



2022/2079(INI)

9.3.2023

OPINION

of the Committee on Foreign Affairs

for the Committee on Industry, Research and Energy

Critical technologies for security and defence: state of play and future challenges
(2022/2079(INI))

Rapporteur for opinion (*): Dragoş Tudorache

(*) Associated committee – Rule 57 of the Rules of Procedure

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SUGGESTIONS

The Committee on Foreign Affairs calls on the Committee on Industry, Research and Energy, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

1. Regrets that the European Union's defence sector is excessively fragmented, which creates costly redundancies and hampers competitiveness and interoperability; notes that this has resulted in unnecessary annual financial losses of between EUR 25 to 100 billion and has led to strategic vulnerabilities for the Union, the Member States and the European Defence Technological and Industrial Base (ETDIB);
2. Calls for more strategic cohesion in security and defence policies at Union level; welcomes, in this context, the Commission's launch of the European Defence Industry Reinforcement through common Procurement Act (EDIRPA) and encourages the Commission and Member States to take this initiative a step further by ensuring that future defence acquisitions focus on cutting-edge weapons systems and by striving towards a genuine defence union supported by a stronger and more competitive ETDIB, based on a strongly articulated common market for defence equipment;
3. Calls on the Member States to increase their cooperation in fostering the development of critical technologies and innovation in security and defence affairs; urges those EU Member States which are also NATO allies to work towards meeting the defence spending goal of 2 % of gross domestic product;
4. Underlines the urgent need to establish a truly European defence equipment market, inter alia by consolidating industrial capacities and reducing duplication and fragmentation while adapting the industrial base, in particular its supply chains and work force, to the new security environment in Europe, which requires rapidly ramped-up production capacities; calls for improving the role of the European Defence Agency (EDA) in coordinating Member States' efforts to establish technical norms for military interoperability and instruments, which would help to standardise military technology and guarantee interoperability;
5. Encourages the Member States to make full use of joint procurement and research and development (R&D) projects as tools for harnessing synergies in the EU defence sector and for generating the necessary competitiveness and technological edge in defence equipment and equipment production; calls, in this context, on the Commission to ensure the full enforcement in all Member States of Directive 2009/81/EC of 13 July 2009 on procurement in the fields of defence and security;
6. Recalls that in 2013 the European Council called on the Commission to develop a roadmap for a comprehensive EU-wide security of supply regime, which, unfortunately, has never been presented; urges the Commission to present this roadmap without further delay;
7. Calls on the relevant bodies to consolidate all relevant EU-level frameworks, instruments, legislation and standards for developing cutting-edge military technologies,

equipment and capabilities in order to ensure a coordinated approach while maintaining a competitive market for the EU defence sector; underlines, in this regard, the need to invest collaboratively in the research and development of emerging and disruptive technologies;

8. Calls on the Commission to encourage the Member States to review all defence programmes and policy tools, following the Coordinated Annual Review on Defence (CARD) approach with a specific focus on critical technologies, check if they are still fit for purpose, summarise findings and share them with all other Member States when possible and relevant; calls for a thorough review of relevant defence initiatives such as the Capability Development Plan with a view to updating it in the light of the provisions included in the EU Strategic Compass and the Gap Analysis drawn up by the EDA; considers the EDA to be well placed to ensure the coherence of innovation activities among European actors in the defence sector; calls, in this regard, for an expanded role for the EDA in providing support, coordinating suggestions, including a strategic assessment of findings, and presenting solutions for supporting joint R&D and procurement projects;
9. Calls for the EU to agree on a common definition of what ‘critical technologies’ are and to agree on a list of key critical domains, as well as to decide on domains where EU action is a priority; calls on the EDA to include the notion of critical technologies in its annual CARD exercise;
10. Calls for a more pragmatic and efficient approach to military research in order to provide incentives for innovation in military technology, including by reducing or removing barriers to entry into the defence market, while preserving and enhancing the necessary levels of standardisation and interoperability; further calls for increased support for European companies in emerging technologies to ensure they remain competitive in international markets by reducing the bureaucratic burden and by stimulating investments on a par with the industrial policies conceived and implemented by other major economies;
11. Stresses the need to ensure and increase the participation of start-ups and small and medium-sized enterprises (SMEs) in defence initiatives by, inter alia, reducing the complexities of bidding procedures and facilitating increased capital investments and growth via incubation; recognises, in this context, the importance of reducing technological, financial, administrative and regulatory barriers and calls for measures to raise awareness about EU programmes and funding opportunities and to provide further support to SMEs;
12. Recognises that an adequately skilled workforce is crucial to developing critical technologies in Europe; underlines the need to take an inclusive and accessible approach to reaching out to the entire available workforce with a view to ensuring a continuous and sustainable supply of skills and human capital; highlights, further, the need to stimulate the development of skills for innovation, EU-financially supported training programmes, R&D and fundamental research in critical areas related to emerging technologies, including in the fields of artificial intelligence, materials science, energy production, semi-conductors, nanotechnology, quantum computing and new-generation aviation;

13. Calls on the Commission to encourage the Member States to establish and fund defence innovation hubs, establish dedicated financial guidelines for defence spending allocated to R&D and support emerging clusters based on new projects and cooperation;
14. Underlines that many critical technologies for security and defence increasingly originate in the civilian sector and use dual-use components; stresses, in this regard, the need to strengthen synergies between civilian and defence research and the various European R&D programmes in order to support the development of critical technologies in Europe, reduce strategic dependencies, facilitate the sharing of best practices, enhance the use of dual-use products and broaden funding opportunities;
15. Notes that the adoption of common standards across sectors has the potential to contribute to cost savings, innovation and increased interoperability; calls, in this regard, on the Commission to accelerate work on the harmonisation of standards between civil, defence and space industries;
16. Underlines that the growing importance of artificial intelligence (AI), quantum computing and machine learning requires enhanced cooperation among the Member States, as well as coordination with like-minded partners, in order to ensure technical excellence in these fields; encourages, in this context, the joint development of interoperable AI capabilities;
17. Is concerned about the EU's multiple dependencies on raw materials, in particular from certain non-democratic countries and strategic rivals such as China, and calls on the Member States to reduce their vulnerabilities resulting from dependence on non-democratic suppliers of critical technologies and materials, avoid the emergence of new dependencies which risk weakening security of supply and enhance defence production chains in Europe by localising or nearshoring production; recalls that any dependence on critical technologies may lead to increased risks of blackmail regarding the common foreign and security policy and the common security and defence policy; underlines the need for increased resource efficiency, the promotion of material recycling and the uptake of sustainable technology solutions;
18. Recognises that a secure supply of critical materials, such as rare earth materials, components and technologies, is crucial for the European security and defence industries and the EU's ability to safeguard its interests; underlines the importance of diversifying supply chains as a means of reducing dependencies on non-EU countries;
19. Expresses its support for the Observatory of Critical Technologies; calls on the Member States to commit and strengthen collaboration within the framework of the Observatory; calls for it to be further developed and for its analysis capabilities, including on reducing strategic dependencies, to be enhanced; recognises that the Observatory deals with highly sensitive and classified information; calls, in this regard, for setting up safeguards and building trust among stakeholders with a view to enabling the sharing of information and appropriate handling of data; calls on the Commission to implement a project to continuously map the need for critical materials, evaluate the EU's strategic dependencies, monitor supply and demand and changes in the behaviour or strategy of competitors and engage in foresight exercises to predict new needs in critical materials; urges the EU to take an active role in international cooperation forums in order to

accelerate the diversification of production chains; considers that these efforts should be made jointly with our strategic partners, such as those in NATO, and included in the Secure Supply Chains Working Group of the EU-US Trade and Technology Council (TTC) in order to coordinate diplomatic efforts to secure supplies and ensure alternative sources; calls for measures to mitigate risks for companies that produce critical technologies and face acquisition by entities established in non-EU countries; expresses concern about critical infrastructure inside the EU being owned by strategic competitors and recalls the need to screen foreign direct investment in European companies in defence-related emerging technologies in order to avoid economic dependence and limit the risk of espionage and sabotage on EU critical infrastructure in line with the threats and challenges identified in the Strategic Compass; urges the Member States to put in place national screening mechanisms for foreign direct investment with potential implications for security;

20. Recalls that the risk of fragmentation is exacerbated by different national requirements and different national public spending and investment and procurement schemes; highlights, in this context, the importance of standard-setting, which is critical for reducing the risks of any strategic dependency as well as ensuring interoperability among the EU Member States and between the EU and its like-minded partners, such as NATO;
21. Recalls the importance of the European Defence Fund and the Horizon programme for investments in critical technologies and calls for a revision of the multiannual financial framework (MFF) in order to increase its budget; calls on the Commission to assess the coherence and complementarity of existing EU investment programmes in order to identify gaps and promote synergies; calls for this assessment to be taken into account when preparing the next MFF;
22. Regrets that the Member States' combined defence research and technology spending in 2020 amounted to only 1.2 % of their total defence spending, far below the 2 % benchmark agreed within the framework of the EDA;
23. Emphasises the need to secure and protect critical European infrastructure and ensure sufficient monitoring and surveillance; calls on the Member States and all relevant actors to work on a plan and investment scheme to update and strengthen the resilience of critical infrastructure, such as nuclear power plants, electricity grids, water and food supply and telecommunications infrastructure, maritime and underwater infrastructures, undersea cables, energy pipelines and offshore wind farms, among others, for the digital age, including by adapting it to AI-assisted drone supervision and maintenance and in line with the new Critical Entities Resilience Directive and the Revised Directive on Security of Network and Information Systems; subsequently calls for the elaboration of an EU R&D and manufacturing strategy for advanced drones;
24. Calls on the Commission and the Member States to fulfil their commitment, as made explicit in the EU Strategic Compass, to enhance the EU's capacity to collect, provide and share accurate information, to protect critical maritime infrastructure and to develop joint operational and technological solutions, including by making the best use of the Permanent Structured Cooperation framework;

25. Calls on the Commission and the Member States to develop capabilities for testing, evaluating, validating and verifying complex defence equipment, including by means of AI-assisted technology, in order to identify vulnerabilities stemming from components produced in non-EU countries; stresses, further, that such efforts should be synergistic with the testing, evaluation, validation and verification regime called for in NATO's AI Strategy;
26. Urges the Commission and the Member States to strengthen cooperation between the European Innovation Council, the European Defence Fund and the European Investment Fund on the one side and NATO's Defence Innovation Accelerator for the North Atlantic on the other side by supporting joint projects, joint research and joint investment in cutting-edge defence technologies while respecting the decision to make all of the organisations involved autonomous;
27. Underlines the importance of a strong transatlantic bond as reflected in the EU Strategic Compass and the NATO Strategic Concept, and the need for further cooperation in the fields of security and defence; welcomes the signing of the Joint Declaration on EU-NATO Cooperation on 9 January 2023;
28. Notes the deteriorating state of multilateral export control regimes and their decreasing ability to enforce and regulate the flow and dissemination of critical technology; calls on the Member States to activate the full potential of the European Dual-Use Regulation and enforce the export control of critical technology;
29. Welcomes the initiative to create a NATO-EU taskforce on resilience and critical infrastructure and the establishment of the EU-US TTC;
30. Urges the Commission and the Member States to show global leadership in developing standards that reflect and promote the Union's interests and values and therefore encourages enhanced strategic partnerships with like-minded partners.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	9.3.2023
Result of final vote	<div style="display: flex; justify-content: flex-end; align-items: center;"> <div style="text-align: right; padding-right: 10px;"> + : - : 0 : </div> <div style="text-align: right;"> 41 2 0 </div> </div>
Members present for the final vote	Alexander Alexandrov Yordanov, François Alfonsi, Maria Arena, Petras Auštrevičius, Traian Băsescu, Reinhard Bütikofer, Włodzimierz Cimoszewicz, Michael Gahler, Sunčana Glavak, Raphaël Glucksmann, Sandra Kalniete, Dietmar Köster, Miriam Lexmann, Leopoldo López Gil, Antonio López-Istúriz White, Vangelis Meimarakis, Sven Mikser, Francisco José Millán Mon, Matjaž Nemec, Gheorghe-Vlad Nistor, Tonino Picula, Thijs Reuten, Nacho Sánchez Amor, Mounir Satouri, Jordi Solé, Sergei Stanishev, Dragoș Tudorache, Viola von Cramon-Taubadel
Substitutes present for the final vote	Attila Ara-Kovács, Anna-Michelle Asimakopoulou, Andrey Kovatchev, Georgios Kyrtos, Sergey Lagodinsky, Javi López, Gabriel Mato, Tom Vandenkendelaere, Mick Wallace, Javier Zarzalejos
Substitutes under Rule 209(7) present for the final vote	Clare Daly, Francisco Guerreiro, Eero Heinäluoma, Janina Ochojska, Pina Picierno

FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

41	+
PPE	Alexander Alexandrov Yordanov, Anna-Michelle Asimakopoulou, Traian Băsescu, Michael Gahler, Sunčana Glavak, Sandra Kalniete, Andrey Kovatchev, Miriam Lexmann, Leopoldo López Gil, Antonio López-Istúriz White, Gabriel Mato, Vangelis Meimarakis, Francisco José Millán Mon, Gheorghe-Vlad Nistor, Janina Ochojska, Tom Vandenkendelaere, Javier Zarzalejos
Renew	Petras Auštrevičius, Georgios Kyrtos, Dragoș Tudorache
S&D	Attila Ara-Kovács, Maria Arena, Włodzimierz Cimoszewicz, Raphaël Glucksmann, Eero Heinäluoma, Dietmar Köster, Javi López, Sven Mikser, Matjaž Nemec, Pina Picierno, Tonino Picula, Thijs Reuten, Nacho Sánchez Amor, Sergei Stanishev
Vers/ALE	François Alfonsi, Reinhard Bütikofer, Francisco Guerreiro, Sergey Lagodinsky, Mounir Satouri, Jordi Solé, Viola von Cramon-Taubadel

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The Left	Clare Daly, Mick Wallace

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Key to symbols:

+ : in favour

- : against

0 : abstention