pledge by Heads of Governments and States at the European Council and at the NATO Summit. This pledge should contain concrete ambitions for progress to be made in the field of moving our troops and personnel swiftly throughout the continent. We aim for national action plans on reducing red tape which today stand in the way of Military Mobility by simplifying diplomatic clearance procedures in the individual Member States.



Christoffer Jonker,
Director International Affairs &
Operations at the Ministry of
Defence, Netherlands

PESCO: here to stay

Avoiding red tape

Red tape should also be avoided within the PESCO framework. Following a realistic and pragmatic approach requires a flexible and light set of governance rules. There are at least two reasons why PESCO should be flexible and light in terms of governance. First, flexibility allows Member States to bring in different types of projects. These range from more political projects, such as Military Mobility, to common procurement projects, such as Maritime Mine Countermeasures, the Cyber Domain and Radio Communication. The different types of projects should allow for flexibility in order to reach these objectives. Second, a rigid and bureaucratic PESCO would fail to prompt Member States to start new PESCO projects. The alternative of flexible international defence cooperation outside of PESCO – in which many EU partners have a long tradition – becomes thereby far more attractive. Hence a risk for European defence cooperation.

Aiming at tangible output

The Netherlands wholeheartedly supports the PESCO initiative – provided it delivers concrete capabilities or operational capacity. Engaging with other EU Member States in defence cooperation is promising. Cooperation is a way of working that we, the Netherlands, have a lot of historical experience with. Our cooperation within Benelux and with Germany are a kind of PESCO *avant la lettre*. Simultaneously, we need to be able to explain these new initiatives to our parliaments and to our peoples.

We intensified European defence cooperation for the benefit of them, to safeguard our common security.

Only if we achieve this, PESCO will have become the success we wanted it to be. Only then will European defence cooperation become the new standard, and no longer the exception.

PESCO: More than just projects

The establishment of PESCO in December 2017 and the approval of the first 17 projects last March were promising steps towards strengthening European security and defence. However, it will take more than just projects to make PESCO a success, argue **Pedro Serrano**, Deputy Secretary General for CSDP and Crisis Response at the European External Action Service (EEAS), **Lt General Esa Pulkkinen**, Director General of the EU's Military Staff (EUMS) and **Jorge Domecq**, the Chief Executive of the European Defence Agency (EDA) whose entities jointly form the PESCO secretariat.

As the most visible part of PESCO, the projects are important but not sufficient. More is needed to make of PESCO the long-yearned-for game changer expected to lift EU defence cooperation to a new level. It has to be used as a tool, a political instrument and framework for structured, sustainable deepening of European defence cooperation rather than just a collection of individual projects. Because PESCO's ambition, unequivocally stated in the Treaty, was further defined in the notification the 25 participating Member States addressed to the Council last November: making PESCO the "most important instrument to foster common security and defence" and a tool intended to provide Europe with "a coherent full spectrum force package, in complementarity with NATO".

The PESCO secretariat supports participating Member States for all PESCO-related

matters including the work on evaluating their projects and contributing to the annual assessment of PESCO participants' contributions and the fulfilment of the 20 binding commitments.

PESCO has great potential to change the way the EU Member States organise their defence cooperation, in a structured way with a permanent, long-term perspective based on the accountability of the participating Member States who have made more binding commitments to one another.

To be successful, it must tick at least four important boxes.

1. Respect of commitments

First and foremost, it is paramount to preserve the core aspect that differentiates PESCO from previous defence cooperation initiatives: the binding nature of the common

commitments the 25 participating Member States have signed up to, in five different areas. The way PESCO is implemented and monitored should unambiguously reflect this binding character. Hopefully, it will trigger a change of mindsets in European Ministries of Defence where the "European collaborative approach" should be considered "as a priority" (commitment No.16) with a view to ensuring more common planning, harmonised requirements, joint capability development and a common use of forces in the future.

The mechanism in place to ensure Member States will actually live up to their commitments is built on the National Implementation Plans (NIPs) that participating Member States presented at the PESCO launch and which will be updated on an annual basis, outlining how each of them intends to meet its overall

commitments and the more specific objectives to be fulfilled at each phase.

This much is certain: PESCO's credibility and success stands and falls on the ambition with which the participating Member States fulfil their commitments as reported through the NIPs underpinned by a sound assessment process.

The PESCO secretariat is crucially involved in this sensitive part of the edifice, as it will assess the updated NIPs annually to determine if and to what extent the commitments are met. Based on the secretariat's contributions, the High Representative (HR) of the Union for Foreign Affairs and Security Policy will present an annual report to the Council, describing the status of PESCO implementation and assessing the fulfilment of commitments. Based on that report, it will be up to the Council to decide whether the participating Member States individually continue to fulfil their commitments or not.

2. Delivering on capability and operational gaps

In line with the Council Decision establishing PESCO, EDA is called to support PESCO with regard to capabilities, including facilitating capability development projects.

Capabilities needed to fill existing gaps identified by Member States, especially in the revised Capability Development Plan (CDP) approved end of June 2018 and the Coordinated Annual Review on Defence (CARD) whose trial run will be completed in autumn. PESCO Member States have committed to helping "to overcome capability shortcomings identified under the Capability Development Plan (CDP) and CARD" (commitment No.15) and to taking part in "at least one project under PESCO which develops or provides capabilities identified as strategically relevant by Member States" (commitment No.17).

As the European forum for joint capability development, EDA is the natural place where joint capability projects, including PESCO projects, can be supported and brought to fruition. Account is taken of this fact in the



"PESCO is a central element of recent key EU initiatives aimed at bringing Member States cooperation in developing defence capabilities to an unprecedented level. This will enhance interoperability and effectiveness of forces, strengthen Europe's industrial and technological base and ultimately increase overall security of European citizens", says Pedro Serrano.



"In today's uncertain strategic environment, potential threats to the security and prosperity of the European Union are many and varied. A credible military capability must be the cornerstone of the EU's integrated approach within CFSP. Through PESCO, the EUMS will strive to ensure that Member States are able to achieve the Union's level of ambition, in a phased approach, through the delivery of appropriately trained, interoperable and connected forces and capabilities, which then can be rapidly generated and deployed to accomplish successful EU Operations and Missions if Member States so decide", says General Pulkkinen.



"As part of the PESCO secretariat, EDA pays particular attention to the impact proposed projects have on the coherence of the European capability landscape, but also on the European Defence Technological and Industrial Base (EDTIB). It is important that we choose the right projects with the right impact. At the end of the day, what we need is a more coherent set of deployable, interoperable, sustainable capabilities and forces", says Jorge Domecq.

PESCO commitments by which Member States agree to take part, where appropriate, "in the development of major joint or European equipment programmes in the framework of the European Defence Agency". This is part of the commitments the PESCO participating Member States subscribed to. The conditions for the exceptional participation of third states in PESCO projects need to be further defined.

For its part, the EUMS is called upon to support the operational aspects of Member States' contributions to PESCO in achieving the Union's level of ambition. To successfully achieve the spectrum of military scenarios agreed by the Member States, the EUMS's primary focus is twofold: supporting the bridging of those capability shortfalls that impact short to medium term EU military effectiveness and connecting

already existing capabilities to enhance their operational effectiveness and to create operational formations. With regard to capability shortfalls, these principally are the high impact capability goals that simultaneously address numerous scenarios and therefore act as force-multipliers. The EUMS attention is on the interoperability, availability and employability of capabilities and forces, so as to help ensure that Member States' forces and capabilities are connected and useable for EU operations and missions. Through PESCO, EU forces will more effectively and efficiently operate together, coherently, to achieve tactical, operational and strategic objectives.

As the process is currently underway to select the second batch of PESCO projects (participating Member States have until end of July to propose new projects), the →

PESCO secretariat is more than ever committed to promoting high-impact, high-value projects which can contribute to meeting the afore-mentioned capability requirements.

3. Coherence with other EU initiatives

Third key prerequisite for PESCO's success: it needs to be intertwined and coherent with other recent EU initiatives launched to boost defence cooperation, especially CARD and the European Defence Fund (EDF). While each of those initiatives has its specific added value, they all must complement each other in a coherent and coordinated manner, leading to increased output of European defence based on capability

priorities agreed by the Member States.

PESCO is therefore embedded and part of a logic sequence of efforts which starts with the definition of the EU Capability Development Priorities (taking the revised CDP as a baseline) and the regular review of them (CARD), on the basis of which Member States should then decide to commonly plan, initiate and carry out joint capability development projects (PESCO). Some of those may be eligible for EU co-funding (under the EDF) and if they are linked to PESCO would even be eligible for an additional 10% 'bonus' in the co-funding share. Hence the need for a coherent, priority-driven implementation of all these

initiatives, which the High Representative also in her capacity as Head of Agency and Vice President of the Commission will seek to promote, as requested by the Council.

4. Complementarity with NATO

Last but not least, although taken forward in the EU framework, PESCO is developing capabilities which remain owned and operated by the Member States – who can choose to make them available also to NATO operations or the UN. So PESCO will deliver more usable, deployable, interoperable and sustainable set of capabilities and forces of the Member States and will therefore also contribute to reinforcing the European contribution to NATO.

List of ambitious and more binding common commit

"a) cooperate, as from the entry into force of the Treaty of Lisbon, with a view to achieving approved objectives concerning the level of investment expenditure on defence equipment, and regularly review these objectives, in the light of the security environment and of the Union's international responsibilities."

1. Regularly increasing defence budgets in real terms, in order to reach agreed objectives
2. Successive medium-term increase in defence investment expenditure to 20% of total defence spending (collective benchmark) in order to fill strategic capability gaps by participating in defence capabilities projects in accordance with CDP and Coordinated Annual Review (CARD)
3. Increasing joint and "collaborative" strategic defence capabilities projects. Such joint and collaborative projects should be supported through the European Defence Fund if required and as appropriate
4. Increasing the share of expenditure allocated to defence research and technology with a view to nearing the 2% of total defence spending (collective benchmark)
5. Establishment of a regular review of these commitments (with the aim of endorsement by the Council)

"b) bring their defence apparatus into line with each other as far as possible, particularly by harmonising the identification of their military needs, by pooling and, where appropriate, specialising their defence means and capabilities, and by encouraging cooperation in the fields of training and logistics."


6. Playing a substantial role in capability development within the EU, including within the framework of CARD, in order to ensure the availability of the necessary capabilities for achieving the level of ambition in Europe

7. Commitment to support the CARD to the maximum extent possible acknowledging the voluntary nature of the review and individual constraints of participating Member States
8. Commitment to the intensive involvement of a future European Defence Fund in multinational procurement with identified EU added value
9. Commitment to drawing up harmonised requirements for all capability development projects agreed by participating Member States
10. Commitment to considering the joint use of existing capabilities in order to optimise the available resources and improve their overall effectiveness
11. Commitment to ensure increasing efforts in the cooperation on cyber defence, such as information sharing, training and operational support

"c) take concrete measures to enhance the availability, interoperability, flexibility and deployability of their forces, in particular by identifying common objectives regarding the commitment of forces, including possibly reviewing their national decision-making procedures."

12. With regard to availability and deployability of the forces, the participating Member States are committed to:
 - Making available formations, that are strategically deployable, for the realisation of the EU LoA, in addition to a potential deployment of an EUBG. This commitment does neither cover a readiness force, a standing force nor a stand by force
 - Developing a solid instrument (e.g. a data base) which will only be accessible to participating Member States and contributing nations to record available and rapidly deployable capabilities in order to facilitate and accelerate the Force Generation Process
 - Aiming for fast-tracked political commitment at national level, including possibly reviewing their national decision-making procedures

As rightly emphasised in the PESCO notification, "enhanced defence capabilities of EU Member States will also benefit NATO. They will strengthen the European pillar within the Alliance and respond to repeated demands for stronger transatlantic burden sharing".

In carrying forward the PESCO initiative, the Council decision of December 2017 establishing PESCO explicitly says that EDA shall support Member States in ensuring "that there is no unnecessary duplication with existing initiatives also in other institutional contexts", meaning that the Agency shall provide its full support to the Member States' single set of forces. 



EEAS/EUMS and EDA contribute to the HR's annual PESCO report to the Council

ments undertaken by participating Member States

- Providing substantial support within means and capabilities to CSDP operations (e.g. EUFOR) and missions (e.g. EU Training Missions) - with personnel, materiel, training, exercise support, infrastructure or otherwise - which have been unanimously decided by the Council, without prejudice to any decision on contributions to CSDP operations and without prejudice to any constitutional constraints
 - Substantially contributing to EU BG by confirmation of contributions in principle at least four years in advance, with a stand-by period in line with the EU BG concept, obligation to carry out EU BG exercises for the EU BG force package (framework nation) and/or to participate in these exercises (all EU Member States participating in EU BG)
 - Simplifying and standardising cross border military transport in Europe for enabling rapid deployment of military materiel and personnel.
- 13.** With regard to interoperability of forces, the participating Member States are committed to:
- Developing the interoperability of their forces by:
 - Commitment to agree on common evaluation and validation criteria for the EU BG force package aligned with NATO standards while maintaining national certification
 - Commitment to agree on common technical and operational standards of forces acknowledging that they need to ensure interoperability with NATO
 - Optimising multinational structures: participating Member States could commit to joining and playing an active role in the main existing and possible future structures partaking in European external action in the military field (EUROCORPS, EUROMARFOR, EUROGENDFOR, MCCE/ATARES/SEOS).
- 14.** Participating Member States will strive for an ambitious approach to common funding of military CSDP operations and missions, beyond what will be defined as common cost according to the Athena council decision

"d) work together to ensure that they take the necessary measures to make good, including through multinational approaches, and without prejudice to undertakings in this regard within the North Atlantic Treaty Organisation, the shortfalls perceived in the framework of the 'Capability Development Mechanism.'"

- 15.** Help to overcome capability shortcomings identified under the Capability Development Plan (CDP) and CARD. These capability projects shall increase Europe's strategic autonomy and strengthen the European Defence Technological and Industrial Base (EDTIB)
- 16.** Consider as a priority a European collaborative approach in order to fill capability shortcomings identified at national level and, as a general rule, only use an exclusively national approach if such an examination has been already carried out
- 17.** Take part in at least one project under the PESCO which develops or provides capabilities identified as strategically relevant by Member States

"e) take part, where appropriate, in the development of major joint or European equipment programmes in the framework of the European Defence Agency."

- 18.** Commitment to the use of EDA as the European forum for joint capability development and consider the OCCAR as the preferred collaborative programme managing organisation
- 19.** Ensure that all projects with regard to capabilities led by participating Member States make the European defence industry more competitive via an appropriate industrial policy which avoids unnecessary overlap
- 20.** Ensure that the cooperation programmes - which must only benefit entities which demonstrably provide added value on EU territory - and the acquisition strategies adopted by the participating Member States will have a positive impact on the EDTIB.

A good start to build on

On 6 March, the EU Council of Ministers formally adopted a first set of 17 PESCO projects, each of them led by one Member State and carried forward by varying groups of participating and observing countries. Below is an overview and short description of the 17 projects (membership and observer status mentioned as of March 2018).

In the meantime, preparations for a second batch of projects are already underway: PESCO Member States have until end of July to come up with proposals.



Military Mobility

This project will support Member States' commitment to simplify and standardise cross-border military transport procedures. It aims to enhance the speed of movement of military forces across Europe.

It aims to guarantee the unhindered movement of military personnel and assets within the borders of the EU. This entails avoiding long bureaucratic procedures to move through or over EU Member States, be it via rail, road, air or sea.

The project should help to reduce barriers such as legal hurdles to cross-border movement, lingering bureaucratic requirements (such as passport checks at some border crossings) and infrastructure problems, like roads and bridges that cannot accommodate large military vehicles.

Project members

Lead - **NL** Participants - **BE BG CZ DE EE EL ES**
FR HR IT CY LV LT LU
HU AT PL PT RO SI SK
FI SE



European Medical Command

The European Medical Command (EMC) will provide the EU with an enduring medical capability to support missions and operations on the ground.

The EMC will provide critical medical resources, including a multinational medical task force with a rapidly deployable capability for basic primary care. The EMC will also provide evacuation facilities, triage and resuscitation, treatment and holding of patients until they can be returned to duty, and emergency dental treatment.

The European Medical Command (EMC) will ensure efficient joint EU management of scarce European medical services (planning, management and coordination unit).

It will provide critical medical resources and contribute to harmonising national medical standards, legal (civil) framework conditions and sanitary service principles.

The project is expected to progress the interoperability and the coherence of health care capabilities in Europe (standardisation of concepts, training and certification).

Project members

Lead - **DE** Participants - **CZ ES FR IT NL RO SK**
SE



Harbour & Maritime Surveillance and Protection (HARMSPRO)

The Harbour & Maritime Surveillance and Protection (HARMSPRO) will deliver a new maritime capability which will provide Member States with the ability to conduct surveillance and protection of specified maritime areas, from harbours up to littoral waters, including sea line of communications and choke points, in order to achieve security and safety of maritime traffic and structures.

It will deliver an integrated system of maritime sensors, software and platforms (surface, underwater and aerial vehicles), which fuse and process data, to aid the detection and identification of a range of potential maritime threats.

The project will also deliver a command and control function for the deployable system, which could operate in harbours, coastal areas and the littoral environment.

Project members

Lead - Participants -



Cyber Rapid Response Teams and Mutual Assistance in Cyber Security

Cyber Rapid Response Teams (CRRTs) will allow Member States to help each other to ensure a higher level of cyber resilience and to collectively respond to cyber incidents. Cyber RRTs could be used to assist other Member States and EU Institutions, CSDP operations as well as partner countries.

CRRTs will be equipped with unified Deployable Cyber Toolkits designed to detect, recognise and mitigate cyber threats. The response teams would be able to assist with training, diagnostics and attribution forensics, and assistance in operations.

The aim of this project is to integrate Member State expertise in the field of cyber defence.

Project members

Lead - Participants -



Energy Operational Function (EOF)

Based on lessons learnt from recent operations, the project 'Energy Operational Function' has a double objective. For the first part, it aims at developing together new systems of energy supply for camps deployed in the framework of joint operations and for soldier connected devices and equipment. For the second part, it aims at ensuring that the energy issue is taken into account from the conception of combat systems to the implementation of this support in operations, and inclusion in the framework of operational planning.

Project members

Lead - Participants -



European Union Training Mission Competence Centre (EU TMCC)

The European Union Training Mission Competence Centre (EU TMCC) will improve the availability, interoperability, specific skills and professionalism of personnel (trainers) for EU training missions across participating Member States.

Moreover, it will accelerate the provision for EU training missions due to a higher situational awareness regarding trained, educated and available personnel for current and future EU training missions.

Project members

Lead - Participants -



European Secure Software defined Radio (ESSOR)

The European Secure Software Defined Radio aims to develop common technologies for European military radios. The adoption of these technologies as a standard will guarantee the interoperability of EU forces in the framework of joint operations, regardless which radio platforms are used, thereby reinforcing the European strategic autonomy.

The European Secure Software Defined Radio project will provide a secure military communications system, improving voice and data communication between EU forces on a variety of platforms.

Project members

Lead - Participants -



Deployable Military Disaster Relief Capability Package

The Deployable Military Disaster Relief Capability Package will deliver a multi-national specialist military package for the assistance to EU and other States, which can be deployed within both EU-led and non EU-led operations. The new EU capability will manage a range of emergencies including natural disasters, civil emergencies and pandemics.

The project aims to include the establishment of a new EU Disaster Relief Training Centre of Excellence, and ultimately a Disaster Relief Deployable Headquarters.

Project members

Lead - **IT** Participants - **EL ES HR AT**



Cyber Threats and Incident Response Information Sharing Platform

Cyber Threats and Incident Response Information Sharing Platform will develop more active defence measures, potentially moving from firewalls to more active measures.

This project aims to help mitigate these risks by focusing on the sharing of cyber threat intelligence through a networked Member State platform, with the aim of strengthening nations' cyber defence capabilities.

Project members

Lead - **EL** Participants - **ES IT CY HU AT PT**



Indirect Fire Support (EuroArtillery)

The Indirect Fire Support (EuroArtillery) will develop a mobile precision artillery platform, which would contribute to the EU's combat capability requirement in military operations. This platform is expected to include land battle decisive ammunition, non-lethal ammunition and a common fire control system for improving coordination and interoperability in multi-national operations.

This project aims at procuring a new capability/platform of a key mission component for land forces in the short to mid-term.

Project members

Lead - **SK** Participants - **IT**



EUFOR Crisis Response Operation Core (EUFOR CROC)

EUFOR Crisis Response Operation Core (EUFOR CROC) will decisively contribute to the creation of a coherent full spectrum force package, which could accelerate the provision of forces. EUFOR CROC will improve the crisis management capabilities of the EU.

In phase I the project will start with an implementation study.

Project members

Lead - **DE** Participants - **ES FR IT CY**



Upgrade of Maritime Surveillance

The project on Upgrade of Maritime Surveillance will integrate land-based surveillance systems, maritime and air platforms in order to distribute real-time information to Member States, so as to provide timely and effective response in the international waters.

The main objective of the programme is to enhance the Maritime Surveillance, Situational Awareness and potential Response Effectiveness of the EU, by using the existing infrastructure, deploying assets and developing related capabilities in the future. It aims to address timely and effectively new and old threats and challenges (such as energy security, environmental challenges, security and defence aspects); thus ensuring accurate Awareness and Rapid Response, so as to contribute to the protection of the EU and its citizens.

Project members

Lead - **EL** Participants - **BG IE ES HR IT CY**



Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)

The Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM) will deliver a world-class mix of (semi-) autonomous underwater, surface and aerial technologies for maritime mine countermeasures. The project will enable Member States to protect maritime vessels, harbours and off shore installations, and to safeguard freedom of navigation on maritime trading routes.

The development of underwater autonomous vehicles, using cutting-edge technology and an open architecture, adopting a modular set up, will contribute significantly to the EU's maritime security by helping to counter the threat of sea mines.

Project members

Lead - **BE** Participants - **EL LV NL PT RO**



Strategic Command and Control (C2) System for CSDP Missions and Operations

The project aims to improve the command and control systems of EU missions and operations at the strategic level. Once implemented, the project will enhance the military decision-making process, improve the planning and conduct of missions, and the coordination of EU forces.

The Strategic Command and Control (C2) System for CSDP Missions will connect users by delivering information systems and decision-making support tools that will assist strategic commanders carry out their missions. Integration of information systems would include intelligence, surveillance, command and control, and logistics systems.

Project members

Lead - **ES** Participants - **DE IT PT**



European Training Certification Centre for European Armies

The European Training Certification Centre for European Armies aims to promote the standardisation of procedures among European Armies and enable the staff, up to Division level, to practice the entire spectrum of the command and control (C2) functions at land, joint and interagency levels in a simulated training environment.

The Centre will ensure that soldiers and civilian employees will work together in a simulated training environment with scenarios such as 'Humanitarian Assistance' and 'Support to Stabilisation and Capacity Building' and eventually contribute to ensure that corporate experience and knowledge is consolidated, shared and made available to plan and conduct CSDP missions and operations.

Project members

Lead - **IT** Participants - **EL**



Network of logistic Hubs in Europe and support to Operations

The Network of logistic Hubs in Europe and support to Operations will improve strategic logistic support and force projection in EU Missions and Operations.

It aims at establishing cross-border solutions for more efficient, seamless military transport/logistics and connection of existing European initiatives under one logistic umbrella.

It is expected to enhance logistic planning and movement as well as to deliver common standards and procedures, that will greatly improve the EU's and NATO's capability to conduct even the most demanding missions.

Project members

Lead - **DE** Participants - **BE BG EL ES FR HR IT CY HU NL SI SK**



Armoured Infantry Fighting Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle

The project will develop and build a prototype European Armoured Infantry Fighting Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle. The vehicles would be based on a common platform and would support fast deployment manoeuvre, reconnaissance, combat support, logistics support, command and control, and medical support.

These new vehicles will also strengthen the EU CSPD ensuring, at the same time, the interoperability among European armies.

Project members

Lead - **IT** Participants - **EL SK**

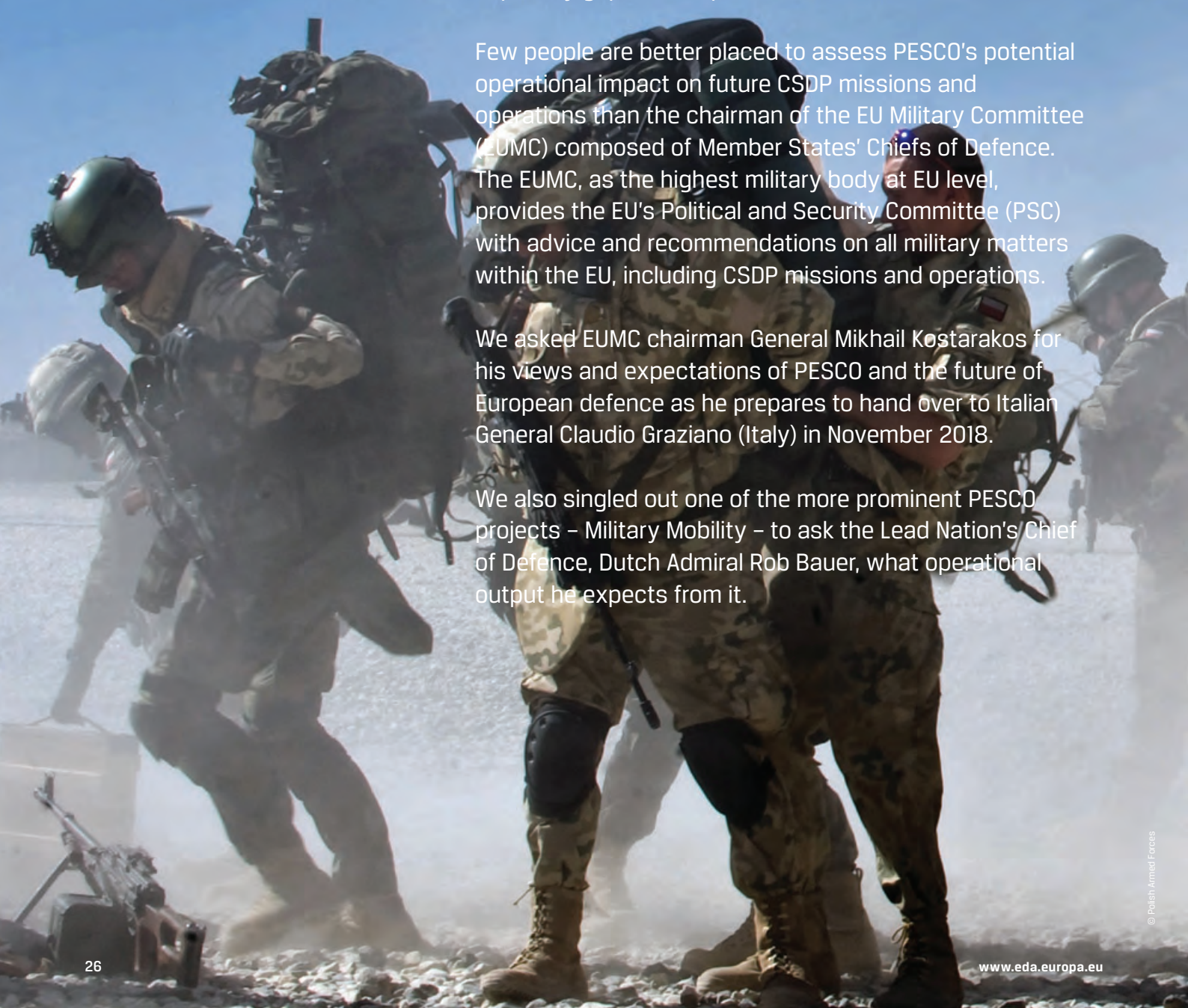
PESCO: the proof is in the field

The success of any PESCO project, current or future, must be measured against its operational output and added-value for Member States' armed forces and the extent to which it contributes to filling existing defence capability gaps in Europe.

Few people are better placed to assess PESCO's potential operational impact on future CSDP missions and operations than the chairman of the EU Military Committee (EUMC) composed of Member States' Chiefs of Defence. The EUMC, as the highest military body at EU level, provides the EU's Political and Security Committee (PSC) with advice and recommendations on all military matters within the EU, including CSDP missions and operations.

We asked EUMC chairman General Mikhail Kostarakos for his views and expectations of PESCO and the future of European defence as he prepares to hand over to Italian General Claudio Graziano (Italy) in November 2018.

We also singled out one of the more prominent PESCO projects – Military Mobility – to ask the Lead Nation's Chief of Defence, Dutch Admiral Rob Bauer, what operational output he expects from it.



"PESCO can change the way Europeans handle their defence"



EUMC chairman General Mikhail Kostarakos

What is your assessment of the implementation of PESCO so far? Is it sufficiently operations-minded?

The stated aim of PESCO is "to jointly develop defence capabilities and make them available for EU military operations" in order to enhance the EU's capacity as an international security partner. PESCO has the potential to achieve this, and its implementation process is definitely heading in that direction. But PESCO collaborative projects will not only address current operational shortfalls in CSDP operations and missions; they should also enable the Union to achieve strategic autonomy in the field of security and defence.

At the same time, it is important to underline that, no matter how efficient it will prove to be, PESCO by itself does not provide a comprehensive response to the problem at hand. Therefore, any discussion on PESCO would be incomplete if it didn't take into account the Coordinated Annual Review on Defence (CARD) and the European Defence Fund (EDF), which are all interconnected.

How can PESCO projects be guaranteed to lead to capabilities and assets that meet the requirements of current and future CSDP missions?

When it comes to capabilities and requirements, the end-user's point of view is crucial. And the end-user of defence capabilities is the military. Therefore, I am convinced that the military, together with industry, should play a central role in order to maximise the effects of PESCO projects and ensure they lead to capabilities and assets which effectively meet Member States Armed Forces' requirements.

The military are those who, better than any other, know which capabilities and assets are critical, and which are just a 'nice to have'.

The military are also the ones able to assess capabilities against possible scenarios and identify and prioritise gaps. It's then up to industry to provide options and solutions to address those shortfalls.

Based on key parameters like usability, deployability and sustainability, it should be the military's task to evaluate to what

extent a project satisfies the aforementioned requirements.

Looking at the first batch of PESCO projects: where do you see the biggest potential for fast, significant and durable improvements of CSDP missions and operations?

As said, PESCO has the potential to change the way we, Europeans, handle our defence and, for this same reason, it may lead to further political integration in Europe.

However, to reach this ambitious goal, PESCO needs to deliver tangible results.

Quick successes and results, even under smaller projects, will demonstrate PESCO's added value and benefits for participating Member States. This, in turn, will encourage a higher level of cooperation on more ambitious projects, making PESCO a self-sustained process.

Until this happens, however, our full attention and commitment are needed to identify and remedy teething problems that will most certainly appear. →



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Does the first list of projects strike the right balance between the different operational domains (land, air, maritime, cyber), training and exercises, joint and enabling capabilities? Where would you like to see more emphasis in the following batch of projects?

The EU Member States participating in PESCO have set a first collaborative PESCO project list identifying, both in the operational and in the capability development area, some specific projects able to contribute to an output-oriented implementation of PESCO. These projects also ensure an effective balance between optimising the use of those resources already available and improving overall effectiveness of CSDP Operations and Missions. At the same time, these first PESCO projects guarantee effective support to the three main core tasks identified by the EU Global Strategy, namely, responding to external conflicts and crises, building the capacities of partners and protecting the European Union and its citizens through external action.

In November, you will hand over the EUMC chairmanship to General Claudio Graziano.

Looking back, how would you describe the evolution of the cooperation between the EUMC and EDA, and where do you see potential for improvements?

In November I will hand over the EUMC chairmanship after a challenging yet exciting tour at the service of the European defence. Looking back, political conditions are now mature for deeper integration in the domain of security and defence and to use the Lisbon Treaty to its full potential.

As our High Representative, Federica Mogherini, recently stated, we are now definitely "building on vision" (that of our founding fathers) and ready for "delivering" and "moving forward to action".

PESCO is a significant example of European integration in the domain of security and defence besides other important defence initiatives underway.


I am convinced that CARD will help foster capability development, deepen defence cooperation and ensure more optimal use of defence spending. The European Defence

Fund, for its part, will effectively support the joint development of defence equipment and technologies as well as investments in joint research, with positive repercussions on the effectiveness of CSDP.

In this framework, EDA plays a key role, in coordination with other EU institutions.

The EU Global Strategy has set the way to fulfil the EU's level of ambition in the area of security and defence. The EU Military Committee has taken up the challenge and is effectively cooperating with all EU institutions, including EDA, in order to keep up this new momentum.

I am convinced my successor, General Claudio Graziano, will keep up this level of engagement. As we continue this journey, our citizens, our neighbours and partners will increasingly benefit from an enhanced European security and defence policy.

The pace will not relent and our resolve to push defence matters to the top of the EU Agenda will not weaken. We deserve a stronger Europe! 



Chief of Defence of The Netherlands,
Admiral Rob Bauer

"Not competition, but planning and cooperation will secure availability of transport capabilities"

What do you expect to be the biggest operational impact of the Military Mobility project for European Armed Forces?

European and NATO Forces need to react swiftly to any crisis or threat throughout Europe. The PESCO Military Mobility project will enhance their deployment by enabling freedom of movement for military personnel and equipment in the most optimised way possible and will strengthen their posture. The Military Mobility project is multinational, complex and faces many challenges. The Netherlands, as lead nation of Military Mobility, is dedicated to take these challenges on in close cooperation with its EU partners and NATO.

Is there a risk of seeing MoDs, the EU and NATO competing with each other for scarce but indispensable civil and commercial transport capacities? How to avoid such a situation?

The Movement and Coordination Centre Europe (MCCE) already coordinates the use

of scarce transport capacities. On top of that EU nations and NATO nations participate in EU PESCO and/or NATO Framework Nation Concept projects.

Also, bilateral or multilateral coordination mechanism are in place to assure optimum use of scarce transport capacities, e.g. through the German-Netherlands Joint Support Steering Group. On a daily basis the Netherlands actively engages the MCCE, for instance when participating in exercises like Trident Juncture. Military planners continuously combine efforts to avoid competition and to have optimal coordination of the use of scarce transport capacities.

Most EU nations are also NATO Members. It's not the organisations that compete for scarce resources, but their member-nations that have to carefully plan the commitment of own means within their single set of forces and commercially available transport capabilities. In the end not competition, but

prudent planning and cooperation between nations will secure optimal availability of indispensable transport capabilities.

Could one imagine a future multilateral, European initiative to procure, pool and share assets for military sealift or rail/road transport, similar to the Multi-Role Tanker Transport Fleet (MMF) initiated by EDA in the AAR domain?

Yes, as a matter of fact the Netherlands initiated the MMF-project and together with Belgium, Germany and France the Netherlands started the European Air Transport Command (EATC) prior to that initiative. These projects as well as the Strategic Airlift Capability (SAC) in Hungary are proven concepts of successful airlift programmes based on Pooling & Sharing. One could imagine that similar programmes for other air, sea, rail or road transport can be seen as opportunities. Sharing scarce transport capacities including road transport is common practice at the MCCE. 

"The Eur
should
capabili



European industry develop future fighter ties cooperatively"

In an exclusive interview, Leonardo CEO **Alessandro Profumo** shares with *European Defence Matters* his views on the current state, challenges and future prospects of the European defence industry. He also comments on the EU's recent defence initiatives as well as on the Preparatory Action on Defence Research (PADR) in which Leonardo is prominently involved through the OCEAN 2020 project. He stresses the European industry's readiness to work on a European fighter jet for the future, provided "governments (...) move in this direction".

You joined Leonardo in May 2017, as a 'newcomer' to the defence sector. What was your first impression of the general condition of Europe's defence industry? What are its biggest challenges?

My first impression was that of a sector in constant evolution, aware that to face challenges we must move forward together, share strategic choices and pool financial resources. Today, in the face of increasing global competition, it is necessary to approach defence and security at a European level. We can achieve our objectives through mechanisms that encourage collaboration between Member States and the European industry, both in terms of research and development and in procurement decisions. As a dynamic company, Leonardo wants to actively contribute to the future of the defence and security industry by building on the skills and expertise we have developed over the years working on major national and European programmes.

On a European level, financial instruments that can support the competitiveness of

companies in the defence and security sector offer a significant opportunity. This funding should be considered as additional to national budgets rather than as a substitute for national spending. Another fundamental challenge is the necessary rationalisation of demand that will follow common requirements.

A strong, innovative and competitive defence industry is a prerequisite for strengthening European defence and for achieving 'strategic autonomy'. What is needed to bring Europe's defence industry to that level?

Today, most of the major European programmes are at an advanced stage of maturity, for example the Eurofighter, the NH90, METEOR and the A400M. But where are the new ones? This is one of the fundamental points. Aside from this, I have already stressed the need for dedicated financial instruments paired with a long-term vision of European defence. Another, equally important issue is technological innovation, a key factor across our sector and one to which Leonardo pays particular

attention, allocating around 12% of our revenue to research and development to look forward to the challenges of the future in a sustainable way. Keeping Europe at the cutting edge of technological innovation will maintain our leadership and provide a great competitive advantage.

As the head of one of Europe's biggest defence prime contractors, how do you assess recent EU initiatives such as the CARD, PESCO and the European Defence Fund? What difference can they make to EU defence cooperation and to the defence industry's competitiveness?

Europe has its foot on the accelerator in terms of a common defence project. All the initiatives mentioned point in this direction, which will help limit the fragmented nature of individual national spending in the sector and help us define investment priorities. The difference these initiatives make is obvious because nothing similar existed before: no financing, no incentives, no disincentives. Therefore, a structured process can only encourage a positive response from the market, making all players more →

competitive. This will also help us make better investment decisions in line with the European Capability Development Plan.

I believe that the expertise of the European Defence Agency, with its in-depth knowledge of the sector, will be extremely important at all stages of this process.

Are you satisfied with the planned set-up of the European defence industrial development programme (EDIDP)? Can the €500 million foreseen for 2019 and 2020 be an incentive for new collaborative programmes?

As far as EDIDP is concerned, Leonardo, in-line with other companies from the sector, strongly supports the €500 million allocated for the scheme. We hope that the proposed annual €1 billion for EDIDP 2 will be confirmed, as part of the development window, in addition to the €500 million dedicated annually to research activities under the European Defence Research Programme (EDRP). It is also important to define which costs can be covered by European funding as part of military programmes, taking into account the unique situation of the defence sector where both research and procurement are handled differently than in the civil sector.

Some argue the consolidation process could be boosted by a genuine single market for defence with fair and open competition among producers and cross-border access of smaller industries to defence supply chains. What is your view on this?

A single market in defence does not currently exist. Armed Forces and defence remain national prerogatives. This does not mean however that there is no competition at an international level. It is not by chance that Leonardo generates 15% of its revenue in Italy and 12% in the UK.

As far as the supply chain is concerned, we are in favour of involving the best SMEs whose contributions are strategic for creating products that are cost-effective and of high quality.

One of the biggest PADR projects, dealing with unmanned naval systems (OCEAN 2020), is run by a consortium led by



Leonardo. What are your vision and plans on autonomous systems (air, sea, land) beyond this specific project?

The success of the OCEAN 2020 project will allow Leonardo and its partners to further develop a wide range of skills and areas of expertise. In addition to our fundamental C4I and space capabilities, we are active in all domains related to autonomous systems: underwater, surface, air and space, including both fixed and rotary-wing autonomous systems. Looking at aerial capabilities specifically, Leonardo will be deploying innovative unmanned rotorcraft for advanced naval missions. These systems will be used alongside manned systems in line with the MUM-T (unmanned/manned teaming) concept.

Overall, we are committed to technological innovation across the entirety of autonomous systems, from the platforms themselves to their sensor payloads and mission systems. We envisage systems that support the remote piloting of unmanned aircraft, significantly reducing the workload of the human operator and allowing them to perform advanced missions.

The Ocean 2020 consortium is made up of a stunning 42 entities coming from 15 countries. Could this type of project involving an unusually high number of industry stakeholders and Member States become a model for collaborative defence research in Europe?

We believe that OCEAN 2020 perfectly represents the spirit of a collaborative European project, in which Leonardo, thanks to its dynamism and its proactivity, found a correct way to proceed. This is an inclusive project involving many countries and bringing large, medium and small companies together with research institutes and end-users. It is a complex ecosystem and one of Leonardo's strengths is managing complexity. This was the winning card.

OCEAN 2020 is an excellent model because it exemplifies the spirit of European projects which must unite industry in the context of a healthy competition. Leonardo has actually entered not just as project co-ordinator of OCEAN 2020 but also as an active participant, in the case of the Generic Open Soldier Systems Reference Architecture (GOSSRA) project.

Leonardo is part of the consortium developing a European MALE RPAS, currently in the second phase of the definition study. What are the biggest remaining stumbling blocks for this project which is scheduled to see the delivery of the first system in 2025? The two-year definition study started in September 2016 and is being carried out jointly by Airbus Defence and Space, Dassault Aviation and Leonardo. Full development should start in 2019 with a prototype flying for the first time at the beginning of 2023 and the first delivery of the system in 2025.

I believe that the project will continue to proceed with speed and efficiency. It is an excellent example of European collaboration that will help us overcome our dependence on foreign systems. The real challenge, once the development is complete, will be to export the system to third countries, both inside and outside the EU. Indeed, the export policy for cooperative programmes is a priority issue for future collaborations.

France and Germany last year relaunched plans to jointly develop a European fighter jet which could overhaul the European fighter industry and its three competitors: Eurofighter, Rafale, Gripen. As a key member of the Eurofighter consortium, what is Leonardo's take on this? Could this become one of Europe's flagship collaborative programmes?

We are convinced that the European fighter industry could better release its potential from the development of a cooperative-based programme. But it is up to governments to move in this direction. We, the industry, stand ready to contribute. In this context, the precedent of the Eurofighter Typhoon, which has recently seen great success in Kuwait, Qatar and Saudi Arabia, is an excellent example of what European collaboration can produce.

I believe that Leonardo has the necessary skills to contribute to the development of any future manned or unmanned system, thanks to our experience in providing platforms, avionics, mission systems, integration and armaments.

Leonardo is a leading company in the space sector and is involved in defence and

navigation programmes such as EGNOS and Galileo. What is your assessment of the EU's space strategy and of its defence implications?

The European space strategy is laying the groundwork for solid future growth in European space activity. The European industry has been called upon to contribute to the definition of the strategy, fully recognising its role as an important stakeholder. We expect this to continue in the implementation phase of the strategy itself. Leonardo, which carries out a wide range of activities in the space sector, is a key player in Europe and we will be able to effectively grasp the opportunities offered by the development of the space economy and by new technological trends. We are also primed to take advantage of new business models that are emerging in private spaceflight, an industry called 'NewSpace'.

The protection of space assets, from satellites to orbital space stations, is also a priority issue, one where we as industry can make a very important contribution.

Leonardo, as an international group, has a leading role in the European Commission's Galileo and Copernicus Space programmes. Through Spaceopal, a joint venture between Telespazio and the German Space Agency, Leonardo is responsible for managing the entire Galileo system and its performance, including providing some of the constellation's cutting-edge technologies. We also provide essential support for Copernicus in the development of satellites, on-board systems and operations and also in the various applications of the programme.

Considering that space is one of the sectors in which military capabilities play a major role, it is clear that Europe must develop, maintain and improve its capabilities in both space-based and dual-use systems built specifically for defence. We should consider sectors such as communication, earth-observation, protection for space-based infrastructure and terrestrial counterparts, intelligence gathering and early-warning. In this framework, some capabilities will be developed at national level and then shared, while others will be developed at European level. 



Alessandro Profumo has been Chief Executive Officer of Leonardo since 16 May 2017. Since July 2017, he is also Honorary Chairman of AIAD (the Italian Industries Federation for Aerospace, Defence and Security). In 1977, he began his career at Banco Lariano, where he worked for ten years. In 1987, he joined McKinsey & Company where he was in charge of strategic and organisational projects for financial companies. In 1994, he joined Credito Italiano (today Unicredit), where, in 1997, he was appointed Chief Executive Officer. In February 2012, he was a member of the High Level Expert Group in Brussels to reform the structure of the EU banking sector. From April 2012 to August 2015, he served as Chairman of Monte dei Paschi di Siena Bank. From September 2015 to May 2017, he was a Board Member and Chairman of Equita SIM. Furthermore, Profumo was Chairman of the European Banking Federation in Brussels and of the International Monetary Conference in Washington, D.C.

"The links between CARD, PESCO and EDF must be clearly defined"

Bulgaria's key defence priority during its EU presidency is to push for a swift implementation of CARD, PESCO and EDF. What is your assessment of the progress made on these initiatives as of today?

One of our defence priorities during our EU Presidency is the development of defence capabilities. In this regard, we want to advance the initiatives mentioned which derive from the new EU's 2016 Global Strategy. We think the work on these initiatives is progressing well. At times, things even develop at such a pace that it becomes difficult for Member States' administrations to respond to all new ideas and take full part in the discussions.

On PESCO, we already have a decision on the first set of projects. We now need quick

With Bulgaria's first EU Presidency (first half of 2018) in full swing, European Defence Matters sat down with **Krasimir Karakachanov**, the country's Deputy Prime Minister and Defence Minister to talk about recent EU defence initiatives and their implementation, the importance and sensitivities of EU-NATO cooperation and the Western Balkans' European integration prospects, including in the security and defence domain.

results in order to secure public support for PESCO.

As regards the EDF, the legislative procedure for the adoption of the Regulation establishing the European Defence Industrial Development Programme (EDIDP) is underway and should be concluded by this summer. The ambition is to maintain the proposed co-funding rate for PESCO projects.

The CARD trial run is also underway and bilateral consultations are currently being held with Member States. Those with Bulgaria have already taken place.

We believe that the links between CARD, PESCO and EDIDP need to be better defined to make sure the initiatives support one another.

How do you see CARD developing after the current trial run? What does Bulgaria hope CARD will yield for defence cooperation once it is up and running in 2019?

The CARD trial run is particularly important since it has to validate the CARD methodology, the agreed timeframes and the relevance of the information gathered from national MoDs' databases. Based on this, the process will have to be adapted and refined so that it can deliver the desired output.

The CARD process aims to shine a light on the full picture of available European defence capabilities and to assess the progress of defence cooperation based on established criteria, as well as to identify new areas with potential for joint work. Moreover, we hope the review will also have an impact on the development of innovative industrial capabilities which are an important element of Europe's strategic autonomy.

At present, defence capabilities in Europe are very fragmented and we hope that CARD will be instrumental in supporting the political impetus to enhance defence cooperation and joint capability development. The CARD should be aligned and synchronized with the NATO Defence Planning Process. It should be guided by Member States with the support of the European Defence Agency, the European External Action Service and the EU Military Staff, all of which have a role to play.

And on PESCO: what is needed to make sure that it does not remain a mere political

statement of good will but instead leads to projects generating the operational capabilities Europe really needs?

To participate in PESCO, each Member State had to submit information, in the form of a National Implementation Plan (NIP), on how it will fulfil and meet the common binding commitments under PESCO.

Bulgaria, too, elaborated such an implementation plan on meeting the 20 criteria and commitments in various areas. It was incorporated into our national plan for increasing defence spending to 2% of our GDP adopted by the government in early 2018. I must say that the commitments undertaken by our country are extremely ambitious and require ardent and unambiguous political support at national level.

Additionally, it is important to note that at least once a year the Council will receive an implementation report by the High Representative, prepared by EDA and EEAS, which will describe to what extent each of the Member States participating in PESCO respects and fulfils the commitments it has subscribed to. In case a Member State does not honour its commitments, its participation in PESCO can be suspended.

As said, I believe that the links between CARD, PESCO and EDF need to be more clearly and firmly defined. Only then will we be able to achieve the necessary coherence among them. →

Bulgaria participates in three of the 17 PESCO projects and is an observer in three others. What do you respond to critics who call this a lukewarm participation?

As soon as the first PESCO project proposals were put forward, the Ministry of Defence began to analyse them which proved a challenging task. When analysing the proposals, we asked ourselves two main questions. First: to what extent can a proposed project contribute to the implementation of EU priorities, Bulgaria's national defence plan, and the NATO Capability Targets, all of which we must implement? This is important because we have only one single set of forces and therefore cannot afford to build separate sets of capabilities for NATO and for the EU respectively. Second: are there any project proposals which build on existing initiatives? Asking this second question is also important because there are a number of areas where at least some work has already been done, either in the NATO or EU framework. We consider it very important to make use of such work in progress as ignoring it would constitute an unacceptable waste of resources.

As a result of that analysis, we concluded that Bulgaria should participate in three of the first 17 projects. We are highly motivated to fully participate in them and have already allocated the necessary financial resources in this year's budget.

Does Bulgaria intend to propose further PESCO projects in the future?

PESCO participating Member States share the view that it is better to start with a limited number of projects, but to work intensively on them so that tangible results can be achieved as quickly as possible.

Let me stress that there exists no direct relation between the selected PESCO projects, which will be implemented on the basis of cooperation with other Member States, and our own, national defence modernisation projects on which we have been working for a long time and which are at a much more advanced implementation stage.

Nevertheless, in the future, Bulgaria could initiate and participate in other PESCO

projects through which we can acquire new capabilities that help us to modernise our armed forces.

Does Bulgaria support a European Defence Union?

Let me start by emphasising that defence still remains a national prerogative of Member States despite the Common Security and Defence Policy (CSDP) related provisions in the EU Treaties. Many commentators think that PESCO could mark the first step towards genuine European defence integration, with the gradual development of joint capabilities and possibly a common budget for capabilities and operations. For the time being, however, the debate is focused on how Member States can better cooperate on individual projects and in domains which are important for our operations and capabilities, so that we can achieve better output.

The scenarios outlined in the European Commission's food for thought paper on the future of European defence should be regarded not as alternative options, but rather as successive stages of future defence integration. Of course, the most ambitious scenario outlined by the Commission, that of 'Common Defence and Security', would lead to the establishment of a European Defence Union. This approach would require a gradual enhancement of defence integration, more investment in the defence sector, a common approach on defence capability building. It would, of course, also mean that Member States accept to give up part of their national sovereignty on defence.

Fear of duplication and unhealthy competition between EU and NATO persists and has in fact recently made a comeback in the public discourse. What is your take on this? Is it more of a concern in Central and Eastern Europe than in Western Europe?

One of the CSDP work strands aims to deepen the cooperation between the EU and NATO. For the first time, we now see a very intensive cooperation and exchange of information between the two organisations as we work on more than 70 measures in seven areas of cooperation. For us, the implementation of these joint measures is a very ambitious task. We therefore would prefer to focus on a limited number

of priority spheres, namely those where we can achieve practical results. As an example, I would like to point at improving military mobility and making use of the two organisations' potential to build defence capacities in the countries of the Western Balkans. Having said this, for Bulgaria and for the other allies there is no doubt that NATO remains the pillar of collective defence and of our security.

Although EU-NATO cooperation has never been closer than today, there are definitely concerns within NATO regarding duplication of functions and competition, especially between NATO's Defence Planning Process and the EU's Coordinated Annual Review on Defence. I would not say that these concerns are more widespread in Central and Eastern Europe but that they exist in countries that are both NATO and EU members.

How can such fears be dispelled?

It is necessary to better explain that EU and NATO activities on defence capability development do not compete but rather complement each other. It can be achieved by ensuring greater transparency, by achieving concrete results in the process of cooperation, and by fair burden sharing in the framework of the Euro-Atlantic bond. Each of the two organisations has to use its tools with maximum effectiveness, bearing





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"We now need quick results in order to secure public support for PESCO"

in mind that the Member States participating in both organisations have a single set of forces and assets.

How would you describe Bulgaria's involvement and expectations of EDA? How do you see your country's engagement in the Agency evolving over the coming years?

The Global Strategy demonstrates the EU's increased ambition in defence. Our basic operational tool in support of defence cooperation and critical operational capability building is the European Defence Agency. For this reason, Bulgaria has always supported efforts aimed at enhancing the Agency's role, providing it with the necessary resources and achieving higher output. Our country participates in a series of EDA programmes and projects.


Among your defence priorities for the EU presidency was also the ambition to 'incentivise EU efforts in the field of capacity building in support of security and development of the Western Balkan countries'. What do you mean by that, and do you feel progress has been achieved?

The European Commission communication on 'A credible enlargement perspective for and enhanced EU engagement with the Western Balkans', presented at the beginning of this year, establishes the necessary

political context for discussing possible initiatives and steps in different fields through which these countries can receive support in their preparation for European integration.

Although the strategy does not envision an individual initiative in the field of defence and security, Bulgaria would like to trigger a more in-depth discussion on the possibilities of capacity-building in Western Balkan countries with respect to security and defence. We hope that our initiative will be supported and further developed in other spheres during the Austrian EU Presidency in the second half of this year.

Being an integral part of Europe - not only geographically, but also in terms of civilisation - the Balkan region plays a significant role for the European continent's security and development. The region attracts the attention of the international community and Bulgaria strongly hopes that both the European institutions and the EU and NATO Member States will actively participate in the debate we would like to put high on the EU agenda, not just during our rotating EU Presidency, but also in the future.

We are convinced that our region makes a substantial contribution to European security, and that its potential has to be developed with the assistance of the EU. 



Krasimir Karakachanov is Bulgaria's Deputy Prime Minister and Minister of Defence since May 2017. He previously served, among others, as a Vice-President of the Bulgarian National Assembly. Mr Karakachanov holds a Master's Degree in History from Sofia University St. Kliment Ohridski and a PhD in International Law and International Relations.

Preparatory Action on Defence Research

On course, full speed ahead

The European Commission's Preparatory Action on Defence Research (PADR), managed and implemented by EDA, reached cruising speed with the first projects signed, the second call for proposals published and close to 50% of the PADR budget already under implementation. Objective: paving the way for a future EU Defence Research Programme.

Only little over a year has passed since EDA was mandated by the European Commission to implement the PADR (€90 million budget for 2017-2019) but the ground covered since the signing of the Delegation Agreement between the two on 31 May 2017 is truly impressive. Flashback.

2017 Call for proposal

The first call for proposals issued by EDA in June 2017 covered three specific domains: enhanced situational awareness in a naval environment; force protection & soldier systems; strategic technology foresight. It attracted wide interest and generated no less than 24 submissions with consortia including around 190 entities - institutes, small and medium sized enterprises and prime companies - some of them applying to various calls in different consortia.

Grant agreements

Following a thorough assessment process led by the Agency with the support of independent experts, a first grant agreement worth €0.95 million covering the strategic technology foresight 'action' was signed in December 2017 with a consortium led by Engineering Ingegneria Informatica S.p.A. (Italy). PYTHIA, the 'Predictive methodology for Technology Intelligence Analysis' project,

aims to identify key trends in the fast-evolving world of innovative defence technologies.

A second grant agreement, worth €35.5 million and related to naval situational awareness technology demonstration, was signed in March 2018 with a consortium led by Leonardo S.p.A (Italy) and involving 42 partners from 15 EU countries. Ocean 2020, the largest project under the 2017 call, aims to enhance situational awareness in a maritime environment by using manned and unmanned systems and building a complete picture using many different inputs. The kick-off meeting of the Ocean 2020 project took place at EDA on 10/11 April 2018.

Last but not least, the force protection & soldier systems 'action' was given a go-ahead when grant agreements for three different projects were signed last April:

- **GOSSRA** (Generic Open Soldier Systems Reference Architecture) which focuses on ensuring that complex system elements worn by soldiers work together. Worth roughly €1.5 million it is run by a consortium led by Rheinmetall Electronics, Germany (*see interview on the right*).
- **ACAMS II**, worth roughly €2.6 million, develops adaptive camouflage for soldiers



Signing of PADR Delegation Agreement between EDA

that protect them against sensors operating in several wavelength ranges. The consortium is led by FOI, the Swedish Defence Research Agency.

- **Vestlife** (roughly €2.7 million) aims to create innovative protective clothing for soldiers that are effective for defence purposes, but lighter, more flexible and comfortable at the same time. The project consortium is led by AITEX (Spain).

The five grants agreements signed so far are worth a total of some €43 million, meaning that close to 50% of the entire PADR budget (€90 million) is already under implementation.



3 questions to... **Dr. Thomas Weise**

Rheinmetall,
Head EU & NATO Affairs

Can GOSSRA generate a European architecture standard that both buyers and suppliers will accept?

GOSSRA will deliver an important contribution to the future standardisation of soldier systems in Europe and NATO. Three important exercises were performed on this topic so far: EDA's STASS1 and STASS2 studies as well as NATO investigations on joint dismounted soldier systems. GOSSRA will consolidate all results and derive from them an overall reference architecture. Unfortunately, so far, there is no military standardisation process at EU level. GOSSRA will lead to recommendations which could and should be the basis for the follow-up development of NATO's Standardisation Agreement (STANAG) launched through the NATO Industrial Advisory Group (NIAG).

GOSSRA brings together many of Europe's most important soldier systems companies. What makes Rheinmetall best suited to lead this group?

Rheinmetall is the largest technology and systems supplier in Europe in the land defence sector and one of the few companies in Europe which have developed a soldier system solution, being fielded by the German customer as well as in the international defence market. Rheinmetall has a longstanding experience in international cooperation in all areas of research, development, production and after sales services. In the field of R&T, Rheinmetall initiated and led a large number of collaborative projects with different international partners from industry and RTOs.

How important is this project, and collaborative European defence research in general, for Rheinmetall?

GOSSRA is one among many projects in which Rheinmetall participates in the development of a European Defence Union. Interoperability and open standards are fundamental for efficient and successful joint EU military operations. After our engagement for standardisation in the fields of Camp Protection and Land Vehicles, Rheinmetall and its partners are now pushing for the development of standards for future open architectures for soldier systems. We thereby contribute to reducing the number of defence systems in Europe which has a positive impact on the EU defence industry.

and European Commission on 31 May 2017

2018 call for proposals

The second PADR call for proposal was issued by EDA on 15 March 2018 focusing on three topics:

- European high-performance, trustable (re)configurable system-on-a-chip or system-in-package components for defence applications (up to €12 million)
- European high-power laser effector (up to €5.4 million)
- Strategic technology foresight, tackling the issue of critical defence technological dependencies for the EU (overall indicative budget of €1.90 million).

Interested parties had until 28 June 2018 to submit proposals.

Lessons learned

In May, based on first lessons learned discussed between the Agency and Member States, EU Ministers of Defence welcomed EDA's successful implementation of the PADR's first work programme (2017) and encouraged it to pursue the identification of further lessons learned for the future EU Defence Research Programme. For EDA Chief Executive Jorge Domecq, "the PADR should not only be seen as a test case for a future European Defence Research Programme but also for the working together between EDA and the European Commission, as well as for the Agency's future role in it".

"Cooperation saves lives"

Nowhere in the military is this statement more appropriate than in the Counter Improvised Explosive Devices (C-IED) domain where European cooperation spearheaded by the European Defence Agency's Project Team C-IED has produced remarkable results over the past 10 years.

Those who witnessed the early days of European C-IED cooperation corroborate that the start of what is nowadays considered a success story was anything but self-evident.

Lt Col Ray Lane, Commanding Officer of the Irish Defence Forces Ordnance School in Ireland and a globally renowned expert in Explosive Ordnance Disposal (EOD), Improvised Explosive Device Disposal (IEDD) and Chemical, Biological, Radiological and Nuclear Improvised Devices disposal (CBRN IDD), is a man of the very first hour.

As he prepared to retire on 6 May 2018 after more than 40 years of service, he still painfully remembers the tragic day in May 1974 when an improvised IRA bomb killed 33 people in Dublin and Monaghan. "At the time, there was no real response to that

type of attack which, until then, had not been seen as a real threat in the Republic of Ireland", he told European Defence Matters. "Heroic men went out that day, at the risk of their lives, to confront a new and very complex situation with only very basic equipment at their disposal".

The Dublin/Monaghan bloodshed proved a watershed moment as it sparked the development of a bomb disposal capability within the Irish Defence Forces which gained considerable traction in the 80s and 90s and, to some extent, inspired other European countries to do more in this strategically important area too.

Shifting the focus

In 2007, Lt Col Lane became Chief Operations Officer of ISAF's C-IED branch in Afghanistan. "At that time, we were

losing significant numbers of soldiers from improvised explosive devices (IEDs). We had no real response to it". The most frustrating aspect, he says, was that the majority of these casualties were "perfectly preventable". He managed to persuade ISAF's military command to pay more attention to C-IED. "The focus at that time was all on hardware: tanks, planes, heavy material. I made it clear that the focus also needed to be shifted to our men: on behaviour and awareness. From that moment on, C-IED considerations and requirements were systematically taken into account. Specific C-IED techniques and procedures were introduced and casualties were reduced".

A comprehensive C-IED strategy was established within ISAF including also forensic analyses, for instance of the



"EDA is a small and flexible organisation where you can get things done. It is just efficient."

origins and supply chains of components used in a device: the start of C-IED exploitation. "It was a great success, we saved people by implementing this strategy". Shortly afterwards, Lt Col Lane returned to his Ordnance School in Ireland with significant new expertise and technical knowledge in his baggage.

EDA project team

"One day in 2007, that letter with the EDA logo arrived at my school, looking for people interested in taking part in the European Defence Agency C-IED Project Team. I said to myself: fantastic, and off I was to Brussels for the first meeting. There were eleven Member States participating", Lt Col Lane remembers.

It was the start of a long and close relationship with the Agency. From 2007

until his retirement in May 2018, Lt Col Lane attended all but one of the C-IED Project Team (PT) meetings, 23 in total. Armed with his frontline experience in Ireland and Afghanistan, he was charged with developing guidelines which should guide the Agency's work in this field for years to come.

Looking back

"A lot has been achieved since 2007. All the people involved in the EDA PT can be proud of what has been done over the past ten years", Lt Col Lane says. For instance in the crucial field of IED exploitation.

The PT received EDA funding to develop a mobile C-IED laboratory. Again, it was Lt Col Lane's Ordnance School who took the lead and came up with a Theatre Exploitation Laboratory Demonstrator (TELD) inspired

with what had been used by ISAF in Afghanistan. "From the development at my desk in Ireland to the demonstrator's test deployment in Spain, it took less than a year". It was deployed to Afghanistan (2010-2014) as an EDA-developed Multi-National Theatre Exploitation Laboratory (MNTel), owned by ISAF and headed by France. "A tangible, cutting-edge product supporting a multinational mission. That was new ground for Europe in the C-IED field".

After that, EDA's IED exploitation work strand made rapid progress with the development, under the lead of the Netherlands, of a Joint Deployable Exploitation and Analysis Laboratory (JDEAL) established since November 2014 in Soesterberg (NL). A second JDEAL facility has been added recently; both are ready to deploy. →



Tactics, Techniques, Procedures (TTPs)

Another important EDA work strand is the development and training of improved C-IED Tactics, Techniques and Procedures (TTPs). "The rule of thumb in C-IED is that to be successful, you need 70% of TTPs, 20% of technology and 10% of luck. We agreed in EDA that if we concentrate on the 70% of TTPs, we can keep more people alive", remembers Lt Col Lane. As a result, EDA launched a series of courses – combat tracking/situational awareness, etc. – which today are a central part of EDA's CIED work. The very successful Home Made Explosives (HME) courses co-funded by EDA and EUROPOL and run by the American FBI and the US Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) showed the value of the comprehensive approach: seamless integration.

Both courses were attended by 23 of the then 27 Member States of the EU. In the field of Manual Neutralisation Techniques (MNT), EDA's work also started with courses and exercises eventually leading to the establishment, under Austrian lead, of a European Centre for Manual Neutralisation Capabilities (ECMAN) which opened in Vienna in February 2018. ECMAN will pay special attention to Chemical, Biological, Radiological and Nuclear Improvised Devices (CBRN ID). "If you want to dispose

of an IED with a biological or chemical element in it, you cannot proceed as with a conventional IED. You need to apply manual neutralisation techniques. Now we have a European capability that gives us the ability to deal with a chemical or biological agent, using advanced techniques. This is a huge step forward", stresses Lt Col Lane.

"EDA is small but efficient"

The man who over the past decades was involved in most international C-IED activities is full of praise for EDA. "The big difference with other fora, including NATO/PFP, is that EDA is a small and flexible organisation where you can get things done. It is just efficient". A career fully free of regrets and disappointments? "Sure, there were some. For instance, the lack of EDA action on countering marauding terrorist attacks (MTA), due to Member States resistance, despite the fact that this is a threat which requires a European response combining military and civil solutions".

And the achievement he is most proud of? "Without hesitation: the fact that within those 10 years, since the launch of the EDA C-IED Project Team in 2007, we produced something which saved or has the potential to save people's lives. Coordination and cooperation saves lives".



Lt Col Ray Lane, a founding member and driving force of EDA's C-IED Project Team, retired on 6 May 2018 after more than 40 years of excellence in the domains of EOD/IEDD/CBRNE ID. He was Commanding Officer of the Irish Defence Force Ordnance School and served in many missions with UN, EU and NATO, including in Lebanon and Bosnia, as well as most recently as Chief Operations Officer of the C-IED Branch ISAF in Afghanistan. Under his leadership, the Irish Ordnance School held countless EDA and NATO C-IED sponsored courses. Lt Col Lane is also a subject matter expert for the international war crimes tribunal and prepared the UN report for the Goldstone commission on the Israeli invasion of Gaza. He graduated from National University of Ireland (Bsc Hons Chemistry).



Small but innovative

Utilis team

The company name Utilis is probably not familiar to many of our readers but the young Croatian SME specialising in cybersecurity wrote history, so to speak, as the leader of the consortium running the first fully fledged defence research project co-funded by the EU under the European Structural and Investment Funds (ESIF).

The project, promoted by the Croatian Ministry of Defence and actively supported by the European Defence Agency (EDA), is a milestone on the path towards EU-funded defence research and technology (R&T).

Up till then, only civil aspects of a dual-use project were eligible for ESIF funding. With the Croatian project, military implications have not only been tolerated but acknowledged as an added-value. As a result, defence applications are nowadays able to secure ESIF funding, in the same manner as civilian ones.

It is also a landmark in EDA's longstanding efforts to open up EU funding opportunities for defence R&T. "The fact that the first defence project co-funded by the EU is run by a consortium itself led by a small and medium sized enterprise, is an important signal that Europe needs the full spectrum of research and industrial actors – large, medium-sized and small alike – to strengthen its defence industrial base. The Agency will continue to exploit the benefits of wider EU policies for defence stakeholders and facilitate their access to EU funding possibilities", says Jorge Domecq, EDA's Chief Executive.

Cyber Conflict Simulator

The Croatian €0.5 million project, 80% of which is funded by ESIF, aims at developing a cyber conflict simulator. "It all started in 2015 when Utilis and the Faculty of Electrical Engineering and Computing of Zagreb University got together to envision a Cyber Conflict Simulator – an advanced synthetic environment for Cyber Security/Defence training. The idea became reality and project was supported by the

Croatian MoD and subsequently also by EDA. With their help, we applied for ESIF funding which was eventually granted.

The project implementation started in 2018 and should be accomplished by the end of 2020", says Goran Polonji, co-founder and co-CEO (together with Zdenko Ćorić) of Utilis which was created in 2002 and today counts nine staff. The simulator is meant to be fit-for-purpose and usable by European Ministries of Defence straightaway, including in European and international military exercises. It will allow for multiple groups in different roles to collaborate within a defined cyber space, in order to address potential cybernetic attacks. "The Cyber Conflict Simulator will definitely help to improve the behaviour and reactivity of incident managers and decision makers in case of cyber attacks. It will also allow stakeholders to evaluate alternative scenarios of handling an incident so that best practices can be selected", Mr Polonji explains.

MORE TO COME

› EDA is now looking forward to the application of other defence project proposals by Member States, industry, academia and research-and-technology organisations. To encourage, facilitate and guide them with best possible information, the Agency has set up two specific online tools:

- ESIF web-platform: eda.europa.eu/esif
- ESIF Success Stories webpage: eda.europa.eu/esifsuccess

Hot Blades, Cool



HOT BLADE 2018, already the 12th helicopter exercise organised under the umbrella of EDA's Helicopter Exercise Programme (HEP), took place last May at Beja Air Force Base, in Southern Portugal. It involved 21 helicopters, six fighters and two transporters as well as crews/observers from Portugal, Belgium, Netherlands, Germany, Hungary, Slovenia, Austria, Czech Republic and Italy.





Heads

Mission accomplished

HB18 delivered on its promise: foster cooperation and interoperability by enabling flying crews and ground personnel to train together in hot, mountainous and dusty conditions. Composite Air Operations (COMAO) missions were flown with rotating Mission Commanders and Electronic Warfare teams on the ground. HB18 also allowed national trainers among the participants to expand their skills in life firing, Forward Arming and Refuelling Procedures (FARP), MEDEVAC or training with special operations forces. Best practices gathered from the eleven previous exercises and EDA's HEP Standard Operating Procedures helped to further standardise planning and tactical processes among participating crews.

Next appointment of EDA's 'BLADE' exercise: DARK BLADE 2019, in the Czech Republic.



Distinguished visitors: Portugal's Defence Minister, José Alberto de Azevedo Lopes, and the Chief of Air Force, General Manuel Teixeira Rolo



The Enablers

Airworthiness, standardisation & certification (hereafter: ASC) are usually not the first domains that spring to mind when considering the biggest potentials for European defence cooperation. Think again: harmonisation in these areas is a key enabler for defence cooperation and can generate considerable time and cost-savings. Spotlight on EDA's dedicated ASC Unit.

Embedded in the Cooperation Planning & Support (CPS) Directorate, EDA's Airworthiness, Standardisation & Certification (ASC) Unit currently counts six staff from five EDA Member States: three working on airworthiness related topics, one on standardisation, one on defence test & evaluation and one on RPAS integration into regular air traffic. The unit coordinates and facilitates European collaborative activities between national airworthiness authorities, national test centres and standardisation organisations.

"All three areas are closely intertwined which means that the unit has to work as a genuine team", says Edvardas Mazeikis, a Lithuanian Major General who joined the

Agency early 2018 as Deputy Director and new Head of Unit. He has no doubt about the importance and benefits of more European cooperation in the ASC domains. "Working towards increased harmonisation of Member States' activities in these critical areas not only makes operational sense, but it also saves enormous amounts of time and money", he says.

Airworthiness

EDA's efforts in this field primarily focus on the Military Airworthiness Authorities (MAWA) Forum bringing together experts from each of the EDA participating Member States' National Military Airworthiness Authorities (NMAAs) with the objective of developing a harmonised approach to the regulation of

military airworthiness and synergies in the area of airworthiness oversight. The forum already delivered a full set of European Military Airworthiness Requirements (EMARs) – non-mandatory standards available to Member States based on the airworthiness regulatory framework for civil aviation developed by the European Aviation Safety Agency (EASA) – including for aircraft maintenance training. "The progressive implementation of EMARs into national regulations and the mutual recognition between NMAAs is key in paving the way for more and deeper cooperation. Since EMARs have no real equivalent outside the EU they could even become a worldwide standard for Military Airworthiness", stresses Mr Mazeikis, referring to non-EU nations like Australia that



have adopted the EMAR's as part of their national regulations. Once a harmonised European Military Airworthiness System will have been fully developed, further steps could be taken towards the creation of a European Military Joint Airworthiness Authorities Organisation (EMJAAO).

Standardisation

The general approach, Edvardas Mazeikis says, is to use civilian standards even for defence needs whenever and wherever possible. "However, that rule has its limits because available standards, by far, do not always fit military needs and requirements. That's where EDA comes in to see what can be done to develop missing standards". For instance, the European Defence Standards Referencesystem (EDSTAR) and the European Defence Standardisation Information System (EDSIS) are both managed by EDA to facilitate work in the area of defence standardisation. "Defence standardisation is an integral part of European standardisation activities, which is key for Member States' collaborative capability development and the interoperability of their armed forces", insists Mr Mazeikis.

Test & Evaluation


Cooperation and progressive harmonisation are also the recommended way forward for Member States' Defence Test & Evaluation (DT&E) centres to improve synergies and avoid duplication. To that end, EDA initiated the European Defence Test and Evaluation Base (DTEB), a portal where national DT&E centres can coordinate their activities. The overarching ambition is to develop a coherent network of European Test Centres offering the full spectrum of Test & Evaluation capabilities needed in Europe. This notably entails fostering collaborative activities among test centres, creating networks of excellence and systematically relating them to EDA projects. "As a starting point, we are working on creating such a network of excellence in the land domain. Air, maritime and possibly other networks could follow in the future", explains Edvardas Mazeikis.

Ammunition testing and certification is another domain where EDA's ASC Unit is involved in developing harmonised requirements, in particular through ENNSA, the European Network of National Safety Authorities.

RPAS

The integration of Remotely Piloted Air Systems (RPAS) into regular air traffic is another important work area for the Unit, closely related to test & evaluation, standardisation and certification. Allowing all kinds of RPAS to fly together with civilian airliners and private planes in the same shared airspace is currently the most challenging task for all international and national aviation authorities. In this regard the ASC Unit fosters dialogue between Member States, industry and other relevant civil stakeholders, aimed at identifying gaps in R&T and regulation, and considering timely solutions.

This work strand relies on close interaction with project officers across EDA and with another Unit in the Agency's CPS Directorate mandated to ensure that the needs of the military are duly taken into account in the Single European Sky (SES) and the related Air Traffic Management Research Programme (SESAR).

More about the SES/SESAR Unit in one of our next editions! 



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