



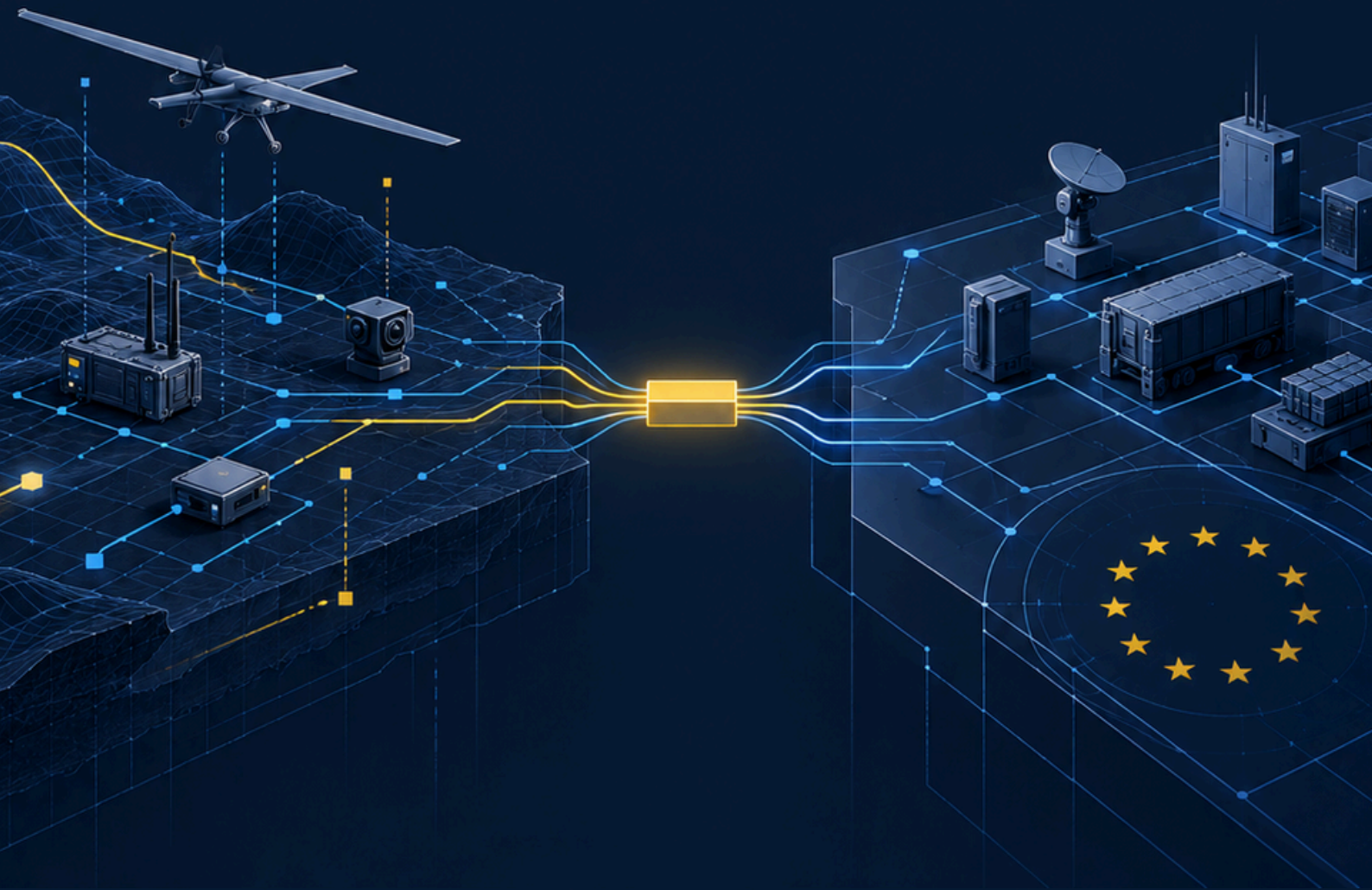
EEYES
EASTERN EUROPE YOUTH
EMPOWERMENT SPACE

UDO
NATION

FROM BATTLEFIELD INNOVATION
TO EUROPEAN CAPABILITIES:

CLOSING THE EU–UKRAINE IMPLEMENTATION GAP

By Maryna Mincheva





Maryna Mincheva

Guest Contributor to the Eastern Europe Youth Empowerment Space (EEYES).

ACKNOWLEDGEMENTS

Special thanks for their valuable comments and suggestions to:

Maksym Chebotarov — Coordinator of the US–Ukraine Partnership Program, Transatlantic Dialogue Center

Heorhii Riabtsun — War Veteran and Defence Analyst

Yaroslav Smovzh — Senior Research Fellow, ADAstra

Oleksii Leznov — Editing; Coordinator of the Ukrainian–German Cooperation Program, EEYES

Yelyzaveta Davlekamova — Design



FROM BATTLEFIELD INNOVATION TO EUROPEAN CAPABILITIES: CLOSING THE EU-UKRAINE IMPLEMENTATION GAP



AI-generated conceptual illustration. Geographic outlines are stylised and not to scale.

1. EU-Ukraine cooperation is needed more than ever

Growing uncertainty about the scale and durability of US security commitments, intensified by announced reductions in US troop presence in Europe and reported cuts to NATO-assigned jet fighters, strategic bombers, submarines, warships and drones, has increased pressure on European allies to assume greater responsibility for their own defence.¹

European forces still lack the integrated intelligence, surveillance and reconnaissance (ISR), command-and-control, targeting and cross-domain planning architecture needed to immediately compensate for these emerging capability shortfalls.² Meanwhile, after more than four years of full-scale war, Ukraine has built a defence-tech ecosystem capable of rapid adaptation, decentralised innovation and accelerated development and deployment of battlefield technologies.³ While this experience cannot replace the strategic enablers on which European defence still depends, it can help the EU strengthen its preparedness and adapt faster before the next strategic shock. The challenge, however, lies in translating this potential into deployable military solutions. Whether the EU can overcome existing institutional barriers and ensure consistent implementation across its expanding cooperation architecture is the central question examined in this brief.

2. From donor-recipient relations to an EU-Ukraine defence innovation partnership

At the outset of Russia's full-scale invasion, EU-Ukraine defence relations were shaped primarily by a donor-recipient logic, centred on military assistance, financial support and training.⁴ As of September 2026, overall EU and Member State assistance to Ukraine amounted to €224.5 billion, including an estimated €93 billion in support to the Ukrainian armed forces.⁵ In April 2026, the EU also finalised a new €90 billion Ukraine Support Loan for 2026-2027, with an indicative €60 billion dedicated to defence industrial capacity and procurement.⁶

In light of an intensifying technological arms race, the changing perception of Ukraine solely as a beneficiary became evident in the White Paper for European Defence Readiness 2030, where the European Commission acknowledged its partner at war as “the world’s leading defence and technology innovation laboratory” and called for closer integration of its defence industry into the European Defence Technological and Industrial Base (EDTIB).⁷ Since then, cooperation has expanded across several functional areas.

At the coordination level, the EU–Ukraine Task Force on Defence Industrial Cooperation was established to exchange lessons and facilitate communication between the two sides.⁸ The EU Defence Innovation Office (EUDIO), operational in Kyiv since September 2024, provided an institutional bridge for the transfer of Ukraine’s battlefield-driven knowledge into European defence innovation, thereby supporting its gradual integration into the European defence ecosystem.⁹

In the field of innovation, BraveTechEU, announced in July 2025, was created as a joint defence-tech alliance for the development, testing and deployment of modern defence solutions, bringing together the European Defence Fund (EDF), the EU Defence Innovation Scheme (EUDIS), the European Defence Agency (EDA) and Ukraine’s BRAVE1 platform.¹⁰ In July 2026, Ukraine also became fully associated with the EDF. This expanded participation allows Ukrainian entities to take part in collaborative EU defence research and development projects, while project activities, including development, testing and trials, can also take place in Ukraine.¹¹ Complementing these mechanisms, the forthcoming Agile and Rapid Defence Innovation Programme (AGILE), introduced in March 2026 and expected to launch in early 2027, is designed to reduce the time from development to operational deployment by accelerating funding, testing and validation of innovative defence technologies.¹²

Industrial cooperation has also deepened through the European Defence Industry Programme (EDIP), notably via the dedicated Ukraine Support Instrument (USI). The €300 million envelope was allocated to support the recovery, reconstruction and modernisation of Ukraine’s DTIB and facilitate its future integration into the European defence industry. Of this amount, €260 million has been allocated to two Ukraine-focused Industrial Reinforcement Actions (USI-IRA): €180 million for missiles, ammunition and bombs, and €80 million for unmanned and counter-unmanned systems.¹³ The recently launched EU–Ukraine Defence Industrial Partnership and EU–Ukraine Drone Deal further aim to bring together industry, innovators and military end-users from both sides.¹¹

In procurement and financing, Ukraine has also gained unusually broad access to EU instruments despite not being an EU member. Under the Security Action for Europe (SAFE), Ukrainian companies are eligible to participate in common procurement alongside companies established in the EU and EEA-EFTA countries, subject to the applicable eligibility and security requirements.¹⁴ While SAFE financing is provided to participating EU member states rather than directly to Ukrainian companies, it can create substantial EU-backed procurement opportunities for Ukraine’s defense industry. In parallel, the Defence Readiness Roadmap 2030 provides for Ukraine’s inclusion in relevant Capability Coalitions, designed to aggregate demand and support joint capability development and procurement.¹⁵

3. Implementation Gap: what hinders the partnership?

The building blocks of EU–Ukraine defence cooperation are increasingly in place, yet they do not form a clear and continuous pipeline from coordination and innovation to funding, testing, certification and procurement, limiting the ability of both sides to fully realise the partnership’s potential.

1) Innovation-to-deployment gap

The Commission acknowledged in its interim evaluation of the EDF that the long-term nature of EU defence research and development (R&D) projects limits the Union’s ability to benefit from Ukraine’s rapid innovation cycle and continuous battlefield feedback.¹⁶ This reflects a broader mismatch between Ukraine’s wartime innovation cycle and the EU’s traditional peacetime procurement model.¹⁷ The problem is therefore the lack of a sufficiently rapid and accessible pathway connecting military requirements, technological development, testing, integration and deployment. Agility, speed and scale have consequently become key requirements in defence capability development, especially for dual-use technologies.¹⁸

As one of the EU’s main responses to this gap, BraveTechEU has already progressed from initial set-up to operational experimentation, with two consecutive phases and planned cycles between 2026 and 2028. In June 2026, the first DefTech Forges were held in France and Estonia under the €35 million Phase II envelope, and six companies progressed to testing by the EDA in realistic operational conditions based on scenarios from the war in Ukraine.¹⁹ ²⁰ The upcoming AGILE is intended to complement this pipeline by further shortening the transition from innovation to operational use. However, as it has not yet started functioning, it remains to be seen whether these mechanisms can deliver consistently and at sufficient speed.

2) Market-access barriers for new entrants

The speed problem is only half of the trouble. Successful validation of a technology does not automatically translate into market entry or access to defence contracts. A key difference between Ukraine and the EU lies not only in the deeper integration of the commercial sector into military innovation, but also in the number of entry points available to new defence companies. Since 2022, Ukraine has developed a more streamlined and decentralised acquisition cycle, allowing military units to procure certain technologies directly in response to frontline needs. Private firms can respond more directly to these requirements, while experimental systems can receive simplified operational approval and be tested under real battlefield conditions without first completing the full peacetime adoption process.²¹

By contrast, the EU has expanded support for new entrants through EUDIS, including matchmaking services, business coaching, hackathons, and, most recently, Tech Alliances.^{22 23} These mechanisms help innovators connect with defence end-users, investors and established industry and improve their market readiness. Nevertheless, the Commission points out that such firms still face barriers to securing defence contracts.²⁴ One of these is a persistent knowledge and information gap. Many have limited direct contact with armed forces and prime contractors and therefore lack the information on operational needs required to adapt their solutions to Member States' capability requirements.¹⁸ This problem is particularly acute for innovative Ukrainian firms, as even products tested and validated under battlefield conditions may struggle to enter the European defence market.

3) Fragmented Demand

Another important barrier to the absorption of Ukraine's knowledge is the fragmentation of European demand. National approaches continue to dominate capability development, as Member States remain reluctant to cede control, while differences in threat perceptions and industrial interests further impede common approaches to defence planning and procurement.²⁵ This national discretion is also preserved by Article 346(1)(b) of the Treaty on the Functioning of the European Union (TFEU), which allows Member States, under specific conditions, to derogate from EU procurement rules where necessary to protect essential security interests.²⁶ In practice, however, Member States have often interpreted this provision as giving them considerable latitude to circumvent EU-wide procurement rules. This can help shield national procurement from wider competition and reinforce the preference for domestic suppliers and national champions, sometimes "at the expense of a broader pan-European industrial logic".²⁷ Technical requirements also differ across EU countries. The EDIS notes, for example, that even ammunition of the same calibre produced in different Member States may not always be fully interchangeable.²⁸ As a result, procurement initiatives and equipment life cycles remain largely unsynchronised, undermining economies of scale, interoperability and long-term convergence.²⁹

The 2026 European Council Conclusions on Ukraine and on European defence and security therefore invited Member States, together with the European Defence Agency (EDA), to continue working on the harmonisation of requirements, aggregation of demand and common procurement.³⁰ To date, Capability Coalitions are being developed in nine priority areas to close the critical gaps through coordinated development and procurement³¹, while SAFE provides a major financial incentive by offering Member States up to €150 billion in long-maturity loans linked, in principle, to common procurement. Of the nineteen Member States that submitted national defence investment plans, eighteen received approval for financial assistance, with disbursements already underway by mid-2026. Notably, fifteen of the submitted plans include projects with Ukraine.¹⁴ This uptake does not, however, demonstrate that common procurement has become routine. SAFE remains based on national investment plans and loans granted to individual Member States, while temporary provisions also allowed single-state procurement for contracts signed by 30 May 2026.³²

4) Standardisation and Certification

Battlefield effectiveness does not automatically make a Ukrainian system procurement-ready. Standardisation remains an important barrier on the Ukrainian side. Deputy Defence Minister Valerii Churkin identified it as a critical bottleneck, as Ukraine currently operates a mix of Western and domestically produced systems that are not always compatible in terms of frequencies, command protocols and user interfaces.³³ For integration into European forces, defence systems must also meet relevant safety, certification and standardisation requirements to ensure interoperability across Member States.³⁴ European defence cooperation increasingly places emphasis on security of supply, including greater transparency regarding supply-chain vulnerabilities and critical component dependencies.



Source: president.gov.ua

To begin addressing these discrepancies, the EU–Ukraine Drone Alliance, launched as part of the Drone Deal, was tasked with facilitating standardisation, certification and interoperability through technological roadmaps and potential common standards, alongside the mutual recognition of qualification and certification procedures.³⁵ If successfully implemented, this approach could facilitate the transition of Ukrainian technologies from battlefield use to long-term European procurement and broader integration across Member States. However, the Alliance remains at an early stage of implementation, making its effectiveness difficult to assess.

4. Recommendations

Possible avenues for breaking down these barriers and enabling a closer partnership include the following measures.

4.1 Build an end-to-end EU–Ukraine innovation-to-deployment pathway

The European Commission and the EDA should build on the existing BraveTechEU cycles to create a more complete EU–Ukraine innovation-to-deployment pathway. This framework would bring together the forthcoming AGILE Programme, Ukrainian and European military end-users, European small and medium-sized enterprises and start-ups, and established defence companies. Each cycle should begin with capability challenges jointly identified by Ukrainian military end-users, the armed forces of participating Member States and relevant EU capability-planning actors. Before projects are selected, participating Member States should also identify a potential procurement route, indicative demand and the conditions under which successful validation could lead to a follow-on contract or order. Selected innovators could then receive milestone-based funding through AGILE, followed by operational testing in Ukraine and structured feedback from Ukrainian and European military experts before final validation. The EUDIO in Kyiv could coordinate this exchange and channel battlefield requirements into the process. At the demonstration stage, the Commission and the EDA should bring in established defence contractors to support systems integration and industrial scaling, while ensuring that new entrants retain an independent role in experimentation and rapid technological development.

4.2 Aggregate demand and create predictable multi-year orders

Interested Member States should build on the existing Capability Coalitions to connect capability development with predictable joint demand. At the outset, participating states should jointly define core operational requirements and publish indicative multi-year demand signals, including expected procurement volumes, timelines and technical baselines. This would allow Ukrainian and European firms to assess the commercial case for investing in certification and production capacity before scale-up begins. Where appropriate, participating Member States could mandate the EDA to facilitate the harmonisation of operational requirements, aggregate demand and support collaborative procurement arrangements. For technologies still under development, states could make conditional advance purchase commitments to minimum order volumes, subject to agreed performance, cost, interoperability and certification thresholds. Once successfully validated, eligible solutions could be channelled into pooled procurement rather than navigate multiple national procedures independently. SAFE loans could provide financial backing for eligible common procurement led by participating Member States, with Ukrainian companies participating as eligible suppliers. To avoid new fragmentation, common technical baselines and procurement documentation should enable additional Member States to join later without requiring suppliers to redesign already validated systems.

4.3 Coordinate qualification and certification for Ukrainian systems

The European Commission, the EDA, competent national authorities and their Ukrainian counterparts should use the Ukraine Drone Alliance to develop a coordinated pathway for qualification, certification and integration of Ukrainian defence technologies into European armed forces. The initial priority should be to identify common technical baselines, testing protocols, documentation requirements and interoperability criteria for drones and counter-drone systems, while pursuing mutual recognition of test results and qualification procedures where legally and operationally feasible. Ukraine's emerging defence export centres in Europe ³⁶ could support this process by hosting market-access and regulatory-support desks, helping Ukrainian firms identify applicable requirements, prepare technical files and engage with authorised national qualification and certification bodies. They should support, rather than replace, accredited conformity-assessment bodies, military certification authorities and national regulators. Joint technical teams could then help companies conduct gap assessments before entering national procurement procedures, reducing unnecessary duplication while preserving the authority of the purchasing states. To preserve the feedback loop, recurring certification problems identified through this process should then inform the Drone Alliance's standard-setting work and future technology roadmaps. Once the approach has been tested in the drone and counter-drone sector, it could be adapted to other capability areas in which Ukrainian technologies offer operational value to European forces.

5. Conclusions

The EU–Ukraine defence tandem is gaining momentum and offers considerable promise for both sides. Yet this potential will not translate into stronger European capabilities on its own. Differences in standards, procurement practices and institutional status still stand in the way. Overcoming these limiting factors, seizing the moment and turning Ukraine's defence-industry boom into a recurring source of European capability development will therefore be decisive. For Ukraine, successful integration would anchor its defence industry more firmly in Europe and bring it closer to its long-standing accession goal. For the EU, it would offer greater speed, readiness and industrial competitiveness. Ultimately, the partnership could redefine Europe's role in its own security and in the wider strategic order.

REFERENCES

1. Malhotra, S., & Rizzo, R. (2026, August 21). *US troop withdrawal from Europe: A blessing in disguise?* Observer Research Foundation. <https://www.orfonline.org/expert-speak/us-troop-withdrawal-from-europe-a-blessing-in-disguise>
2. Stewart, R. (2026). A European way of war without the United States. *Survival*, 68(3), 7–34. <https://doi.org/10.1080/00396338.2026.2678691>
3. Hakmeh, J. (2025, March 5). *What Ukraine can teach Europe and the world about innovation in modern warfare*. Chatham House. <https://www.chathamhouse.org/2025/03/what-ukraine-can-teach-europe-and-world-about-innovation-modern-warfare>
4. Council of the European Union. (n.d.). *Timeline: EU response to Russia's war of aggression against Ukraine*. Retrieved September 21, 2026, from <https://www.consilium.europa.eu/en/policies/eu-solidarity-ukraine/timeline-russia-military-aggression-against-ukraine/>
5. Council of the European Union. (n.d.). *EU military support for Ukraine*. <https://www.consilium.europa.eu/en/policies/military-support-ukraine/>
6. Council of the European Union. (2026, April 23). *Council finalises €90 billion support loan to Ukraine*. <https://www.consilium.europa.eu/en/press/press-releases/2026/04/23/council-finalises-90-billion-support-loan-to-ukraine/>
7. European Commission, & High Representative of the Union for Foreign Affairs and Security Policy. (2025, March 19). *Joint white paper for European defence readiness 2030* (JOIN(2025) 120 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52025JC0120>
8. Directorate-General for Defence Industry and Space. (2025, May 14). *First meeting of the EU–Ukraine Task Force on Defence Industrial Cooperation*. European Commission. https://defence-industry-space.ec.europa.eu/first-meeting-eu-ukraine-task-force-defence-industrial-cooperation-2025-05-14_en
9. Directorate-General for Defence Industry and Space. (n.d.). *EU Defence Innovation Office in Kyiv (EUDIO)*. EU Defence Innovation Scheme. https://eudis.europa.eu/eu-defence-innovation-office-kyiv-eudio_en
10. Directorate-General for Defence Industry and Space. (n.d.). *BraveTechEU*. European Commission. Retrieved September 21, 2026, from https://defence-industry-space.ec.europa.eu/eu-defence-industry/bravetecheu_en
11. Press and Information Team of the Delegation to Ukraine. (2026, July 16). *EU launches Ukraine defence industrial partnership, Drone Deal and disburses €1 billion for drones*. European External Action Service. https://www.eeas.europa.eu/delegations/ukraine/eu-launches-ukraine-defence-industrial-partnership-drone-deal-and-disburses-eur1-billion-drones_en
12. Directorate-General for Defence Industry and Space. (2026, March 26). *€115 million programme for agile and rapid defence innovation (AGILE)*. European Commission. https://defence-industry-space.ec.europa.eu/eu115-million-programme-agile-and-rapid-defence-innovation-agile-2026-03-26_en

REFERENCES

13. Directorate-General for Defence Industry and Space. (n.d.). *EDIP | Forging Europe's defence*. European Commission. Retrieved September 21, 2026, from https://defence-industry-space.ec.europa.eu/eu-defence-industry/edip-forging-europes-defence_en
14. Directorate-General for Defence Industry and Space. (n.d.). *SAFE | Security Action for Europe*. European Commission. Retrieved September 21, 2026, from https://defence-industry-space.ec.europa.eu/eu-defence-industry/safe-security-action-europe_en
15. Directorate-General for Defence Industry and Space. (2025, October 16). *Readiness Roadmap 2030*. European Commission. https://defence-industry-space.ec.europa.eu/eu-defence-industry/readiness-roadmap-2030_en
16. European Commission. (2025, June 17). *The European Defence Fund: Supporting the development of the defence capabilities of tomorrow: Interim evaluation of the European Defence Fund* (COM(2025) 299 final). https://defence-industry-space.ec.europa.eu/document/download/50cb88a0-7a4b-4f41-9649-f6272ca987ca_en?filename=COM_2025_299_1_EN_ACT.pdf
17. Fakhurdinova, M., Valinkevych, V., Tkachuk, Y., Rusyn, S., Maslianchuk, D., Veselovskyi, B., Khimich, K., Demchuk, S., & Balanchuk, Y. (2026, June 19). *The EU's next chapter: Economic, political and security gains from Ukraine's accession*. Transatlantic Dialogue Center. <https://tdcenter.org/2026/06/19/economic-security-gains-ukraine-eu-accession/>
18. European Commission. (2025, November 19). *EU defence industry transformation roadmap: Unleashing disruptive innovation for defence readiness* (COM(2025) 845 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52025DC0845>
19. Directorate-General for Defence Industry and Space. (2026, April 29). *European Commission partners with the European Defence Agency on BraveTech EU*. European Commission. https://defence-industry-space.ec.europa.eu/european-commission-partners-european-defence-agency-bravetech-eu-2026-04-29_en
20. European Defence Agency. (2026, July 14). *EDA will work with the first group of innovators under BraveTech EU Phase II*. <https://eda.europa.eu/news-and-events/news/2026/07/14/eda-starts-working-with-the-first-group-of-innovators-under-bravetech-eu-phase-ii>
21. Bondar, K. (2025, January 13). *How Ukraine rebuilt its military acquisition system around commercial technology*. Center for Strategic and International Studies. <https://www.csis.org/analysis/how-ukraine-rebuilt-its-military-acquisition-system-around-commercial-technology>
22. Directorate-General for Defence Industry and Space. (n.d.). *About EUDIS*. EU Defence Innovation Scheme. Retrieved September 21, 2026, from https://eudis.europa.eu/index_en
23. Directorate-General for Defence Industry and Space. (2025, November 28). *Launch event of the EUDIS Tech Alliance*. European Commission. https://defence-industry-space.ec.europa.eu/launch-event-eudis-tech-alliance-2025-11-28_en
24. Directorate-General for Defence Industry and Space. (2026, June 17). *Implementation dialogue on the EU defence industry: Industrial ramp-up and supply chain resilience*. European Commission. https://defence-industry-space.ec.europa.eu/implementation-dialogue-eu-defence-industry-industrial-ramp-and-supply-chain-resilience-2026-06-17_en

REFERENCES

25. Clapp, S. (2024, September). *European defence industrial strategy* (PE 762.402). European Parliamentary Research Service. https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/762402/EPRS_BRI%282024%29762402_EN.pdf
26. *Consolidated version of the Treaty on the Functioning of the European Union*, art. 346, 2016 O.J. (C 202) 194. https://eur-lex.europa.eu/eli/treaty/tfeu_2016/art_346/oj/eng
27. Clapp, S., Höflmayr, M., & Vambrie, F. (2025, September). *Building a common market for European defence* (PE 775.924). European Parliamentary Research Service. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/775924/EPRS_BRI\(2025\)775924_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/775924/EPRS_BRI(2025)775924_EN.pdf)
28. European Commission, & High Representative of the Union for Foreign Affairs and Security Policy. (2024, March 5). *A new European defence industrial strategy: Achieving EU readiness through a responsive and resilient European defence industry* (JOIN(2024) 10 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52024JC0010>
29. European Defence Agency. (2026). *Defence data 2025–2026*. https://eda.europa.eu/docs/default-source/eda-publications/2026-eda_defencedata_webpublic.pdf
30. European Council. (2026, June 18). *European Council conclusions on Ukraine and on European defence and security*. <https://www.consilium.europa.eu/en/press/press-releases/2026/06/18/european-council-conclusions-on-ukraine-and-on-european-defence-and-security/>
31. Directorate-General for Defence Industry and Space. (2025, October 16). *Commission and High Representative present new Defence Roadmap to strengthen European defence capabilities*. European Commission. https://defence-industry-space.ec.europa.eu/commission-and-high-representative-present-new-defence-roadmap-strengthen-european-defence-2025-10-16_en
32. Council Regulation (EU) 2025/1106 of 27 May 2025 establishing the Security Action for Europe (SAFE) through the Reinforcement of the European Defence Industry Instrument. (2025). *Official Journal of the European Union, L, 2025/1106*. <https://eur-lex.europa.eu/eli/reg/2025/1106/oj/eng>
33. European Defence Agency. (2025, May 14). *Ukraine makes pitch for closer EU defence innovation at EDA event*. <https://eda.europa.eu/news-and-events/news/2025/05/14/ukraine-makes-pitch-for-closer-eu-defence-innovation-at-eda-event>
34. European Defence Agency. (n.d.). *Industry, Synergies & Enablers Directorate*. Retrieved September 21, 2026, from <https://eda.europa.eu/who-we-are/organigram/industry-synergies-enablers-ise>
35. European Commission. (2026, May 5). *Draft terms of reference: EU–Ukraine Drone Alliance*. https://defence-industry-space.ec.europa.eu/document/download/c97ccfcb-1ee0-4fff-b061-64081f502325_en?filename=EU-Ukraine+Drone+Alliance+Draft+Terms+of+Reference.pdf
36. Hunder, M. (2026, February 9). *Ukraine opens up arms exports, seeking to cash in on wartime technology*. *Reuters*. <https://www.reuters.com/business/aerospace-defense/ukraine-opens-up-arms-exports-seeking-cash-wartime-technology-2026-02-09/>