



CCMI/179

EU action plan on the defence and space industries

OPINION

European Economic and Social Committee

Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions -

Action Plan on synergies between civil, defence and space industries

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1. **Conclusions and recommendations**

- 1.1 The EESC believes that the initiative to promote synergies between EU-funded instruments, while also facilitating cross-fertilisation between civil, defence and space industries, can enhance European strategic autonomy and technological sovereignty, improve the security of citizens, further develop the single market, and boost competitiveness, economic growth and employment. The EESC therefore fully supports the objectives of the Action Plan and calls for a rapid, forceful and ambitious implementation of the 11 actions.
- 1.2 A key priority of the Action Plan should be the uptake of new digital and other emerging technologies in defence and security. To facilitate this uptake, it should be ensured that relevant civil initiatives take into account defence and security requirements from the outset. This would also help optimise the scope and efficiency of defence- and security-specific funding instruments.
- 1.3 The EESC takes the view that the Action Plan should not limit itself to identifying existing opportunities for synergies. It should also point the way to moving from an ad hoc approach to a more systematic one that creates synergies by design. The EESC therefore encourages the Commission to introduce new forms of integrated planning across relevant programmes.
- 1.4 In the EESC's view, the approach of linking capabilities, technologies and value chains can achieve greater coherence and a more strategic use of EU funding. We therefore call on the Commission to frame relevant EU programmes accordingly.
- 1.5 The EESC considers the envisaged Observatory for Critical Technologies to be an essential element of this approach. To foster cross-fertilisation between civil, defence, security and space, the observatory should in particular develop a common technology taxonomy applicable to all sectors.
- 1.6 The EESC considers the Action Plan to be a pillar of the EU Industrial Strategy. The successful translation of technology roadmaps into fully-fledged industrial flagships is therefore crucial. We therefore call upon the Commission to ensure that the work of the observatory leads to tangible results.
- 1.7 In the EESC's view, the full engagement of relevant stakeholders, in particular industry and RTOs, is crucial for the successful implementation of the Action Plan. In this context, we welcome the Commission's intention to launch targeted actions to support start-ups, SMEs and RTOs to raise awareness about EU programmes and instruments.
- 1.8 Equally important is raising public awareness of the economic and technological dividends of EU funding on defence and security for EU citizens. To achieve this, the Commission should launch specific information campaigns in which civil society representatives must be involved.
- 1.9 The EESC believes that SMEs play a key role in the process of implementing the Action Plan. It is therefore important to ensure that they have access to all the measures envisaged.

- 1.10 Historically, innovations in defence have been adopted by civil products. Today, emerging technologies are driven by huge investment from commercial sectors, and technological dissemination increasingly flows in the opposite direction, from civil to defence. In this context, digitalisation is of particular importance. The Action Plan is fundamental to fostering the integration of new digital and other emerging technologies in the defence, security and space ecosystem.
- 1.11 Targeted recruitment, retention and advancement of women in the defence and security sectors should be prioritised, along with ensuring quality jobs and qualifications for young people, in order to foster social inclusion and gender equality in a still male-dominated ecosystem.
- 1.12 Alongside the rights to equal opportunities and non-discrimination, quality employment is part of a new social contract to be established with European citizens.
- 1.13 Social factors need to be incorporated into investments. In other words, a return on investment should not only be viewed in economic terms, but also in terms of key aspects such as employment, job creation and the quality of employment. Space must be made accessible to SMEs by facilitating their access to resilience funds, increasing synergies in relation to the training, qualification and mobility of SME workers, strengthening ecosystems along the value chain, avoiding the duplication of resources and ensuring that all countries in the EU work together.
- 1.14 Likewise, we see a need, even if dealing with investments of high strategic value, to include a requirement to carry out evaluations of investments and to monitor them against set corporate social responsibility standards.
- 1.15 These requirements should be introduced for investments at EU level, to ensure that no area in which public money is invested is left out of these provisions.

2. **Background**

- 2.1 Together with civil aeronautics, space, defence and security form a high-tech ecosystem of strategic importance for Europe. Many companies within this ecosystem undertake both defence and civil activities and are part of complex cross-border supply chains, which include numerous mid-caps and SMEs. This ecosystem has a long record of synergies between its sectors and with other civil hi-tech industry sectors. The emergence of new technologies offers huge potential for future synergies.
- 2.2 Historically, innovations in defence have been adopted by civil products. Today, emerging technologies are driven by huge investment from commercial sectors, and technological dissemination increasingly flows in the opposite direction, from civil to defence. In this context, digitalisation is of particular importance. The Action Plan is fundamental to fostering the integration of new digital and other emerging technologies in the defence, security and space ecosystem.
- 2.3 The EESC considers that in order to recover from the COVID-19 crisis and to make the ongoing technological revolution a success, the EU needs an industrial "reset", based on the use of

advanced digital technologies that will foster economic growth and create a more resilient economic model.

- 2.4 Technological advances are a continuous, dynamic process; breakthroughs always occur but are hard to predict. Consequently, it is of the utmost importance to incentivise the convergence of emerging dual-use technologies through large-scale European projects to boost innovation, competitiveness and technological leadership in strategically important sectors.
- 2.5 In October 2020, the European Council noted that achieving strategic autonomy while maintaining an open economy is a key Union objective and called for the EU to develop autonomy in the space industry and a more integrated industrial basis for defence. These objectives are supported by numerous important EU initiatives, such as the European Defence Fund¹, the Space Programme², Digital Europe, Horizon Europe, the Security Union Strategy and the new Industrial Strategy. We regard the Action Plan on Synergies as a link between these instruments and strategies and call on the European Commission to put maximum effort into the ambitious and effective implementation of the proposed actions.
- 2.6 Return on investment should not only be viewed in economic terms, but also in terms of key aspects such as employment, job creation and the quality of employment. The EESC therefore stresses the importance of education and skills for the successful implementation of the Action Plan. There can be no innovation and competitiveness without a highly skilled workforce, and the uptake of new emerging technologies will necessitate additional efforts in reskilling and upskilling. Moreover, initiatives to foster technological synergies between sectors should be accompanied by measures to facilitate the cross-sectoral mobility of employees.
- 2.7 The EESC considers diversity to be an essential driver for innovation and calls on the Commission also to use the Action Plan as a tool to foster social inclusion and gender equality in a still male-dominated ecosystem. As research shows, diversity leads to better decision-making. Therefore, the presence of women at all levels of decision-making is vital and should be fostered by recruitment, retention and advancement policies. In addition, the Committee calls for measures to combat vertical segregation and giving young girls initial impetus to pursue careers in these sectors, e.g. by making them enthusiastic about the STEM sector early in the educational agenda.

3. General comments

- 3.1 The European Commission's Action Plan specifically refers to and emphasises "synergies", which are looked at "in a challenging international environment, where the EU needs to maintain its technological edge and support its industrial base". In the new geopolitical context, it is particularly important to support sectors that contribute to the EU's strategic autonomy and technological sovereignty.

¹ European Defence Fund, Regulation (EU) 2021/697 of 29.04.2021, [OJ L 170. 12.5.2021](#).

² Communication on space policy – COM(2021) 208 of 21 April 2021.

- 3.2 The EU's 2021-2027 multiannual financial framework (MFF) significantly scales up investment in technologies for strategic sectors such as defence, security, mobility, health, information management, cyber and space. With the European Defence Fund (EDF), it includes for the first time ever an EU programme specifically dedicated to cooperative defence projects. Relevant MFF programmes cover research, development, demonstration, prototyping and deployment (procurement of innovative products and services) in a complementary fashion. Hence, there is enormous potential for synergies between EU programmes. Fully exploiting these synergies would increase the added-value of European investments tremendously and must therefore be a top priority for the Commission.
- 3.3 Public spending on research and innovation (R&I) in Europe remains far below the level of the US and China. R&I efforts are decisive for the industry's competitiveness and Europe's autonomy. Therefore, synergies between EU programmes must optimise return on investment, but not replace R&I funding. Member States must step up their efforts as well and not use European investment as an excuse to reduce their own spending on strategic sectors. Equally important is the synchronisation between EU and national R&I programmes, for example, as part of the European Semester, as a means of ensuring the optimal use of resources.
- 3.4 New digital and other emerging technologies are driven by huge investment from commercial sectors. At the same time, they are also indispensable enablers for defence and security capabilities. The uptake of these technologies in defence and security should therefore be a priority of the Action Plan. It should ensure that civil programmes such as the European Cloud, Clean Hydrogen and the European Processor Initiative take into account defence and security requirements from the outset.
- 3.5 Technological synergies are possible mainly at lower Technology Readiness Levels (TRLs) and for components and subsystems. In digital domains such as artificial intelligence, high-performance computing and blockchain, many underlying models and theories are the same for different sectors. Sharing research work at these levels would accelerate the development of sector-specific solutions and free up resources for their deployment. A new partnership-based approach to governance between industry, public authorities, the social partners and other stakeholders should ensure a just transition for ecosystems during their digital and green transformation. Priority will be given to finding synergies between the ecosystems and sectors facing the most significant hurdles to achieving environmental, social and governance resilience and sustainability objectives. SMEs will be encouraged to participate in trans-European, interdisciplinary and cross-sectoral clusters, linking the critical value chains of the aerospace and defence ecosystems, with the mobility, automotive, transport, and health sectors in particular. These clusters need to be provided with support to help them deal with shocks and vulnerabilities, or to diversify, by connecting them with new local or cross-border partners through viable and sustainable competitiveness plans.
- 3.6 Synergies in the research phase will not eliminate differences between sector-specific applications. Due to different customer requirements, 5G for defence will not be like commercial 5G, and a combat cloud will differ from a commercial cloud, even if the basic technological bricks are similar. Defence, security and space industries are indispensable for the adaptation and integration of emerging technologies into sector-specific solutions.

3.7 In the EESC's view, the implementation of the Action Plan must also take account of differences between the defence, security, space and civil markets. As business models and regulatory frameworks are not the same, a balance must be found on the openness of research results, IPRs, guarantees for high-risk investments, assurance of economic return, etc. In this respect, emerging technologies will also bring new challenges, e.g. for the standardisation and protection of data.

4. **Specific comments**

4.1 The EESC believes that the Action Plan must take into account relevant security and defence initiatives managed by the Member States. Examples would include the Strategic Compass, the Coordinated Annual Review on Defence (CARD), Permanent Structured Cooperation (PESCO) and the Civilian CSDP Compact.

4.2 The EESC also believes it is important to take EU-NATO cooperation into account and to ensure in particular interoperability between NATO and EU assets, including those for encrypted and secure communications. Commission services should continue to work closely with the European External Action Service (EEAS) and the European Defence Agency (EDA), whose activities should promote synergies and cross-fertilisation.

4.3 The EESC welcomes the importance that the Action Plan attaches to flagship projects. Bringing together companies of all sizes from different sectors and from across the EU, such flagships foster cross-border cooperation and can become effective frameworks for the consistent use of industrial policy tools. To ensure that the implementation of the European Pillar of Social Rights is effective during the digital and climate transitions, and to ensure that it has a long-term and structural impact on the implementation of the mechanisms for sustainable competitiveness linked to the European Semester, we recommend that the proposed measures be accompanied by a multi-stakeholder governance system, with the aim of guaranteeing coherence between different actions and the effective involvement of all relevant stakeholders.

4.4 The EESC encourages the Commission to implement the Action Plan in both a long- and a short-term approach: In a short-term approach, it should promote cross-fertilisation between existing EU-funded initiatives. The Action Plan itself lists a broad range of initiatives in various domains, from space to maritime security, that seem promising in this respect.

4.5 At the same time, The EESC takes the view that the Action Plan should not limit itself to identifying existing opportunities for synergies. It should also point the way to moving from an ad hoc approach to a more systematic one that creates synergies by design. The Action Plan contains several elements that can contribute to making this happen: cross-sectoral technology watch, capability planning, close coordination of funding programmes, technology roadmaps, assessment of value chains, etc. To be effective and have a long-term, structuring impact, we recommend that the proposed actions should be accompanied by new governance structures and appropriate planning processes across all relevant programmes. This seems necessary to ensure coherence between the different actions and involve all relevant stakeholders effectively.

4.6 The EESC considers transparency to be equally important. The choice of technologies, roadmaps and flagships that are to be supported should be comprehensible and based on objective criteria. The envisaged two-yearly progress report should formulate KPIs to measure success and include gate reviews to improve the process and stop actions if no value is being produced. Legal and regulatory aspects should also be part of the evaluation process to identify if and where the legal basis and the provisions of EU programmes would need to be modified to foster and exploit synergies.

4.7 Looking at each action individually, the EESC is of the following opinion:

4.7.1 *ACTION 1: Before the end of 2021, the Commission will present a proposal to strengthen the forward-looking and early identification of needs and solutions in the field of internal security and law enforcement by fostering capability-driven approaches across security sectors, building on best practices from the defence and space sectors.* From the EESC's perspective, this action is most welcome since a capability-driven approach is key to overcoming the current fragmentation of Europe's security market and enable security end-users to be ahead of current and future security threats. The envisaged capability-planning process for integrated border management is welcome, but its establishment must be accelerated considerably to have an impact on related spending programmes before the end of the current MFF. To cope with the diversity of security end-users and give some stability to planning processes, we would recommend establishing, at EU level, security missions that are broad enough to capture diverse and evolving capability requirements. The envisaged approach should be strategic and long term, but also flexible enough to cover possible low-probability but high-impact events (such as a pandemic) and react to the sudden emergence of unexpected threats.

4.7.2 *ACTION 2: Before the end of 2021 and with a view to the 2022 work-programmes, the Commission will further enhance its internal process to promote synergies between space, defence and related civil industries by improving coordination of EU programmes and instruments and by launching actions to facilitate access to finance.* The EESC considers this action to be one of the centrepieces of the Action Plan. The EU should exploit potential synergies horizontally between R&I programmes (e.g. EDF and Horizon Europe) to foster cross-fertilisation, but also vertically between R&I and deployment programmes (e.g. security research and the Internal Security Fund) to foster market uptake of research results. Differences in the rules and conditions for programmes risk becoming obstacles to synergies and will necessitate careful consideration of legal and technical issues such as IPR. It will be particularly important to establish, within the Commission, new forms of integrated programming and planning to ensure that synergies occur not by coincidence but design.

4.7.3 *ACTION 3: Starting in the second half of 2021, the Commission will announce targeted actions for start-ups, SMEs and RTOs to raise awareness about EU programmes and instruments that offer funding opportunities, provide technical support and hands-on training, provide business-accelerating services, showcase innovative solutions, and facilitate market entry to the defence, security, space or other relevant civil markets.* The EESC agrees that start-ups and SMEs are crucial drivers of innovation and play an important role for synergies, as they often operate in different sectors and across the dividing line between civil and defence. At the same time, they normally lack the capacities to execute complex projects and the financial strength to operate

independently on purely public, highly regulated markets with very specific customer needs. Consequently, they need strong links to system integrators to drive innovation into the market. The Action Plan should therefore support the integration of start-ups and SME into cross-border supply chains and foster the link between RTOs and industry.

- 4.7.4 *ACTION 4: The Commission will develop technology roadmaps to boost innovation on critical technologies for the defence, space and related civil sectors and stimulate cross-border cooperation using all relevant EU instruments in a synergetic way. These roadmaps will be based on an assessment produced every two years by a new Observatory for Critical Technologies within the Commission. The roadmaps may lead to the launch of new flagship projects. The EESC fully supports the establishment of an observatory and its mission to develop technology roadmaps that bring together defence, space and related civil industries. We also welcome the intention to include value chains in the assessment, as it paves the way towards the coherent and combined use of industrial policy tools to support technological leadership in strategic sectors. At the same time, the success of this action depends on numerous factors. The observatory will have to*
- develop strong links to relevant capability planning processes;
 - actively monitor worldwide technology trends and detect at the earliest possible stage technological breakthroughs and disruptions;
 - establish objectives, rules and criteria for the assessment of technologies;
 - develop a common taxonomy applicable to all relevant sectors must be developed to ensure that space, defence and security speak the same "technological language".

Finally, it must be ensured that the roadmaps generated by the observatory do not end up as pure paper exercises, but are actually implemented into work programmes and flagships. To achieve all this, we recommend that the observatory also build on lessons learned from similar existing processes, such as the Joint Task Force (EDA-ESA-EC) on critical space technologies.

- 4.7.5 *ACTION 5: Before the end of 2022, the Commission, in close cooperation with other key stakeholders, will present a plan to promote the use of existing hybrid civil/defence standards and the development of new ones. The EESC considers standards to be a powerful tool to shape markets. The use of hybrid standards makes sense where it is appropriate, and the examples of CBRN or Security Data Space are indeed promising. The challenge, however, is the slowness of the standardisation process for technical standards, which seems to be increasingly struggling to keep pace with new innovation development. Standards requirements should also be part of Horizon Europe's calls to ensure that new innovations will actually be usable for end-users.*
- 4.7.6 *ACTION 6: In the first half of 2022, the Commission will launch, in cooperation with the European Innovation Council and other stakeholders, an 'innovation incubator' to support new technologies and shape dual-use innovation. The Commission will also support cross-border defence innovation networks that will test the relevance of technologies from the civil sector and support responsible innovation in defence value chains. These actions will also address the current fragmentation of the civil-defence innovation landscape, shortages of skills as well as equality and inclusion goals. The EESC considers the establishment of a dual-use innovation incubator and defence innovation networks to be interesting and worth exploring. In this context, special attention should be paid to the rapid obsolescence of many commercial technologies,*

which is often a major obstacle for their use in defence applications. We also encourage the Commission to actively foster cross-sectoral transfers of technologies with accompanying administrative and financial support measures. Since it opens new avenues, the EESC would recommend active monitoring and regular assessment of this action to measure its success.

4.7.7 *ACTION 7: From June 2021 onwards, the Commission will set up together with Member States the Cybersecurity Competence Centre, allocating the necessary resources from relevant EU programmes and instruments. The Commission will seek to strengthen synergies, spin-ins and spin-offs between the work of the Centre, the EDF and the EU Space programme on cybersecurity and cyber defence with a view to reduce vulnerabilities and create efficiencies.* The EESC believes that the activities covered in Action 7 are essential for Europe's sovereignty in key technology areas. Cybersecurity and cyber defence are obvious choices for synergies between security, defence and space and should indeed be given high priority. Close cooperation between public authorities and the private sector is particularly important here.

4.7.8 *ACTION 8: Starting in the first half of 2022, to support disruptive technologies, the Commission will present innovative forms of funding to promote participation of non-traditional players, attract start-ups and promote cross-fertilisation of solutions, building upon opportunities offered by EU programmes and instruments including the DEP and the EDF.* The EESC welcomes the support of potentially disruptive technologies as the logical complement to a more traditional capability-based approach and suggests relating it closely to the envisaged technological observatory. We also support the use of the EDF and DEP for such activities and recommend further developing a fully-fledged European agency similar to DARPA³ in the medium term.

4.7.9 *Action 9: EU drone technologies.* Drones⁴ provide numerous illustrations of technologies used in commercial aeronautics, and in space, security and defence. Cross-fertilisation is of the essence in drone technology, and inclusion of civil and military drones in the aerospace sector is dual-purpose as well. Hence, the EESC fully supports the launch of a drones flagship project as an obvious choice and recommends underpinning it with a specific technology roadmap that prioritises the relevant technological building blocks in line with their relevance for European strategic autonomy and technological sovereignty.

4.7.10 *ACTION 10: EU space-based global secure communications system.* The EESC considers this flagship project to be highly important, as it covers key elements of European autonomy and technological sovereignty. At the same time, it remains unclear how this project will create or benefit from synergies with the defence sector. We believe that one option for additional synergies would be to place additional payloads on board satellites in this system. This could include sensors for space surveillance, which would create synergies between the two space-related flagships.

4.7.11 *ACTION 11: Space Traffic Management.* STM is crucial for the security of space-based assets and infrastructures that are increasingly important for the functioning of modern societies. The EESC therefore supports the launch of a specific STM flagship. At the same time, we are

³ The Defense Advanced Research Projects Agency (DARPA) is a the R&D agency of the US Department of Defense responsible for the development of emerging technologies.

⁴ CCMI/154 – European defence industrial development programme

concerned that this initiative is limited to regulatory and standardisation aspects, which are important but not sufficient. The Commission should therefore also consider the creation of a marketplace for space surveillance data (as is the objective in the US). In order to develop a credible European STM approach, Europe should also significantly improve its space surveillance capabilities (new sensors, analysis and calculation capacity, etc.).

Brussels, 8 July 2021

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The president of the European Economic and Social Committee
