



Policy Brief

Between a hammer and an anvil

How Ukraine can strengthen
Europe's defence and security



Executive Summary

1. Europe faces an urgent capability gap.

Russia is now outperforming Europe in military spending, production, and adaptation speed. Its output, backed by coordinated autocratic partnerships, far exceeds the fragmented and slow-moving European plans. Without rapid rearmament and deeper industrial integration, Europe will not be able to match Russia's trajectory by 2030.

2. Ukraine can help Europe close this gap.

Ukraine offers not only battlefield lessons learned, but something far more valuable: a system of fast innovation, rapid scaling, and continuous adaptation. The war has shown that capability development — not legacy stockpiles — determines long-term advantage. Ukraine's defence sector is already demonstrating the agility Europe lacks.

3. Ukraine's contribution goes beyond the frontline.

Ukraine brings a rapidly expanding industry, advanced dual-use innovation, a skilled engineering and IT workforce, and a unique end-user feedback loop that compresses

R&D cycles dramatically. Combined with European industrial power and financing, this creates real potential for joint capability-building.

4. But cooperation is constrained by hurdles on both sides.

Regulation, export control, long-term contracting limits, fragmented procurement procedures, supply-chain bottlenecks, and slow innovation cycles continue to hold back both Ukraine and the EU. These barriers can be addressed — but only through coordinated reform, G2G agreements, and a shift toward flexible development and testing frameworks.

5. The main challenge is fragmentation and short planning horizons.

Europe's defence ecosystem is still structured around national silos, incompatible systems, and multi-year procurement delays. This document outlines how a coordinated approach — driven by joint planning, standardisation, integrated supply chains, and Ukraine's unique operational expertise — can narrow this gap and accelerate Europe's ability to rearm effectively.



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I. Geopolitical context

In recent years, most European states have recognised Russia's growing ambition to re-define global security architecture, and the full-scale invasion of Ukraine is no longer viewed in isolation. The war in Ukraine is the next stage in an escalatory strategy outlined by Putin in his 2007 Munich security conference speech. Modern Russia has reverted to the Cold War mentality of opposing «camps» and subversive tactics favoured by the Soviet intelligence services. It combines versatile hybrid interference aimed at eroding foundations of Western democracies with military campaigns designed to probe and undermine triggers of collective security framework, including Article 5.

Russia does not think in categories of war and peace — since 2007 it has set on a clear path of dismantling and rebuilding the international post-war order.

Russia's ability to escape unscathed following a series of regional conflicts (from the Transnistria War to Abkhazia and South Ossetia, to the occupation of Crimea and Eastern Ukraine) has served two key purposes. Firstly — cohesion, unity and, most importantly, ability to mount a rapid response to external threats by democratic states (either unilaterally or collectively) has been successfully put into doubt. Secondly, lack of trust and confidence in existing security organisations creates increasing internal pressures, while emboldening potential adversaries. **In three years, Russia has succeeded in creating an alliance of like-minded autocracies.**

In the defence domain, this translates into pooling of resources, finances, lessons learned, experience and technology. Centrally planned autocracies are proving to be more efficient in standardising requirements and demand signals, directing financial resources to scaling up and overseeing R&D in the military domain. **As a result, Russia is no longer catching up with Ukraine's innovation breakthroughs,** it is actively countering defence tech innovations in key areas and collaborating with its allies to develop and implement new technologies and tactics, which could give a competitive edge to their forces — from fibre optic cable solutions to AI applications.

According to IISS data, Russia's military spending adjusted by purchasing power if taken on a stand-alone basis (without considering synergies across the «axis of upheaval») amounted to \$461.6 billion in 2024. Europe's combined spending was assessed at \$457 billion, fragmented between numerous nations and often representing an «upkeep cost» of the militaries. Long-term investment into military capabilities of EU countries amounted to just 19.5% of defence spending. In 2024 alone, Russia produced and refurbished an estimated 1,550 tanks, 5,700 armoured vehicles and 450 artillery pieces of all types. It also deployed 1,800 long-range Lancet loitering munitions¹. The growth is staggering, and Russia shows no signs of slowing down. Recent assessments such as «**Fit for War by 2030?**» (Kiel Institute) reinforced this picture. Even when comparing Russia only to four major European producers, the gap remains

¹ David Hambling, «Russia Steps Up Deployment Of Lancet Kamikaze Drones, But How Effective Are They?» Forbes, 25 June 2024 <https://www.forbes.com/sites/davidhambling/2024/06/25/russia-steps-up-deployment-of-lancet-kamikaze-drones-but-how-effective-are-they/>



I. Geopolitical context

wide: **Russia continues to outproduce Europe across multiple weapon systems.** The report concludes that European output would need to increase by **a factor of around five** to tilt the balance decisively. Procurement must also be **frontloaded**, as delivery delays of **three years or more** persist across the EU industrial base².

Dependence on China for critical materials and components has been identified as a significant risk for European defence in several recent studies and has been reflected in the EC's official position.

Several de-risking initiatives, including the Critical Raw Materials Act, have been adopted but are yet to show meaningful changes to the supply chains, especially in the industries that are heavily dependent on Chinese materials and components and not incentivised to switch to more expensive alternative sources.

At the same time, political changes in the US global priorities and foreign policy brought to the forefront growing concerns over **systemic dependence on the US strategic enablers, as well as missile defence, aircraft engines and drones** are further areas where Europe needs to focus. According to data by the Stockholm International Peace Research Institute (SIPRI), US arms exports to the European states more than trebled from 2015-19 to 2020-24 (+233%), and the share of arms imports from the US by European NATO states rose from 52% to 64%. Despite EU initiatives aimed at curbing this trend (SAFE, EDIP) decoupling from the US arms manufacturers will present significant challenges.

Various studies indicate that without a substantial rethinking of defence planning and procurement, relaxation of regulations affecting defence industries directly or indirectly, improved access to financing as well as support of defence R&D and innovation, Europe is unlikely to be able to catch up to Russia's arms production by 2030.

In response to the above factors, the European Commission has launched a number of initiatives outlined in the White Paper for European Defence Readiness 2030, which seek to address key weaknesses and hurdles (SAFE initiative, additional financing routes, Defence Simplification Omnibus etc). Successful implementation of these measures is crucial to the ability of European Defence Technological and Industrial Base (DTIB) to deliver the scaling up and innovation expected by the defence ministries around Europe.

Inclusion of Ukraine's DTIB into various European mechanisms and regulations (SAFE, EDIS, EDIP) is a first step towards integrating battlefield lessons learned, tactics and emerging technologies into the wider European defence dimension.

Simultaneously Ukraine has announced the «Build with Ukraine» initiative aimed at maximising the effect of defence collaboration to achieve long-lasting industrial ties that will benefit European security. It is intended to allow European DTIB to co-develop and co-produce (both in Ukraine and in Europe), mutually sharing technology, data and resulting production. In the most rapidly developing areas like uncrewed systems manufacturing, this approach may lead to a capability building

² Report «Fit for war by 2030? European rearmament vis-a-vis Russia lagging in numbers and technologies» <https://www.bruegel.org/report/fit-war-2030-european-rearmament-vis-vis-russia-lagging-numbers-and-technologies>



II. Lessons learned – battlefield and procurement

exercise rather than simple defence material sales, involving sharing of tactics, joint training and exercises, constant upgrades, modernisation and data sharing. The initiative also envisages various incentives to defence production and scaling up in Ukraine.

It is possible to pursue this goal without Ukraine — and we acknowledge this. But it is easier, cheaper, more realistic, and far more beneficial for the resilience of the EU to do it with Ukraine as a full partner.

II. Lessons learned – battlefield and procurement

Autonomous systems are transforming the battlefield, calling for an urgent revision of established tactics and strategies in all key domains.

According to the latest announcements by Ukraine, 80-85% of all kills are effected by various unmanned aerial system (UAS) platforms. While replacing conventional weapons with autonomous systems is still premature, lessons learned by the Armed Forces of Ukraine (AFU) are invaluable in informing future warfare doctrine. Presently drones demonstrate highest efficiency when used with artillery, increasing strike precision and contributing to effective ammunition use, however it is becoming increasingly likely that electronic warfare/uncrewed systems capabilities will be crucial in both the defensive and offensive capability building. In this evolving environment, tactics are proving as crucial as technology. Continuous innovation in electronic warfare is driving rapid modernization of uncrewed systems, particularly UAS, with growing emphasis on AI, autonomous terminal guidance, and fibre-optic technologies. Recently interceptor drones have emerged as a critical air defence system component,

especially in light of scaling of drone production by Russia. Increased sightings of drones over European critical infrastructure requires an urgent solution, while several European states have acknowledged that their current air defence and counter drone capabilities are insufficient in the face of a potential attack.

EU member states are considering various projects to develop and deploy counter-drone capabilities; however, it remains unclear whether true full-scale synergies will be implemented given a persistent national bias.

Higher mobility is now often favoured over costly heavy armour, **signalling a partial shift away from the traditional approach** that was heavily reliant on main battle tanks (MBT) and infantry fighting vehicles (IFVs).

Meanwhile, **ammunition, spare parts and components remain key logistical bottlenecks for maintenance as well as scaling up — both for Ukraine and its partners.**

Russia's war of aggression against Ukraine has highlighted at least a partial



II. Lessons learned – battlefield and procurement

shift from costly conventional armaments to economic and scalable solutions — it does not make much sense to produce high-precision weapons that will be delivered in years' time, if the manufacturing factory can be destroyed by a swarm of cheap drones produced in a month. Their lower hit rate will be compensated by mass and speed of delivery and deployment.

What the war ultimately shows is that the **decisive factor is no longer the size of the ammunition stockpile, but the capacity to develop, adapt and scale new systems faster than the opponent.**

Industrial agility — not legacy arsenals — is what determines long-term advantage.

Automation and scalability are also the only answer to the otherwise unsolvable problem currently faced by Ukraine, but potentially threatening other states: counteracting an adversary with a considerably higher military manpower and high tolerance for human losses.

Such changes in military doctrine require a change in military planning and procurement. Traditional procurement methods based on stringent, highly tailored specifications and prolonged bidding and contracting need to be replaced by a more flexible system of regulations allowing continuous upgrades and iterative development. Similarly, European regulations on testing are strangling the ability of manufacturers to deliver battle-ready systems.

End users have traditionally been removed from active participation in the development and improvement of systems that they will be ultimately fighting with. AFU's experience demonstrates that continuous feedback from

end users is crucial to rapid innovation and ability to respond to the enemy's new tech and tactics. Therefore, R&D contracts must be designed to foster close collaboration between developers and end users (while providing adequate protection of classified information); the success of the UK's Raven air defence system — developed in just three months through such cooperation — is a clear example.

Finally, Ukraine's experience has highlighted the urgent need for greater standardisation across European and NATO systems. Managing an increasingly fragmented inventory of incompatible equipment, spare parts and munitions creates unnecessary operational friction — **standardisation must become a strategic priority despite political complexities.** One example of a successful approach to overcoming this problem is a multilateral agreement setting up «CV-90 Club», which allows CV-90 user militaries to share expertise, lessons learned and pool resources, as well as provide feedback to the manufacturer.



III. Ukraine is a strategic defence partner, not just a battleground

Viewing Ukraine as merely a frontline country and a testing ground is a mistake that should be avoided — many successful solutions developed over the last three years in Ukraine result from combined forces of dedicated end users and highly professional civilians, which is unique to current circumstances in the country and cannot be easily replicated. Ukraine should become an indispensable part of Europe's evolving defence ecosystem for Europe's benefit, contributing its expertise and know-how, but also working closely with its European partners.

Ukraine's defence industrial base (DTIB) is expanding rapidly, from \$1 billion in 2022 to a projected \$35 billion in 2025. The country brings unparalleled battlefield experience across multiple domains – from maintenance, repair, and overhaul (MRO) of both legacy and NATO equipment, to logistics and cutting-edge tech innovation.

Ukrainian industry is demonstrating an unmatched ability to move from concept to

battlefield supply on compressed timelines. The country also benefits from a highly skilled labour force in engineering, IT, and advanced manufacturing. Critically, R&D is driven by frontline realities and supported by an ability to test innovations in real combat conditions. Many regulations limiting the ability of manufacturers to test their equipment in close to battle conditions have been eased or removed. Various initiatives allow close collaboration in terms of testing, feedback gathering and access to end users. Additionally, Ukraine is proving its capacity to develop new, decentralised production facilities — vital for fast and efficient stockpiling of ammunition, including drone systems. This makes Ukraine not just a consumer of Western technology, but a key contributor to the defence capabilities of the broader European and NATO community.

As crucial is the tactical experience of Ukrainian troops in drone and counter-drone warfare that can inform allies' armed forces' decisions in developing new initiatives to counter emerging threats.

IV. Key challenges for the EU and possible solutions

One of the key challenges that has been strangling the European defence sector is the perpetuation of **siloes, purely national approaches to defence procurement and persistent preference for national**

defence companies. While this is understandable from the national security point of view, especially at times of peace, such an approach becomes an Achilles heel for the smaller countries when faced with a



IV. Key challenges for the EU and possible solutions

large autocratic adversary. These practices reinforce fragmentation across Europe's defence ecosystem and significantly slow down innovation, create severe limitations for joint military action and erode benefits offered by military alliances. In an event of a theoretical conflict, instead of a joint European force, 27 armies of varying strength will be struggling with compatibility in terms of armaments, spares and munitions and relevant experience.

To counter this, it is essential to further promote and develop collaborative initiatives similar to SAFE (Security Action for Europe), EDIP (European Defence Industry Programme), and multinational procurement mechanisms at the G2G level. Projects of common interest within the EU should be formulated specifically in the defence domain. Priority should be given to frameworks that incentivise joint ventures, enable cross-border technology transfer, and foster deeper industrial integration — all critical to building a cohesive and resilient European Defence Industrial Base.

A second major challenge is the **limited availability of funding** for defence modernisation and innovation. One practical solution is to relax existing ESG-related constraints — with the European Investment Bank (EIB) leading by example. In parallel, expanding export financing mechanisms and enabling greater participation of private capital can help unlock new resources to support Europe's defence ambitions, and bring on board more Ukrainian producers who struggle with lack of national defence funding. Finding alternative funding routes should go hand in hand with more efficient spending and procurement procedures, to emphasize cost-efficient solutions.

Another pressing issue is the **presence of persistent supply chain bottlenecks**. Addressing this will require closer cooperation with Ukrainian engineering and production companies, which bring both conventional and additive manufacturing capabilities to the table. Leveraging Ukraine's industrial capacity can help relieve critical pressure points in Europe's defence supply chains.

Finally, the defence sector continues to suffer from a **slow innovation cycle**. This can be tackled by strengthening R&D efforts through dedicated G2G science and technology cooperation agreements, fostering robust G2B and B2B partnerships, and — crucially — ensuring that innovation cycles are informed by practical lessons learned from the battlefield.



V. Hurdles to DTIB growth and cooperation in Ukraine

Ukraine also has significant work to do internally to unlock the full potential of its Defence Technological and Industrial Base (DTIB) and to become a more effective partner in European defence cooperation.

First, we must tackle existing **regulatory constraints**. These include limitations on long-term contracting, export restrictions, capital movement controls, outdated frameworks for defence intellectual property (IP) and technology transfer, and upgrading approaches and systems for protecting classified information along with ensuring cybersecurity. Addressing these issues will require targeted reforms, the development of G2G agreements, and well-designed incentives to support a more open and dynamic defence sector.

Second, there is a clear **lack of strategic guidance** regarding DTIB growth and future procurement needs. While operational security considerations may limit public release of some details, it is critical that clear strategies

in relevant sectors are developed and shared with trusted stakeholders. This will enable better alignment of industrial capacity with future requirements.

Third, Ukraine faces the challenge of a **large but fragmented defence industrial base**.

To overcome this, improved coordination is required both internally and through G2G mechanisms – with a strong focus on building more effective horizontal links across the ecosystem and particular attention given to the entire supply chain, not only end product manufacturers.

Finally, there is **insufficient dialogue between industry and key stakeholders**, including the Ukrainian government and international partners. Strengthening this dialogue is essential to mobilise the full potential of the Ukrainian DTIB and to ensure that its growth is strategically aligned with both national defence needs and wider European priorities.

VI. Deblocking the cooperation pipeline: Conceptual Approach

To unlock the full potential of defence cooperation with Ukraine, a **structured and proactive approach is required**.

1. **Controlled exports** should be enabled through robust international and

G2G agreements, providing a trusted framework for sensitive transactions — while first steps are already in the pipeline, it is crucial that the approach to exports fosters cooperation with partner nations while protecting the IP rights of



Ukrainian innovators and ensuring a level playing field for all producers to avoid handpicking selected companies and instead preserves healthy competition.

2. **A comprehensive suite of multinational and G2G agreements** should be established to cover all key areas of cooperation and support — spanning R&D, technology transfer, joint procurement, and industrial integration.
3. Ukraine should implement a dedicated **state programme** to incentivise the growth of its DTIB and foster cross-border industrial cooperation.

4. **Material life cycle management and technological capability roadmaps** — fully digitalised and equipped with appropriate cyber protections — should underpin future development and procurement cycles.

Finally, a **centralised research and lessons-learned effort** is needed to systematically capture battlefield insights and channel them into both Ukrainian and partner-driven R&D efforts. Such an initiative will ensure that innovation remains tightly linked to operational realities and shared across the cooperative network.

VII. Collaboration case: Why effectiveness is now

A recent UK example demonstrates that rapid innovation in defence is entirely possible within established industrial structures — if the right frameworks and incentives are in place. What is often perceived as one of the largest and most bureaucratic original equipment manufacturers (OEMs) successfully developed the Raven air defence system in just three months, integrating an existing missile with a new launcher, and delivering it battle-tested to Ukraine.

This success was enabled by a broader UK-Ukraine framework: the April 2024 Framework Agreement on Defence Materiel Cooperation, covering joint development, procurement, R&D, test and evaluation (T&E), and IP protection; a July 2024 UKEF Loan Agreement; and a £1.6 billion procurement

project for LMM missiles and RapidRanger launchers with a localisation component potentially worth £500 million. The initiative aims to foster long-term industrial partnerships, modernise Ukraine's Defence Industrial Base, localise manufacturing, and ensure technology transfer — as exemplified by the February 2025 Thales — Ukrainian Defense Industry (UDI) joint venture announcement.



VIII. Toolkit as a collaborative effort

The Ukraine Facility Platform calls on all stakeholders – policymakers, financial institutions, businesses, experts, and the military – to engage in a joint effort to develop a comprehensive solutions-oriented Toolkit. Every element of this Toolkit should be built through collaboration, drawing on the combined expertise and practical experience of the entire ecosystem.

- **Battlefield Lessons Learned** must be continuously updated to inform both tactical adaptation and strategic planning, while Ukraine should be included in the strategic doctrine of Russia's deterrence development.
- Second, **Ukraine's strengths should be clearly assessed and articulated** – the country is fast becoming an indispensable player in Europe's evolving defence ecosystem.
- **Specific solutions** where Ukraine contributes real added value should be clearly defined and translated into **actionable projects**.
- A structured section on **Hurdles to Growth and Cooperation in Ukraine** should be developed – moving from detailed problem assessment to a targeted set of policy recommendations and practical solutions.
- **Ukraine should contribute concrete recommendations to the evolving EU regulatory framework**, to the design of future EU defence-related funds, and to European initiatives on defragmentation and standardisation of the European DTIB. This contribution should be

prepared systematically – as part of Ukraine's engagement with EU partners – to ensure that Ukraine's experience and industrial capacity are fully integrated into Europe's future defence architecture.

Moving from problem identification to actionable policy solutions requires a different level of coordination. Ukraine Facility Platform brings together leading national and international expertise to support this shift. No single institution – governmental or expert – can build this cooperation alone. But when the most proactive institutions and thinkers work together, a coordination system begins to emerge – **its contours are already visible**.

To advance this work, we have started producing updated summaries of:

1. **An assessment of Ukraine's emerging technological and industrial strengths**, rooted in the battlefield lessons learned, including cooperation with the civilian sector, where dual-use innovation is growing fastest.
2. **Analysis of the hurdles to growth**, originated in both Ukraine's and EU regulations, practices moving from problem identification to actionable policy solutions.