

RESEARCH REPORT

Partnering with Ukraine **Rearming Europe through** **defence industrial** **cooperation**

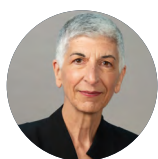
Tamar Jacoby

APRIL 2026



Democratic Resilience in a New Age of War

About the Author



Tamar Jacoby is the Kyiv-based director of the Progressive Policy Institute's New Ukraine project and author most recently of *Displaced: The Ukrainian Refugee Experience*.

The **Democratic Resilience in a New Age of War (DRNAW)** programme is a three-year, multidisciplinary initiative supporting democracies amid escalating drone-enabled warfare and hybrid conflict. Ukraine is both a core partner and a hub for operational learning and knowledge exchange. Leveraging LSE's global expertise, direct Ukrainian partnerships, and practitioner engagement, the programme delivers real-world solutions for democratic resilience against accelerating authoritarian threats and technological disruption.

20 April 2026

Editor: **Stuart Austin**

Research support: **Maryna Ponomarenko** and **Matthew Truehart**

Designer: **Indira Endaya**

Cover image: Bohdana self-propelled howitzer in the field in eastern Ukraine.

Photo credit: **National Association of Ukrainian Defense Industries.**

Contents

4	Introduction
5	Ukrainian and Western European Defence: The Case for Integration
6	Ukraine's Defence Sector: Breaking the Mould
11	The Danish Model: A First Step Toward Collaboration
15	The Birth of the Joint Venture Model
17	Joint Venture Model: Mixed Reviews and Outcomes
21	Challenges and Opportunities
24	Looking Ahead
25	Conclusion and Policy Recommendations
27	Note on Sources
28	References

PARTNERING WITH UKRAINE

Rearming Europe through defence industrial cooperation

Four years into the full-scale war in Ukraine, with a second major conflagration raging in the Persian Gulf and an increasing number of Western countries talking about adapting Ukraine's way of war, there is growing recognition of the potential mutual benefit that can be derived from more cooperation between Kyiv and the West.

Policy makers and practitioners in the West and Ukraine have argued for exploring new forms of cooperation above and beyond Western military aid. Kyiv could give or sell its innovative, low-cost, battle-proven weapons to the West. Training, now largely one-directional – Europeans training Ukrainian fighters – could evolve into more of a two-way street. Western strategists have much to learn from Ukraine about how to integrate unmanned vehicles – air, land, and sea drones – into their battle plans. But one of the most promising approaches, often neglected in the West, is collaborative manufacturing.

Ukraine has been talking about industrial cooperation for more than two years, and a handful of European countries have explored promising experiments. Under the so-called 'Danish model', launched in mid-2024, Copenhagen, Stockholm, Oslo, and several other donors alongside the European Union, bolstered Ukraine's defence procurement by covering the cost of selected arms purchases. More recently, some dozen Ukrainian companies have signed agreements to produce weaponry in Western Europe, either alone or as part of a joint venture with a Western firm.

The war in the Persian Gulf has spurred new international interest in Ukrainian defence technology. Yet by and large, these are still small experiments – ingenious ideas with significant promise for both the West and Ukraine, but not yet meaningful steps toward the integration of Ukrainian and European security.

This paper asks why. What have these experiments hoped to achieve? What have they accomplished? What lessons have been learned by Ukraine and its international partners? What if anything can be done to improve these fledgling initiatives and, most important, scale them?

The paper concludes with recommendations for policy makers, manufacturers, investors, and facilitating middlemen. What can be done to build on the experiments under way, including the Danish model and a handful of government-sponsored joint ventures – an approach Kyiv calls 'Build With Ukraine'? Europe's future security may turn on the results.

Ukrainian and Western European Defence: The Case for Integration

Events in Europe and the Middle East in late 2025 and early 2026 drove home the immediate potential benefits of closer cooperation between the West and Ukraine. Drone incursions in autumn 2025 in Poland, Denmark, and several other European countries caused widespread alarm among Western publics. The European response, though effective, was widely seen as wasteful and inappropriate – in more than one case, using an F-35 fighter jet that cost more than \$80 million to shoot down a Russian drone worth \$10,000 to \$15,000 (Burrows, 2025). The same spectacle repeated itself a few months later in the Persian Gulf as Iran lobbed thousands of inexpensive Shahed drones at American and regional targets, sowing fear and confusion and disrupting global oil shipments. But the case for learning from Ukraine goes beyond these immediate flashpoints.

Many Western Europeans find it challenging to enter into collaboration with Ukrainian arms manufacturers. The Ukrainian defence industry is highly decentralised. Wartime secrecy and restrictions add to the complexity of operating in a heavily regulated business climate. Many Europeans fail to grasp how deeply Ukraine's way of war – and its defence industry – differs from the traditional Western way. Others, conditioned by Western reliance on highly engineered, expensive weaponry, dismiss what they see as cheap, low-tech equipment with little value on the battlefield – what one leading European defence manufacturer described as gadgetry made 'in the kitchen' by 'housewives [with] 3D printers' (Peleschuk, 2026).

“
In the longer run, defence production will likely emerge as a pillar of the postwar Ukrainian economy...
”

Europeans ignore the opportunity in Ukraine at their peril. Closer defence industrial cooperation has nothing to do with charity. It's driven by strategic interest, for both parties. Facing an aggressive, revanchist Russia with little or no prospect of support from its traditional ally, the United States, Europe needs to rearm quickly with battle-proven technology. For its part, Ukraine needs help to repel Russia and find its footing in the European single market. Integration's long-term promise for both sides: a single, state-of-the-art defence industrial base and sustainable deterrence (Kirkegaard, 2025; Krasnoshtan, 2025).

After four years of grinding war, Ukraine brings significant assets to the table. It fields a larger and more experienced army than any other European nation – in late 2025, more soldiers than Germany, France, the UK, and Poland combined (Statbase, 2026). So too, defence spending; measured by purchasing power parity rather than nominal dollars, the 2024 Ukrainian defence budget was nearly equal to the sum of the German and French defence budgets (Robertson, no date). Looking beyond drones and other 21st-century technology, one of the traditional weapons systems most widely used in Ukraine is the Bohdana self-propelled howitzer. The Soviet-legacy machine-tool manufacturer that makes it produces several times as many guns each year as the French defence giant KNDS, whose Cesar howitzers cost nearly twice as much (Defence Express, 2024).

Bottom line: closer cooperation would help both the West and Ukraine now and for decades to come. In the short term, European funding can boost Kyiv's wartime defence production, while the West adapts Ukraine's innovative weaponry and draws on its extensive combat experience. AI-enhanced drone interceptors, drone-swarm software, and acoustic air defence sensors are just a few of the new technologies on offer.

In the longer run, defence production will likely emerge as a pillar of the postwar Ukrainian economy, and when Kyiv joins the single market and begins to participate in EU decision-making, Ukraine could become the arsenal of Europe, manufacturing much of its weaponry and augmenting the continent's armed forces. An integrated defence industrial base could even produce weapons for export, anchoring the Ukrainian economy and bolstering Europe's global economic power.

Ukraine's Defence Sector: Breaking the Mould

Ukraine has a long history of weapons manufacturing. Some 30% of the Soviet arms industry was concentrated in Ukraine, and as late as the 1990s, more than one million Ukrainians were employed in weapons factories (Kuzmuk and Scarazzato, 2025). But that industry atrophied long ago. Many of the enterprises active today are brand-new, having emerged since February 2022, and what is different goes deeper than uncrewed weaponry or other new technology – it's a new and entirely unique way of war.

Before the 2022 invasion, the industry was dominated by a sprawling state-owned enterprise, Ukroboronprom, now renamed Ukrainian Defence Industries (UDI). Some 130 enterprises under the UDI umbrella manufactured and maintained traditional weaponry, much of it inherited directly from the Soviet Army. But in 2023, then Minister of Digital Transformation (now Minister of Defence) Mykhailo Fedorov upended the system by initiating new regulations to unleash the private sector. Resolution 256 dramatically reduced red tape, expanded allowable profit margins, and accelerated the path to Ministry of Defence (MoD) certification, cutting the time from innovation to procurement and sharply reducing opportunities for corruption.

The results were striking. Before the full-scale war, Ukraine had no more than five or six private defence contractors (Fedirko 2026). In the four years since, Fedorov's liberalisation combined with a deep pool of engineering talent have given rise to more than 1,000 firms, some say as many as 1,500 (Kushnerska 2025). The production of unmanned aerial vehicles (UAVs), used on a largely experimental basis for correcting artillery fire in Donbas in 2014-15, has expanded exponentially and taken on a host of new forms.

Today, drones come in all shapes and sizes. Some fit in a carry-on bag, while others are as big as rowboats or small airplanes. They perform every conceivable function on the battlefield – reconnaissance and surveillance, aerial bombardment, air defence, unmanned ground assaults, delivering food and medicine, evacuating the wounded, and more. The most potent can deliver long-range fire, hitting targets some thousand miles from where they are launched.



A General Cherry Bullet interceptor designed to down Iranian Shahed and Russian Geran-2 drones. Photo credit: General Cherry.

In 2022, Ukraine produced just a few thousand UAVs; by 2025, the count had risen to four million. Expected capacity in 2026: seven million (Safronov, 2026). Together, air, sea, and land drones are estimated to be responsible for more than 80% of Ukrainian and Russian battlefield casualties (Ruitenbergh, 2026).

But weaponry alone does not win wars, and this new technology is just one dimension of what's often called the Ukrainian defence 'ecosystem' (Matlack et al., 2025; Chivers, 2024; Honcharuk, 2026).

'Precise mass'. The widespread availability of inexpensive 'first-person-view' (FPV) strike drones has transformed the way Ukrainians think about combat. The key concept is volume (Horowitz, 2024). An officer must think carefully before using a High Mobility Artillery Rocket System (HIMARS) to launch a \$150,000 missile, but he can afford to send a dozen FPV drones, each worth a few hundred dollars, to destroy an enemy target. Most FPVs – perhaps 40-60% – are intercepted. But some get through, and only one needs to work to kill an enemy soldier or explode a bunker.

Good-enough weaponry. Precise-mass tactics requiring a large volume of inexpensive arms and ammunition align neatly with Soviet-legacy military doctrine. The Armed Forces of Ukraine (AFU), like the Soviet Army before it, favours rugged, easy-to-use weaponry – functional, not fancy, and very different from the complex, expensive, so-called 'exquisite' systems preferred by NATO armies. Drones tend to be made of the cheapest possible material, often components purchased online, held together by inexpensive hand soldering

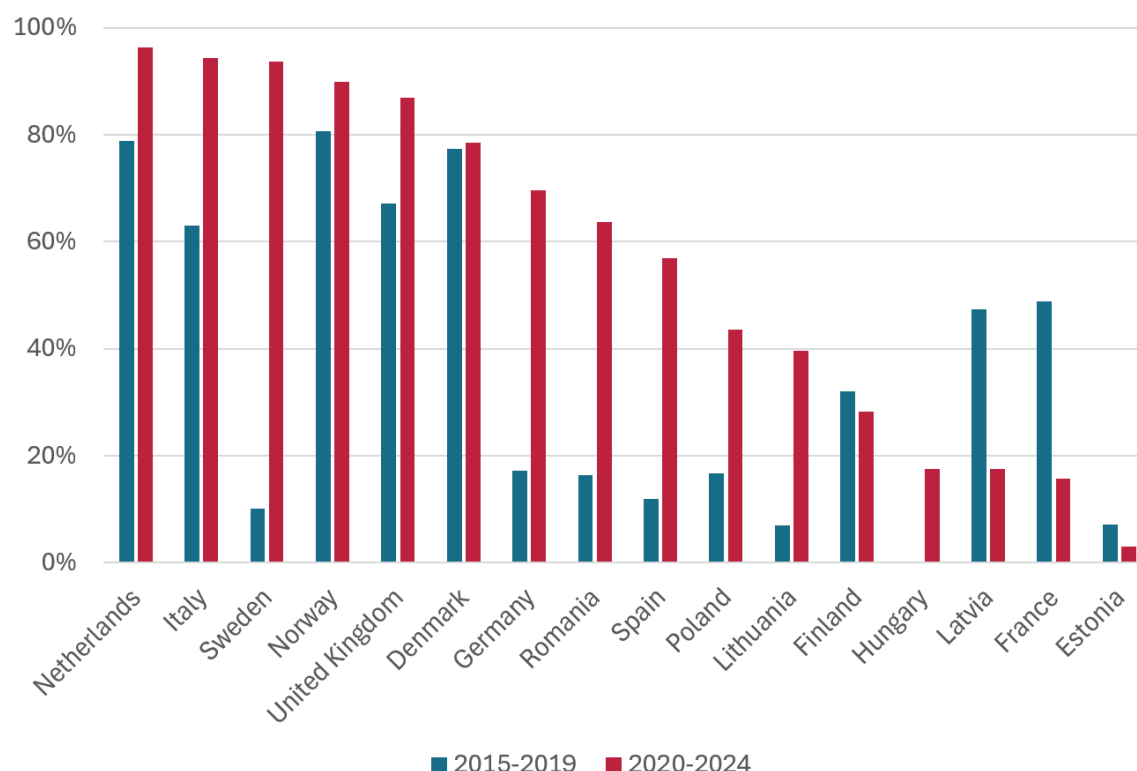
or even duct tape – simple, expendable, cheap, and easy to modify to accomplish the task at hand. (See Figure 1: exquisite, expensive American-made weaponry remains widely popular in Europe.)

Battlefield R&D. The first days of the full-scale war pitted agile, ingenious Ukrainians against lumbering, unimaginative Russians. But that is no longer the case. Russia can copy anything Ukraine does – new weaponry and new tactics – and vice versa, generally in a matter of months if not weeks. The two sides are locked in a neck-and-neck technological arms race, that has now produced several generations of FPV drones, fibre-optic drones, electronic warfare, AI-enhanced drone swarms, and more. One week, one side is ahead. The next week, it's often the other side – and the competition spurs urgent, unrelenting innovation.

Technical innovation on the frontline and feedback to manufacturers. A typical Ukrainian drone unit receives devices from many sources – the armed forces, but also charity foundations, local governments, even friends and relatives who chip in to buy a few frames or components. Most battlefield drones arrive incomplete – just the frame with no explosive and no 're-translator' to extend its range – and virtually all units have their own small IT teams. Frontline soldiers advance innovation with handmade modifications and 3D printers, frequently sending new specifications back to drone manufacturers, who incorporate the changes into the next iteration of the weapon.

Figure 1. Europe still relies on American weapons

Share of arms imports supplied by U.S., 2015–2019 compared to 2020–2024



Source: Stockholm International Peace Research Institute arms transfers database
<https://www.sipri.org/databases>



*Preparing to launch a Mini Shark UAS fixed-reconnaissance drone produced by Ukrspesystems.
Photo credit: Ukrspesystems.*

Rapid innovation cycles. A soldier who is wounded on the battlefield and recovers in the rear often doesn't recognise his own unit when he returns three months later. Weapons have changed, tactics have changed, even the shape of the battlefield may have changed as the ever more extensive use of drones widens the 'kill zone' between the two armies. Manufacturers must keep up with four or five innovation cycles a year – a velocity of change that demands extreme flexibility and rapid response times. It also means that most Ukrainian drone manufacturers produce and assemble devices by hand, not on an automated assembly line.

Decentralised production. There are no Ukrainian defence primes and almost no standard-issue weaponry. According to one estimate, by an industry association, dozens of manufacturers make deep-strike drones, and hundreds produce FPVs or FPV components (Fedirko, 2026). This decentralisation produces a patchwork arsenal that Ukrainian fighters call an armament 'zoo'. Among its advantages is that it spurs competition, rewards innovation, and produces a rich array of weapons for soldiers to choose from. But it also means redundancy and missed economies of scale.

Decentralised procurement. Ukrainian drone manufacturers look to many different kinds of customers to buy their product. The Ministry of Defence is the largest consumer, but every combat brigade also has a pot of funding it can use as it pleases to purchase its own weaponry. Further decentralising the options, MoD awards 'e-points' for every target a unit destroys – currency to spend on an Amazon-like virtual marketplace selling drones and drone components (Jacoby, 2025b). Still other buyers include the National Guard, the National Police, a wide array of charity foundations, and the intelligence services, HUR and the SBU. The upshot for the industry is that more competition, more innovation, and a more rapidly evolving defence marketplace.

Ever-evolving combat tactics. The rapid evolution of the Ukrainian arsenal drives equally rapid changes on the battlefield. UAVs are responsible for the widening of the front line to a 20-mile kill zone. Unmanned ground vehicles (UGVs) that deliver supplies and evacuate the wounded help soldiers adjust to this change but also accelerate it. Drone pilots are the new infantry – the tip of the spear and among the most vulnerable fighters in the combat zone. Electronic warfare (EW) and fibre-optic drones, also constantly evolving, drive still other changes in tactics and strategy, and commanders have wide latitude to prosecute the war as they see fit.

Fighting-force structure. The make-up of Ukrainian fighting units looks very different today compared to even a few years ago. Every unit has an IT team, most brigades have a drone battalion, and many also have separate counter-drone or EW companies. Virtually every soldier on the front line has some familiarity with uncrewed warfare. And the most innovative battalions are working to redefine the relationship between drones and infantry, using them more effectively to reinforce and support each other, as the unit assigns a growing share of tasks to air and ground robots (Nehoda, 2025).

Training. Drone training comes in many varieties. Several of the big drone manufacturers run their own schools, as do many elite units and an array of training organisations, for-profit and nonprofit. Courses vary in length from as short as a week to full-time over three months. The Ministry of Defence maintains standards for drone training and certifies qualifying schools. Some soldiers enrol in courses before joining the armed forces; in other cases, their commander sends them back to the rear for additional training in the middle of their contracts. Still other drone pilots learn online, and many tell frontline visitors they've had no training – they learned everything they know on the battlefield.

Together, these policies and practices add up to a complex, evolving ecosystem – hard for international observers to map and understand, let alone transplant to their home countries. Just how much of the Ukrainian way of war can plausibly be adapted in a NATO country where the defence industry is driven by giant primes, only the ministry of defence can procure weapons, and most soldiers have little (if any) familiarity with drone warfare remains questionable. Policy makers and practitioners working to advance the integration of Ukrainian and Western European defence are betting that this cross-pollination is not as difficult as it seems.

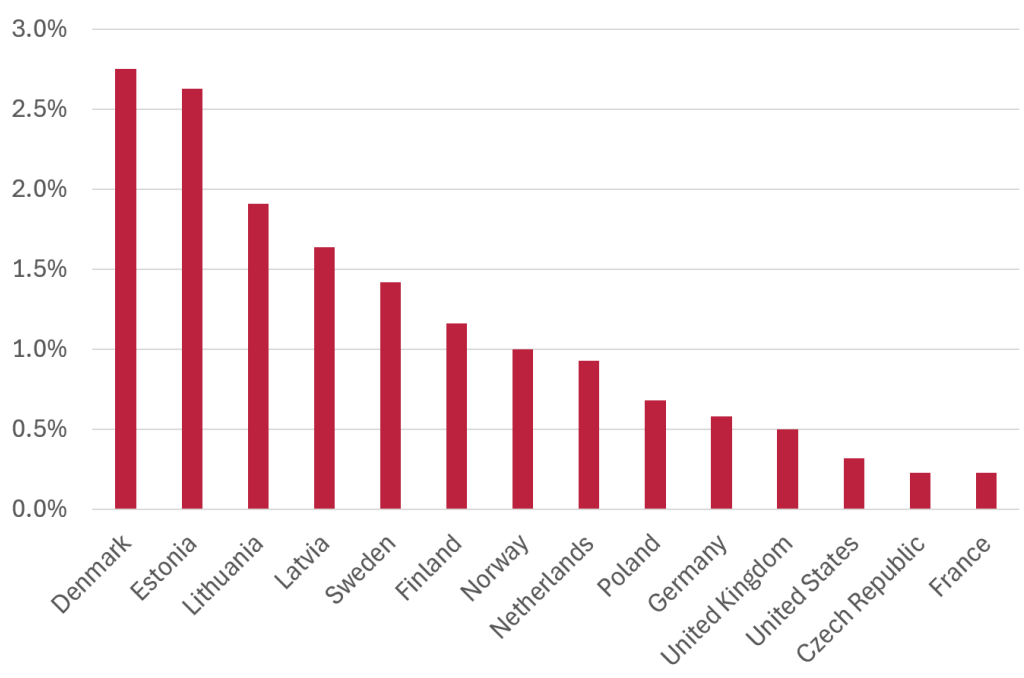
The Danish Model: A First Step Toward Collaboration

What became known as the ‘Danish model’, widely regarded in Ukraine and later Brussels as a dramatic breakthrough and exemplar, was conceived in early 2024 in conversations between Kyiv and Copenhagen. Tiny Demark – population six million – had emerged early in the full-scale war as one of Ukraine’s strongest supporters in Europe, devoting a larger share of GDP to bilateral aid than any other EU member and using every available forum to encourage other nations to do more (see Figure 2). On the Ukrainian side, the fledgling homegrown defence industry was growing so rapidly that its productive capacity was outstripping the government’s procurement budget – even as a voracious front line demanded an increasing supply of arms and ammunition.

The solution emerged in early 2024: rather than donate from its own weapons stockpile, as Denmark had been doing for more than two years, Copenhagen would work with the Ukrainian MoD to identify Ukraine’s most effective arms manufacturers and reimburse Kyiv for its purchases from these companies. Instead of just an external donor, Denmark inserted itself as a full partner, taking on all the risks and responsibilities that came with collaborative purchasing (Michaels *et al.*, 2024; The Odessa Journal, 2025; Gibadło and Tarociński, 2025).

The new arrangement solved a variety of problems for Copenhagen and Kyiv. By 2024, Denmark had already given Ukraine all of its stockpiled artillery and a significant portion of its F-16 fighter jets. But it wanted to do more and chafed at buying US and European weaponry that might not be what Kyiv needed and was much more expensive than what Ukraine could produce.

Figure 2. Danes lead the West in military support for Ukraine
Direct military aid to Ukraine as share of national GDP



Source: Kiel Institute Ukraine Support Tracker.

<https://www.kielinstitut.de/topics/war-against-ukraine/ukraine-support-tracker>

For its part, Ukraine was running out of options. Two years into the war, Western military aid was shrinking. The national budget was increasingly tight. Ukrainian soldiers were complaining about what they said was shoddy donated equipment – outmoded arms and ammunition, as one soldier put it, that Western donors had ‘found in the garage’. But many Western arms manufacturers that had cut back production after the Cold War were still ramping up – not yet producing enough to meet Kyiv’s needs. Meanwhile, Ukrainian weapons producers, growing fast, were eager to do more to help their compatriots fighting on the front line (Hoeg-Jensen, 2025; Andreason, 2026; Moroz, 2026).

The first purchase was an experiment. The Ukrainian MoD came up with a list of possible companies. Copenhagen vetted what it saw as the most promising, scouring financial statements and sending Danish scouts to production sites. One Ukrainian manufacturer that later received funding recalls Denmark making inquiries among fighting units: “They wanted to know what equipment end users wanted more of.” A Ukrainian MoD official who helped shepherd the programme, then CEO of the Defence Procurement Agency, Maryna Bezrukova, remembers an intense concern among visiting Danes about corruption and mismanagement at Ukrainian firms: “It took a lot of handholding to persuade them,” she recalls, “documents, site visits, many attaché meetings.”

Finally, Copenhagen deposited a first tranche of funding – €50 million – in a dedicated National Bank of Ukraine account, and Kyiv signed a contract with the manufacturer of Bohdana howitzers, the Kramatorsk Heavy Machine Tool Plant (The Odessa Journal, 2025).

The results of the experiment surpassed expectations. In just two months, the contractor produced 18 self-propelled howitzers – up from six the year before (The Odessa Journal, 2025). Danish assessors tracked the funding flow and vetted the finished product – to their satisfaction. Both Denmark and Ukraine were thrilled by the speed of production and the price. According to one early assessment of the model, defence industry wages in Ukraine in 2024 were one-third of comparable wages in Poland and one-eighth the average pay in Germany (Ruitenbergh, 2025). Also important is the possibility of repair and maintenance close to the front in eastern Ukraine – much faster and more efficient than shipping a French howitzer more than 800 miles to be repaired in the West.

One Ukrainian official – chief of staff to then Defence Minister Rustem Umerov, Diana Davityan – called the *Bohdana* experiment a ‘revolutionary’ leap forward. “Denmark trusted us with direct financing”, Davityan observed. “It was only a few million dollars, but it was worth billions.”

The successful *Bohdana* pilot opened the door to more Danish funding – a total of €3 billion intended to last four years. In 2024, Copenhagen subsidised procurement from ten diverse Ukrainian firms, purchasing artillery, missile systems, and deep-strike drones. Within months, a handful of other donors had stepped in – Sweden, Norway, Iceland, Canada, and eventually the EU, drawing on revenue accrued to frozen Russian assets held in Belgium. These international partners donated funding – the EU alone kicked in €1 billion – but left it to Denmark to run the programme, choosing and vetting companies from a Ukrainian MoD list, monitoring financial flows, and tracking delivery of the product, by serial number.

There were complaints, then and later, that most of the money went to well-connected companies close to the government. Ukrainians weren't surprised. "Given the way the programme was designed", one industry insider recalls, "you couldn't avoid it. Of course, MoD likes some companies better than others." But a handful of attaches assigned to the Danish embassy in Kyiv worked overtime to ensure there were no improprieties – as of November 2024, no cases of corruption or mismanagement had to come to light (Hoeg-Jensen, 2025; The Odessa Journal, 2025; Daniels et al., 2025).

Still another important question from the beginning, even as policy makers and practitioners across Europe heaped praise on the model: could it be scaled to make a significant difference for Ukraine? Early press reports about the initiative reflected the high hopes of Ukrainian defence officials – talk of €10 billion, maybe more. By early 2025, estimates had shrunk to €1 billion a year. In fact, over two years (2024 and 2025) the program funnelled nearly €2.3 billion from six international donors (Brueghel, 2026). It was a significant sum, particularly in the Ukrainian market. But it wasn't a financial game changer.

Industry insiders now say it was only the tip of the iceberg. Research for this paper surfaced several Ukrainian drone manufacturers that benefited from parallel foreign procurement in those years – northern European governments that signed contracts with Ukrainian firms to purchase munitions that went directly to the Armed Forces of Ukraine.

"Not all contracts went through Copenhagen, and not all were not highlighted in the media", explains industry trade association official Serhiy Goncharov, executive director of the National Association of Ukrainian Defence Industries (NAUDI). Neither the Ukrainian firms nor their partners wanted to attract Russian attention, and some European governments feared a political backlash at home. How much foreign capital flowed beneath the surface in this way? "A lot of money", Goncharov says, "several billion euros."

Still, many Ukrainians now say, the most enduring impact of the Danish model went beyond funding. "International partners got their first look at the Ukrainian defence industry", MoD official Davityan recalls, and many liked what they saw. Others, in Ukraine and Western defence circles, began to imagine a day when Ukraine could make most of what it needed on the battlefield by itself, rather than depending on Western donors – the seeds of the idea that would become known as the 'steel porcupine'.

Still others saw a profound impact on the Ukrainian firms with contracts funded by foreign governments. "They were all young companies, just finding their way, and they learned important lessons from international partners", explains Artem Moroz, director of investor relations at Brave1, a government platform that supports Ukrainian defence companies. "They learned how to structure a business and think strategically, how to build an international company and explain it to investors. Over time, the interaction had a game-changing effect on these firms' business culture." (See Table 1 for a full picture of Danish collaboration with the Ukrainian arms industry, from subsidised procurement to private investment and beyond.)

Table 1. How Denmark helps Ukraine

WHAT	DESCRIPTION
Military aid	€10 billion 2022-2025
Humanitarian aid	€0.9 billion 2022-2025
Total bilateral aid as a percentage of GDP	3.9 percent, the largest share in the EU
Danish model procurement	€3 billion allocated for 2024-2027
EIFO loans & guarantees	The national Export and Investment Fund provides grants, loans, and investment guarantees to encourage private-sector cooperation between Danish and Ukrainian companies. More than 100 major Danish firms are active in Ukraine. Many are focused on civilian projects, but a new 2025 initiative targets the defence sector. Includes a 70% risk guarantee for qualifying Danish investments in Ukrainian defence firms plus a 'buy-back' provision that allows the investor to sell their shares back to EIFO when the guarantee runs out. Total allocated to encourage private-sector cooperation: €1 billion. Targeted defence initiative: €135 million.
Private-sector interest	Industry representatives say a growing number of Danish defence companies are interested in doing deals in Ukraine—interest driven in equal parts by support for the war effort and interest in establishing a foothold what they expect to a thriving postwar market. Danish defence firms tend to be small, agile, and heavily dependent on exports—foreign sales account for 80% of industry revenue—making them ideal suppliers and partners for Ukrainian manufacturers.
Danish Defence & Security Industry Association	Plays an active role in facilitating defence cooperation—organising exploratory trips to Ukraine for Danish entrepreneurs, matchmaking between Danish and Ukrainian companies, helping companies navigate Ukrainian administrative procedures.
D3	EIFO has also invested \$5 million in D3, a venture capital fund linked to former Google CEO Eric Schmidt dedicated to supporting Ukrainian defence startups.
Fast-track construction law	Legislation passed in fall 2025 to encourage the Ukrainian drone manufacturer Fire Point to launch production in Denmark. Allows any construction project deemed essential for national defence or civil emergency preparedness to bypass laws and regulations related to the environment, nature conservation, permitting, and building.

Sources: Kiel Institute, Kaare Stamer Andreasen, Kasper Hoeg-Jensen, Morten Flindt.

The Birth of the Joint Venture Model

Danish-model collaborative procurement – both the disclosed and undisclosed varieties – was in full swing in early 2025 when Kyiv began to think about building on it with other forms of international cooperation. The Danish model made sense for Denmark because its own defence industry is small and limited in scope – mostly specialised companies producing components for export. But the model had significantly less appeal for larger countries – France, Germany, the UK – with their own robust arms industries and workers to protect.

“It had become clear to everyone that one model was no longer enough”, one Ukrainian industry insider recalled. And by mid-2025, Europeans as well as Ukrainians were beginning to look for additional approaches.

By late 2024, it was widely understood that the conflict in Ukraine was ushering in a new way of war, and a growing number of Europeans and Americans were looking for ways to benefit. But the three most common approaches – testing Western weaponry in Ukraine, selling it to Ukrainians, and conventional venture capital financing – were falling short, disappointing Ukrainians and potential partners.

Dozens of Western companies, large and small, tried bringing small batches of weaponry to the eastern front to test it on the battlefield. Some learned valuable lessons and went home to improve their product. But as time went on, many came to understand that a single foray of this kind was close to useless. The Ukrainian front changed so quickly that a lesson learned at, say, the beginning of the year was often no longer relevant by springtime. “We’d test and test, and try to improve the product”, one German entrepreneur remembers, “but by the time we had travelled back and forth and come up with an iteration that we thought would work, our Ukrainian competitors were three steps ahead of us.”

In other cases, respected, cutting-edge Western firms that had expected to dominate the market in Ukraine were startled to watch their product fail on the eastern front. One of Germany’s first unicorns, AI defence startup Helsing, and premier US mil-tech firm Anduril Industries, worth \$30 billion by early 2025, suffered humiliating defeats in Ukraine. There were a variety of reasons, some more embarrassing than others, but the main problem in both cases was Russia’s evolving electronic warfare – jamming, spoofing, and other countermeasures that brought these companies’ exquisite, expensive platforms crashing to the ground (Holliday *et al.*, 2025; Kyriasoglou *et al.*, 2026).

Conventional venture capital financing was more successful but still limited in reach. Ukrainian innovation began to catch the eye of Western investors in 2023. Tech fairs and expos drew hundreds of startups and scores of investors. Early rounds were small by Western defence standards – before 2025, mostly less than \$1 million. But analysts noted growing interest among US and European investors, and the number active in Ukraine increased steadily from just a few in 2023 to several dozen by 2025.

Brave1 counted \$105 million worth of investment in 2025. Yet according to one trade association, the Ukrainian Council of Defence Industry (UCDI), some 30% of foreign financing remained undisclosed for security reasons, bringing the total closer to \$140

million. Still, even then, Ukrainian defence investment lagged far behind that in Europe and the US (Ukrainian Council of Defence Industry, 2025; Brave1, 2025).

There were many reasons for this shortfall. Wartime Ukraine is not an easy place to invest. Defence manufacturing facilities have been a prime target for Russian air strikes since the beginning of the war. Soviet-legacy bureaucracy can be opaque and difficult to navigate, especially for newcomers. Perhaps most inhibiting, strictly enforced martial law restrictions prohibit the export of arms and ammunition, the international transfer of defence technology, and the repatriation of capital earned on Western investments in Ukraine. A handful of early investors found ways to get around these barriers, but many were discouraged.

Martial law restrictions on defence exports and tech transfer also had a significant effect on Ukrainian interest in foreign investment. The gap between the government's budget and the private sector's productive capacity grew steadily as the war progressed. In 2025, state defence spending peaked at \$22.5 billion, while capacity grew to \$35 billion. The upshot for most Ukrainian contractors is that orders lagged behind productive capacity and many plants lay close to idle for several months a year.

In 2025, for example, Ukrainian Armor, one of the country's largest private manufacturers, completed all outstanding orders for its popular mortar launchers in July and fulfilled its last contract for armoured vehicles in October. In different circumstances, the company might have welcomed foreign investment to expand capacity. But as is, management says it has little use for foreign financing. Like most Ukrainian defence firms, Ukrainian Armor can meet its investment needs with the proceeds of its own sales.

Other startups have no ministry contracts. "There are dozens of companies producing deep-strike weapons and hundreds making FPVs", NAUDI's Goncharov explains, "and many sell nothing to MoD." Most survive by selling to alternative buyers – frontline brigades, charity foundations, the National Guard, the National Police, or the intelligence services. But most of these contracts are smaller than MoD procurement deals and often hard to cobble together.

In 2024, industry insiders recall, it was still taboo to argue publicly in favour of lifting the export ban. The argument against liberalisation had considerable popular appeal. Those who believe that foreign sales deplete the weaponry available for use against the enemy are dead set against allowing exports even to Ukraine's closest allies. But as the year wore on, the case for lifting the ban began gaining traction in the arms industry and beyond.

"Defence production is not a fixed pie," one association executive explained. "Ukrainian firms have more than enough capacity to produce for the front line and for export, and the more arms they make, the lower the price will fall, helping to stretch the MoD budget and generating more weapons for the front line – not fewer."

As time wore on, the gap between capacity and domestic sales bred other problems. Companies that couldn't export their product began opening offices in Western Europe. A few incorporated in other countries; a handful launched subsidiaries and even production facilities in the West. The ban on tech transfer limited the effectiveness of these efforts, and martial law restrictions on foreign travel by draft-age men prevented an exodus of IT talent.

But industry insiders worried about the potential being squandered. “The government is concerned about the leak of technology”, Vadym Bartkov, head of government relations at the large, bestselling drone maker DeViro, complained. “What they don’t see is that the leak of minds will be even worse.” NAUDI chief Goncharov echoed the concern: “Every month Ukraine delays authorising exports, the more competitors we create abroad.”

Pressure to lift the export ban built steadily through 2024 and 2025. Some 94% of manufacturers told the trade association UCDI that they wanted to sell their product abroad. All the major industry groups lobbied for an end to restrictions. The debate spread to parliament – the *Verkhovna Rada*. In September 2025, President Volodymyr Zelensky addressed the issue in a speech to the UN General Assembly, promising that Ukraine would soon begin sharing its new defence technology with European allies (Business Day, 2025).

Finally, in autumn 2025, the dam broke. The government approved legislation creating a new entity it called ‘Defence City’ that promised to simplify export controls, streamline customs procedures, and open the door, eventually, to easier foreign currency transactions. Then, in October, the Ministry of Defence moved to implement the law by launching two programmes to facilitate joint ventures between Western and Ukrainian defence firms: Build In Ukraine, to spur collaboration inside the country, and Build With Ukraine, to advance joint ventures on foreign soil (Jacoby, 2025a).

Joint Venture Model: Mixed Reviews and Outcomes

Hope spread among defence manufacturers in Ukraine and abroad. The new programme seemed to have a little something for everyone, even as it promised bigger and more significant changes in the future.

Joint ventures would be more appealing than the Danish model for countries like Germany and the UK with their own thriving arms industries – they could funnel military aid allocated for Ukraine to home industry production and jobs for domestic workers. Vigilant licensing of propriety Ukrainian products would protect intellectual property even if the weapons were produced abroad. The new flow of foreign funding into Ukrainian production would help address unused capacity issues. Together, European and Ukrainian firms could produce more weaponry for the Ukrainian army, and the collaboration would position Ukraine for eventual integration into the European defence market and security architecture.

Still, despite this potential, change was elusive and slow to materialise. A full six months later, many firms were uncertain how the Build programmes worked and sceptical about their chances of winning approval for a joint venture. Defence City’s promise of liberalised exports turned out to be misleading; it soon became clear that what the MoD meant by exports, at least for the time being, was technology transfer to allied countries, not the actual sale of ready-to-use weaponry. The complex administrative procedures previously required for tech transfer remained in place, and the interdepartmental export commission that was supposed to approve all transfers held no meetings from mid-2025 through February 2026.

The government seemed eager to advance the joint venture model. Zelensky travelled to Europe to sell it in foreign capitals. Kyiv signed memoranda of understanding with a handful of early adopters, including Germany and the UK. A few tech transfers were authorised by means of what Ukrainians call 'manual' (discretionary) approval by the president's office. The first joint ventures were announced with considerable fanfare in autumn 2025. But the process only reinforced many Ukrainian manufacturers' doubts about an initiative that required so much government assistance and intervention.

Interviews for this paper found deep ambivalence among manufacturers about government and markets. No one is naïve; it's understood that weaponry is different from other commodities. The end user will always be the military, and the state will inevitably pick winners and losers from among potential producers. But some entrepreneurs were more concerned than others about what they saw as the distorting effects of the Ukrainian joint venture initiatives.

Defenders of the programmes say that every nation controls arms exports, and Ukrainian manufacturers need the state to initiate joint ventures with other countries. "You need a government-to-government agreement to open the door", one insider argued. "You also need the government monitoring defence exports to prevent breaches of security."

Sceptics argue that the heavy hand of the state means red tape, delays, and barely disguised favouritism. The joint venture initiatives are for "well-connected companies only", one manufacturer complained, "friends of the president's office." "It's always better when government doesn't help", maintained another entrepreneur. "It only creates problems." Still others talked about a chilling effect on innovation – arguably the signature strength of the Ukrainian defence sector. "Once the government has locked in a contractor", one financier asked, "why would anyone invest in alternative providers?"

A third group of insiders, perhaps the majority, were concerned about some aspects of the joint venture initiative – most often, what they saw as cronyism and the remaining export barriers – but resigned. "In theory, I'm all for more independent, market-driven collaboration between Ukrainian and European firms", one financial adviser argued. "But in practice, it's hard – maybe prohibitively hard – to do it without the government."

Just how much cooperation has been unleashed by the two initiatives remains hard to say. As of mid-February 2026, there had been many MOUs and more press announcements – dozens of prospective deals involving several countries. But only three confirmed collaborations were producing weaponry abroad or close to starting production.

One fully executed joint venture matched a large and well-financed German drone maker, Quantum Systems, with a midsize Ukrainian manufacturer, Frontline Robotics. The new, combined operation, designed to leverage battle-tested Ukrainian technology with German manufacturing might, launched production of strike drones at a repurposed automotive plant near Munich in mid-February.

Two other Ukrainian firms, Fire Point and Ukrspecsystms, struck deals with foreign governments rather than companies. Fire Point, a well-known and well-connected producer of deep-strike drones and missiles, signed an MOU to produce solid rocket fuel

in Denmark. Ukrspecsystems, an older drone maker with a diversified product line, agreed to manufacture a modified version of its Octopus interceptor drone in the UK. After lengthy negotiations and preparations on the ground, both new international firms were said to be on schedule to begin production in spring 2026.

The export commission met for the first time in eight months in mid-February and approved a handful of other deals at various stages of development. UCDI CEO Ihor Fedirko estimates that more than 30 additional pairs of manufacturers are having ‘serious conversations’ about collaborative production abroad. He counts more than 25 Western defence firms with some kind of operation in Ukraine – a joint venture, an R&D centre, or facilities for repair and maintenance of weaponry produced abroad. Many of them have no Ukrainian partner or are cooperating with state-owned enterprises, but five or six, Fedirko estimates, may be working in partnership with private firms.

Before the war in the Persian Gulf, no one expected all these deals to come through this year, or perhaps ever. Fedirko’s goal was ten additional joint ventures in 2026. Some defence officials viewed that as optimistic. Many European firms are hesitant, they explained, and not all Ukrainian companies are ready for external collaboration. But other industry insiders say that in this case too, as with the Danish model, there are at least as many informal, market-driven collaborative projects as state-brokered deals – perhaps more.

NAUDI executive director Goncharov believes there are dozens, maybe scores, of private-sector cross-border projects not brokered by the government. “Between 10 and 20% of Ukrainian defence companies have some kind of international cooperation or international support”, he maintains. Few of these projects involve a formal joint venture – an exchange of shares or new, third company. Many deals are small. They don’t always bring together equal partners; a Ukrainian firm may have a trusted supplier abroad or a subsidiary that produces components for products assembled in Ukraine.

Companies operating under the radar in this way do so for the same reasons other firms sign procurement contracts outside the umbrella of the Danish model. One partner or both may fear attracting Russian attention, inviting a missile strike or (in the West) grey-zone vandalism or sabotage. In other cases, the Western firm may fear a political backlash from voters or consumers at home who oppose support for Ukraine. Perhaps most often, both partners simply want to avoid the red tape likely to come with participation in a government programme.

Little if any of this informal cross-border traffic counts toward the government’s official joint venture tallies. But Goncharov believes it is just as important, paving the way for the 90% of other Ukrainian defence contractors who would like to strike international deals. These pioneers are showing the way, and others can learn from them. “It’s the only way”, Goncharov says, “to open new markets for your company.”

Drawing on this broad understanding of cross-border collaboration, it’s possible to construct a rough taxonomy, ranging from conventional venture capital financing to legally binding, government-sanctioned joint venture deals (see Table 2).

Table 2. Nine kinds of Western-Ukrainian defence collaboration, formal and informal, government-brokered and private

TYPE	PARTICIPANTS	DESCRIPTION
Private investment	MITs Capital	An American-Ukrainian investment group funnels Western capital to 20 Ukrainian defence startups.
Danish model procurement	Kramatorsk Heavy Machine Tool Plant	Denmark subsidised procurement of Bohdana self-propelled howitzers for use by the Ukrainian armed forces.
Independent procurement subsidy	Airlogix	Undisclosed northern European nation, not a participant in the Danish model coalition, subsidised procurement of large fixed-wing reconnaissance drones delivered directly to the Ukrainian army.
Build with Ukraine joint venture	Quantum Systems/ Frontline Robotics	Fully executed joint venture between German and Ukrainian manufacturers, producing AI-powered reconnaissance strike drones in Germany. Funding provided by the German government; all product to be delivered directly to the front line in Ukraine.
Build in Ukraine joint venture	Kramatorsk Heavy Machine Tool Plant/Mercedes-Benz	Three German companies and two Ukrainian firms will collaborate to mount Bohdana howitzers on armored Mercedes-Benz Zetros trucks. Funding provided by the German government; final product assembled in Ukraine and shipped directly to the Ukrainian armed forces.
Build with Ukraine licensed production abroad	Fire Point	Ukraine's best-known drone and missile manufacturer to produce solid rocket fuel in western Denmark. Project facilitated by a new Danish 'fast-track' construction law, passed expressly for Fire Point, allowing defence manufacturers to bypass environmental and other regulations. All product to be returned to Ukraine to power drones for use by the Ukrainian armed forces.
Other licensed production abroad	Fire Point	Fire Point executives say they maintain undisclosed production facilities in several countries outside Ukraine.
Non-state-brokered coproduction in Ukraine	Ukrainian Armor/ Czechoslovak Group	Large, traditional Ukrainian arms manufacturer partners with Czechia's leading defence contractor to produce 155mm artillery shells. CSG provides components and licensed designs. Ukrainian Armor produces ammunition for the Ukrainian army.
Subsidiary or major supplier abroad, assembly in Ukraine	Scientific Production Company Athlon Avia LLC	Medium-sized drone manufacturer with popular product and large customer base sources components at a spinoff in Poland launched during the war without government support.

Challenges and Opportunities

In early 2026, interest in cross-border cooperation ran high among both Ukrainian manufacturers and potential international partners. The opening of the Quantum Frontline production facility near Munich spurred Western media attention, while the war in Iran focused the world's attention on Ukraine's hard-won experience with drone interception. Several European embassies in Kyiv brought in special staff dedicated to scouting for potential business partners, and industry insiders reported an explosion of interest from potential buyers in Europe and the Gulf, and Zelensky signed defence cooperation agreements with some half dozen countries.

Still, the number of done deals hardly moved, raising questions about what barriers were blocking collaboration, whether in Ukraine or Europe, and what could be done to alleviate them.

“

Remember, there are two Ukraines: the old, Soviet-legacy institutions and attitudes, and a new Western-looking, young, tech-savvy and self-reliant nation, eager to sweep away old ways.

”

Some obstacles were more intractable than others. The only antidote for Russian bombardment was production abroad. So too, the conscription of working-age men. By 2026, nearly a million men had left the Ukrainian workforce to serve on the front line. The armed forces were desperately short of manpower. All males between 25 and 60 were potential targets for recruiters, and many men reluctant to serve were hiding at home – leaving businesses of every kind short of workers. Export of ready-to-use weaponry was still effectively blocked, and repatriating capital to the West was more a dream than reality – with little immediate prospect of relief for either problem.

Other deeply rooted obstacles – matters of legal tradition or deep-seated culture – appeared beyond the reach of policy. But industry insiders pointed hopefully to the tectonic shifts under way in Ukraine and Europe – Ukraine's long-term push to break free of its Russian past and the growing rift in the transatlantic relationship. “Remember”, one investor argued, “there are two Ukraines: the old, Soviet-legacy institutions and attitudes, and a new Western-looking, young, tech-savvy and self-reliant nation, eager to sweep away old ways.”

Among the challenges that Ukrainian defence manufacturers and Westerners interested in partnering with them complain most about:

Corruption and perceived corruption. Virtually all Westerners come to Ukraine expecting a cesspit of cronyism, kickbacks, influence-peddling, and fraud. In fact, Ukraine has made dramatic progress in the last decade in curbing what was once endemic corruption. High-profile prosecutions, often alarming to Europeans, are in fact a sign of progress – proof that the antibodies of anti-corruption jurisprudence are working, and prosecutors are rooting out patronage and other malfeasance. The EU accession process has accelerated the push to curb corruption, and it will continue to do so in coming years. Still, there is more to be done, and Westerners exploring deals aren't wrong to remain vigilant.

Soviet-legacy bureaucracy. “It’s no accident”, one investor complained, “that the most common sign in Kyiv is *notary*.” The Ukrainian legal system is a maze of petty regulations and redundant paperwork that many Western investors find difficult to navigate. These obstacles seem particularly challenging for large, traditional defence contractors set in their ways and used to getting their way at home. The CEO of German giant Rheinmetall complained publicly as his company struggled to launch four long-promised production facilities in Ukraine. Very few primes from any Western country have established meaningful partnerships, and it’s no accident that small, nimble, export-oriented entrepreneurs from Denmark, for example, are more likely to have a presence in Ukraine than American firms.

European environmental regulations. Ukrainian manufacturers express parallel concerns about European bureaucracy, particularly environmental regulations. When Danish officials approached Fire Point technical director Iryna Terekh about locating a production facility in Denmark, she initially turned down the offer. “Why would we want to work in such an expensive, bureaucratic, ecology-minded European country?”, she recalls asking; Fire Point agreed to consider a deal only when Denmark promised to ease environmental and safety regulations. Even so, Fire Point says it feels constrained by many Danish rules. Other Ukrainians who manufacture weaponry in Europe say they leave it to their joint venture partners to deal with local regulatory issues.

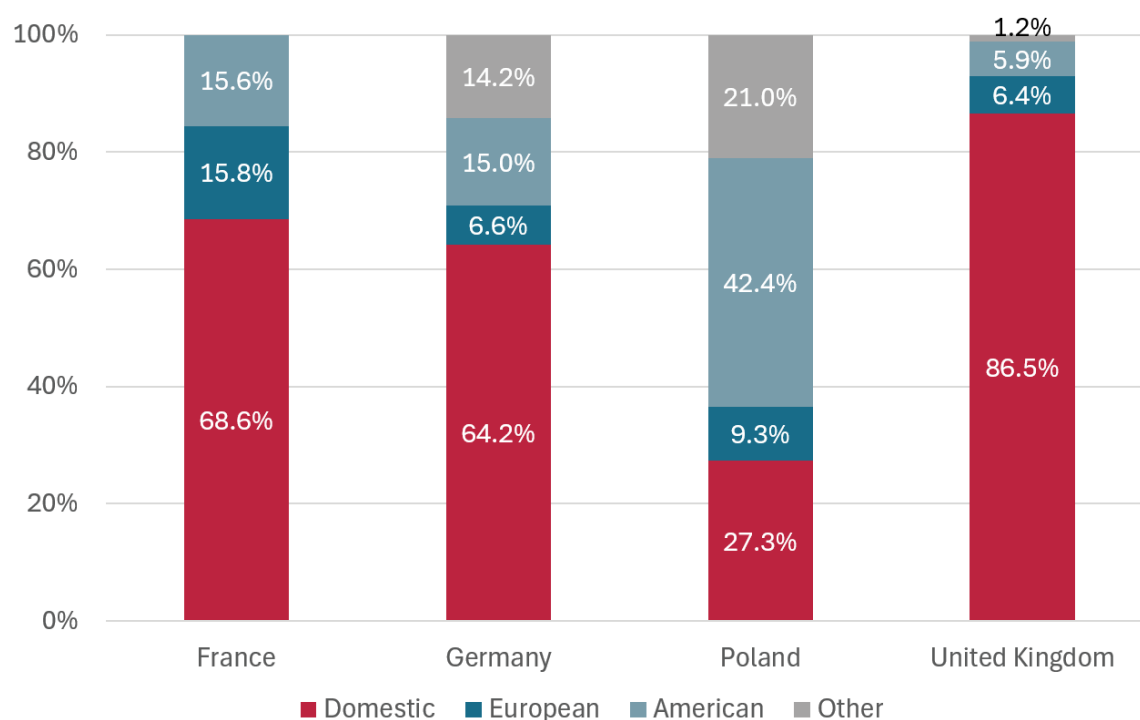
Ukrainian law and law courts, including IP law. Some areas of Ukrainian law have been updated to conform to European law. Others still bear the stamp of the Soviet past, and the courts are uneven, some more transparent than others. Entrepreneurs say IP protections are particularly murky, especially given the way drone and counter-drone technology has developed, with extensive input from soldiers and IT teams on the front line. “Soldiers have paid in blood for this technology”, said one industry insider concerned about what could happen if it falls into the wrong hands. Ukraine is moving to reform its IP protections, and international defence deals are advancing despite the uncertainty. But there is more to be done – for the sake of Ukrainian innovators and the Europeans who partner with them.

European home industry bias. Difficult as it is to export weaponry from Ukraine, entrepreneurs in Kyiv complain bitterly about what they call European ‘protectionism’. European politicians “want defence contracts to go exclusively to companies owned by their own citizens”, one company founder explained at a public forum – so much so that he saw no possibility for what he called “classic exports, where we manufacture drones and sell them abroad.” Policy makers seeking greater defence cooperation among Western European countries are encountering the same obstacles and struggling to overcome them (see Figure 5). Europeans can only hope they succeed – the continent’s future security rests on enhanced cooperation.

Ukrainian MoD churn. Export barriers aside, no obstacle causes more consternation among Ukrainian contractors than what they see as the chaotic and constantly changing direction of their own defence ministry. “MoD changes ministers every half year”, one entrepreneur complained. “It changes its purchase priorities every three months.” In 2022, he recalled, the ministry couldn’t procure enough armoured vehicles; it promised to buy everything that became available. Now, it doesn’t buy any – not because the army doesn’t need them, but

Figure 5. Home industry preference

National military procurement, by geography, January 2020 to April 2025



Source: Kiel Institute Military Procurement Tracker.

<https://www.kielinstitut.de/publications/kiel-military-procurement-tracker-17722/>

“because drones are sexier.” Other manufacturers echoed the concern. “We need a more predictable partner”, a second contractor argued, “an institution with a long-term strategic view of how the industry should develop.”

International business savvy among Ukrainian manufacturers. Ukrainian industry insiders and Western investors alike see room for improvement in the business practices of Ukrainian startups. “Most of our private-sector companies are young”, one industry association executive explained, “just two or three years old, if that. And they’ve had little exposure to Western expectations or global business practices.” The most commonly heard concerns about fledgling firms: companies are structured in ways that don’t conform to Western norms, accounting practices are amateurish, the documents provided for European due diligence are not transparent, and management practices are unconventional and erratic. “Many Ukrainian companies are not ready to meet Western investment standards”, another industry insider explained. “They have a lot of homework to do.”

Looking Ahead

In spring 2026, with US-brokered ceasefire negotiations stalled and war still raging in Iran, the Ukrainian defence industry was uncertain what lay ahead. A few insiders were bullish, declaring 2026 the year of exports or joint ventures. Others were more cautious.

The hopeful view looked to the power of example. Most Ukrainian manufacturers still seemed driven as much by patriotism – a desire to do their part for the war effort – as profit, and virtually all who had succeeded in securing Western deals talked about paving the way for others. “We walk this path so others can follow,” explained Vitalii Kolesnichenko, CEO of Airlogix, which signed a joint venture contract with the cutting-edge multinational software firm Auterion in February. “More companies, more governments, more money, more drones, more dead Russians,” he said hopefully.

As the Build programmes began to gain traction, a small army of would-be facilitators gathered to help midwife the process. Dedicated staff at several European embassies in Kyiv, originally charged with finding and vetting companies to partner with, turned their attention to streamlining the process and easing the way for Ukrainian firms. Both NAUDI and UCDI put promoting ventures at the top of their annual goals – whether by finding international partners for Ukrainian firms, brokering collaborative deals, helping entrepreneurs learn Western business ways, or advising them how to navigate Ukrainian government bureaucracy.

Other Ukrainian entrepreneurs and Westerners searching for opportunities to collaborate looked to private-sector consultants and investors to ease the way. These intermediary services varied widely, some more useful than others, according to one industry insider. The US-Ukrainian investment group MITS Capital was one of the more experienced, offering an array of help from business advising and an accelerator programme to venture capital financing.

A veteran investor with a long-time commitment to the Ukrainian cause, MITS CEO Perry Boyle also had ambitions to reshape defence manufacturing in Ukraine. Like many industry insiders, he saw two pressing needs: spurring consolidation of what he viewed as too many startups too small to compete in the global market and adapting Western industrial production, traditionally difficult and expensive to retool, to the rapid, ever-churning Ukrainian innovation cycle.

Still, even as the Iran war highlighted Ukrainian drone prowess, and Zelensky talked about sharing Ukraine’s knowledge with the US and its Gulf allies, Kyiv seemed reluctant to fully open the spigot to arms exports, and little ready-to-use weaponry was sold or delivered abroad. “It’s not a simple ban,” one manufacturer explained, something the Rada can repeal with a vote. “The problem is the hoops you have to jump through” – a gauntlet of arcane bureaucracy and administrative procedures. And the opaque, unpredictable commission, ultimately controlled from the president’s office, still had the last word.

Every industry insider had their own theory about why the government wouldn’t sweep away the barriers. Perhaps popular opinion, still convinced that defence production is a fixed pie, wouldn’t allow it. Perhaps Zelensky was saving exports as leverage for future negotiations

with the West. Either way, Brave1 investment chief Moroz seemed to speak for many when he said, “it’s going to start small and snowball slowly.” Even the most optimistic estimates predicted no more than a few dozen new Build With Ukraine joint ventures in 2026.

Much harder to predict, as this paper went to press, was what the war in Iran would mean for the Ukrainian defence industry. Zelensky offered help with drone warfare and sent several teams of advisers to the Gulf. As the fighting intensified, he visited the region and negotiated long-term security agreements with Saudi Arabia, Qatar, and the United Arab Emirates. News reports suggested that one or more of the agreements stipulated an exchange of military assistance for fossil fuels. Potentially most beneficial for Ukraine, Zelensky proposed trading Ukrainian drone technology for Patriot interceptors—the only Western weaponry capable of shooting down Russian ballistic missiles (Hunder and Dysa, 2026). Yet neither the US nor the Gulf states seemed ready to trade away their Patriot missiles while fighting continued in the Middle East.

Some industry insiders took hope from the growing international interest in Ukrainian weaponry, particularly cheap interceptors and other counter-drone technology. “The war in Iran showed that Ukraine is becoming a global player,” UCDI’s Fedirko told the media. “I’m convinced that at a maximum over the next two months, we’ll see the first export contracts.” Other manufacturers were more hesitant—concerned that Kyiv’s reluctance to ease export barriers would drive potential clients in the Gulf to turn elsewhere to meet their pressing needs for new weaponry. Still, as the fighting paused in mid-April, it remained unclear how far Kyiv would go to open the way to foreign sales.

Conclusion and Policy Recommendations

The experience and models of the last three years – the ‘Danish model’, the joint venture initiatives, and non-state-brokered approaches to European-Ukrainian defence cooperation – confirms the hope on both sides that collaboration can be a win-win for Ukraine and the West. The challenge now is how to generate more of it – for Europe’s sake and Ukraine’s.

Ukrainians and Europeans, defence manufacturers, investors, governments, and a variety of middlemen all have essential roles to play.

Among the lessons of the past three years:

- **Various models.** The Danish model and MoD-brokered joint ventures are just two of many potential approaches, formal and informal. Kyiv’s early 2026 experiment trading battlefield data for German and American defence cooperation is an important step in the right direction, and there is more that can be done – much more (Gosselin-Malo, 2026). Western governments and private investors alike should experiment with alternative approaches, both negotiated government-to-government and powered by market forces.

- **More help along the way.** Ukrainian entrepreneurs and Westerners seeking to partner with them need help bridging their differences: cultural differences, regulatory barriers, disparate business practices, and clashing timeframes – the difference between wartime urgency and the slower, more deliberate rhythms of peacetime. What’s needed going forward: everything from matchmaking between European and Ukrainian entrepreneurs to business accelerators and creative financial instruments.
- **National policy incentives.** Western capitals have many tools at their disposal to advance cooperation, from easing barriers for Ukrainian contractors to rallying home-country defence firms to explore collaboration with Ukraine. Denmark’s approach has been particularly inventive: loan guarantees, the fast-track construction law, spreading word about the potential for cooperation among domestic defence manufacturers, and more. Other European nations should copy and build on these ideas.
- **Continent-wide policy incentives.** Most European-Ukrainian defence industry collaboration to date has been bilateral – individual European countries working with Ukraine and Ukrainian companies. But Ukraine’s long-term vision is broader than cooperation with Denmark or Germany. The ultimate goal is integration into Europe’s security architecture, and Europe – or European ‘coalitions of the willing’ – should be doing more to foster partnerships.

The EU’s 2025 Security Action for Europe (SAFE) loan initiative permitted cross-border collaboration with Ukraine but did not require it – something that could be remedied in future iterations of the programme. Other potential options: prime-the-pump financing from the European Investment Bank or other international bodies, an EU initiative that builds on Denmark’s loan guarantees for companies investing in Ukraine, EU incentives for other capitals considering versions of Denmark’s fast-track construction law, and more.

- **The spillover impact of European integration.** Ukrainian integration into the European single market will go a long way toward closing the gaps that now challenge defence firms seeking to cooperate across borders. Among the areas where accession is sure to be helpful: aligning Ukrainian IP protections with European rules, encouraging broader adoption of European business practices, and ensuring transparency and impartiality in the Ukrainian judicial system. But as accession proceeds, Brussels should be mindful of the unique challenges that come with defence cooperation – policy makers should be on the lookout for other ways to bring down barriers and encourage collaboration.
- **Ukrainian policy initiatives.** The last three years point to several areas where Ukraine can do more. Domestic defence manufacturers are all but unanimous: they want more consistency and less churn in leadership, a clearer sense of direction, and more consistent demand signals – especially from the Ministry of Defence. Contractors understand that war is unpredictable. But even so, they say, there’s a

need for steadier, more transparent policy. A second priority is export liberalisation; the sooner, the better. One obvious policy idea: replacing executive discretion with a 'white list' of products and destination countries that do not need approval on a case-by-case basis.

A dark joke circulated throughout Ukraine during the months after Russia's 2022 full-scale invasion: the time for Ukraine to join NATO had passed; the question now was when NATO would be applying to join Ukraine. In truth, of course, they need each other – and not just NATO, but the broader European defence establishment and defence industry.

Both Europe and Ukraine appear to recognise this, but they don't always act on it with the necessary urgency or resolve. All too often, short-term and parochial considerations – political exigency, financial motives, or home-industry interests – get in the way, and leaders on both sides of the divide lose sight of the larger vision.

What's needed is much bigger than just helping Ukraine win the war, essential as that is, or creating new markets for defence contractors, whether European or Ukrainian. What's at stake is ultimately the defence of Europe, including Ukraine. Neither side can afford to lose sight of that goal or miss an opportunity to advance it. ■

Note on Sources

This paper draws on some two dozen interviews conducted in Ukraine in late 2025 and early 2026. Interviewees included Ukrainian defence manufacturers, defence industry association executives, and government officials, as well as a handful of European diplomats and an investor.

Most of the conversations were in person; a handful were online. One additional interview took place in Brussels. Ukrainian defence production is shrouded in secrecy for obvious security reasons, and many manufacturers and some government officials requested that their names not be used in the paper. The author is deeply grateful to everyone who took the time to speak and, in a handful of cases, tour their arms production facilities.

The paper also draws on the author's experience since 2022 reporting on the Ukrainian armed forces and defence industry—frequent trips to the front line, long-term relationships with several combat units, and sustained observation of Kyiv's defence procurement policy.

References

- Andreason, K. (EIFO at the Danish embassy in Kyiv) (2026) Interview with the author, 3 February.
- Bartkov, V. (Head of government relations, DeViro) (2026) Interview with the author, 4 February.
- Belbas, V. (Director General at Ukrainian Armor) (2026) Interview with the author, 19 February.
- Bezrukova, M. (Director of the Defense Procurement Agency of the Ministry of Defense of Ukraine) (2025) Interview with the author, 9 July.
- Bomprezzi P., Cherepinskiy D., Irto, G., Kharitonov, I., Nishikawa T. and Trebesch, C. (2025) *Ukraine Support After Three Years of War: Aid remains low but steady and there is a shift toward weapons procurement*. Kiel Institute for the World Economy. Available at: https://www.kielinstitut.de/fileadmin/Dateiverwaltung/Subject_Dossiers_Topics/Ukraine/Ukraine_Support_Tracker/3rd_Aniv_Report.pdf (Accessed: 19 November 2025).
- Boyle, P. (Co-founder and CEO of MITS Capital LLC) (2026) Interview with the author, 9 February.
- Brave1 Ukrainian Defense Innovations (2025) *Brave1 investment outlook of Ukrainian defense tech ecosystem 2025*. Available at: https://drive.google.com/file/d/1rFVRM4Y_Yk-jBgtR2tssQZVjYFFoRlcv/view?usp=drivesdk (Accessed: 11 February 2026).
- Bruegel (2026) Panel discussion viewed by the author, 27 January.
- Burrows, E. (2025) 'NATO's first drone battle pits million-dollar jets against cheap drones, exposing vulnerabilities', *Associated Press*, 11 September. Available at: <https://apnews.com/article/poland-russia-drones-jamming-ukraine-incursion-nato-27b1aeed542604c91386df1f4e4463c7> (Accessed: 12 March 2026).
- Business Day (2025) *Ukraine opening up weapons exports to allies, says Zelensky*, 24 September. Available at: <https://www.businessday.co.za/bd/world/2025-09-24-ukraine-opening-up-weapons-exports-to-allies-says-zelensky/> (Accessed: 18 January 2026).
- Chivers, C. J. (2024) 'How Suicide Drones Transformed the Front Lines in Ukraine', *The New York Times Magazine*, 31 December. Available at: <https://www.nytimes.com/2024/12/31/magazine/drones-weapons-ukraine-war.html> (Accessed: 11 December 2025).
- Davityan, D. (Chief of Staff to the Minister of Defense of Ukraine) (2025) Interview with the author, 11 August.
- Defense Express (2024) *How Ukrainian Bohdana and European Howitzers Compare in Price and Production*, 23 November. Available at: https://en.defence-ua.com/news/how_ukrainian_bohdana_and_european_howitzers_compare_in_price_and_production-12625.html (Accessed: 20 January 2026).
- Economic Security Council of Ukraine (2025) *Analytical Paper 'EU/NATO Tech & IP Governance Models for Ukraine'*, 25 November. Available at: <https://reb.org.ua/en/news/analitичne-dosliddzennya-modeli-upravlinnya-texnologiyami-ta-iv-jesnato-dlya-ukrayini-ym8662> (Accessed: 7 January 2026).
- Ernst, A. (German Embassy in Kyiv) (2026) Interview with the author, 23 January.
- Fedirko, I. (CEO of UCDI) (2026) Interview with the author, 2 February.
- Flindt, M. (Deputy Director of the Danish Defense Industry Association) (2026) Interview with the author, 28 January.
- Gibadło, L. and Tarociński, J. (2025) *German military aid for Ukraine: a new model of support?* Ośrodek Studiów Wschodnich, 22 July. Available at: <https://www.osw.waw.pl/en/publikacje/analyses/2025-07-22/german-military-aid-ukraine-a-new-model-support> (Accessed: 17 February 2026).
- Goncharov, S. (CEO of NAUDI) (2026) Interview with the author, 28 January.
- Gosselin-Malo, E. (2026) 'Ukraine feeds sensitive military data to Palantir AI for training', *Defense News*, 21 January. Available at: <https://www.defensenews.com/global/europe/2026/01/21/ukraine-feeds-sensitive-military-data-to-palantir-ai-for-training/> (Accessed: 19 March 2026).
- Hoeg-Jensen, K. (Denmark's Permanent Representative to NATO, Brussels) (2025) Interview with the author, 17 November.
- Holliday, S., Somerville, H., MacDonald, A. and Glazer, E. (2025) '“We Do Fail ... a Lot”: Defense Startup Anduril Hits Setbacks with Weapons Tech', *The Wall Street Journal*, 27 November. Available at: <https://www.wsj.com/business/anduril-industries-defense-tech-problems-52b90cae?st=999WLj> (Accessed: 11 February 2026).
- Honcharuk, O. (2026) 'Time matters: Why Europe needs Ukrainian defense innovation', *Atlantic Council*, 26 January. Available at: <https://www.atlanticcouncil.org/dispatches/time-matters-why-europe-needs-ukrainian-defense/> (Accessed: 10 February 2026).

- Horowitz, M. C. (2024) 'Battles of Precise Mass', *Foreign Affairs*, 22 October. Available at: <https://www.foreignaffairs.com/world/battles-precise-mass-technology-war-horowitz> (Accessed: 15 October 2025).
- Huebner, C. (German Embassy in Kyiv) (2026) Interview with the author, 29 January.
- Hunder, M. and Dysa, Y. (2026) 'Zelenskiy says Ukraine wants money, technology in return for Middle East drone help', *Reuters*, 15 March. Available at: <https://www.reuters.com/business/aerospace-defense/zelenskiy-says-ukraine-wants-money-technology-return-middle-east-drone-help-2026-03-15/> (Accessed: 19 March 2026).
- Jacoby, T. (2026) 'Ukraine's Way of War is Coming to the Persian Gulf', *Washington Monthly*, 2 April. Available at: <https://washingtonmonthly.com/2026/04/02/ukraines-way-of-war-is-coming-to-the-persian-gulf/> (Accessed: 2 April 2026).
- Jacoby, T. (2025a) 'Ukraine Looks Abroad for Joint Ventures to Boost Its Defense Industry', *Forbes*, 27 August. Available at: <https://www.forbes.com/sites/tamarjacoby/2025/08/27/ukraine-looks-abroad-for-joint-ventures-to-boost-its-defense-industry/> (Accessed: 26 January 2026).
- Jacoby, T. (2025b) 'Kyiv's E-Points Drone Marketplace – An Amazon for Frontline Units', *Forbes*, 19 September. Available at: <https://www.forbes.com/sites/tamarjacoby/2025/09/19/kyivs-e-points-drone-marketplace-an-amazon-for-frontline-units/> (Accessed: 5 February 2026).
- Jacoby, T. (2024) 'How Ukraine's Drone Industry Took Flight', *Foreign Policy*, 6 July. Available at: <https://foreignpolicy.com/2024/07/06/ukraine-drone-industry-russia-war-regulation/> (Accessed: 29 January 2026).
- Kuzmuk, K. and Scarazzato, L. (2025) 'The transformation of Ukraine's arms industry amid war with Russia', *Stockholm International Peace Research Institute*, 21 February. Available at: <https://www.sipri.org/commentary/topical-background-er/2025/transformation-ukraines-arms-industry-amid-war-russia> (Accessed: 23 March 2026).
- Kirkegaard, J. F. (2025) *The European Union and the war in Ukraine: More money, but not more Europe*. Bruegel, Working Paper Issue 31. Available at: <https://www.bruegel.org/sites/default/files/2025-12/WP%2031%202025.pdf> (Accessed: 18 December 2025).
- Koleshnichenko, V. (CEO of Airlogix) (2026) Interview with the author, 5 February.
- Krasnoshtan, I. (2025) 'Why Ukraine Must Be at the Core of the New European Security Architecture', *International Centre for Defence and Security*, 10 June. Available at: <https://icds.ee/en/why-ukraine-must-be-at-the-core-of-the-new-european-security-architecture/> (Accessed: 11 January 2026).
- Kushnerska, N. (2025) 'What to expect from Ukraine's defense innovation in 2025', *The Kyiv Independent*, 4 February. Available at: <https://kyivindependent.com/what-to-expect-from-ukraines-defense-innovation-in-2025/> (Accessed: 19 November 2025).
- Kyriasoglou, C., Rudnitsky, J. and Leonard, J. (2026) 'Ukraine Holds Off on New Helsing Drone Orders After Setbacks', *Bloomberg*, 19 January. Available at: <https://www.bloomberg.com/news/articles/2026-01-19/ukraine-holds-off-on-new-helsing-drone-orders-after-setbacks> (Accessed: 18 February 2026).
- Lang, K. O., Marangé, C. and Stewart, S. (2025) *Indispensable: Why Ukraine is becoming a fundamental part of the future European security architecture*. Stiftung Wissenschaft und Politik. Available at: <https://www.swp-berlin.org/en/publication/indispensable-why-ukraine-is-becoming-a-fundamental-part-of-the-future-european-security-architecture> (Accessed: 20 December 2025).
- Lehna, M. (Managing Director of Quantum Frontline Industries) (2026) Interview with the author, 13 January.
- Lovett, I. and Nikolaienko, N. (2024) 'Ukraine Bets a Free Market for Weapons Production Can Out-Innovate Russia', *The Wall Street Journal*, 22 December. Available at: <https://www.wsj.com/world/europe/ukraine-russia-weapons-manufacturing-ddbe8fdf> (Accessed: 4 January 2026).
- Matlack, J. W., Schwartz, S. and Gill, O. (2025) *Ukraine's Drone Ecosystem and the Defence of Europe: Lessons Lost Can't be Learned*. LSE IDEAS, London School of Economics and Political Science. Available at: <https://www.lse.ac.uk/ideas/publications/research-reports/ukraines-drone-ecosystem-and-the-defence-of-europe-lessons-lost-cant-be-learned> (Accessed: 18 February 2026).
- Michaels, D., Rasmussen, S.E. and Lytvynenko, J. (2024) 'Europe Can't Make Ukraine Enough Weapons – So It's Paying Kyiv to Do It', *The Wall Street Journal*, 26 November. Available at: <https://www.wsj.com/world/europe/europe-cant-make-ukraine-enough-weaponsso-its-paying-kyiv-to-do-it-f9b86bf0> (Accessed: 2 November 2025).
- Moroz, A. (Head of Investor Relations & Deputy Head of International Cooperation at Brave1) (2026) Interview with the author, 12 February.
- Myre, G. (2025) 'The many ways Ukraine carries out unprecedented drone attacks', *NPR*, 7 June. Available at: <https://www.npr.org/2025/06/07/nx-s1-5422306/the-many-ways-ukraine-carries-out-unprecedented-drone-attacks> (Accessed: 17 December 2025).

- Nehoda, T. (2025) 'Andrii "Old Man" Mishchenko, CODE 9.2 Assault Battalion Commander', *Ukrinform*, 10 March. Available at: <https://www.ukrinform.net/rubric-ato/3969066-andrii-old-man-mishchenko-code-92-assault-battalion-commander.html> (Accessed: 3 January 2026).
- Peleschuk, D. (2026) 'Ukraine hits back against Rheinmetall CEO's housewives' drones comments', *Reuters*, 30 March. Available at: <https://www.reuters.com/world/ukraine-hits-back-against-rheinmetall-ceos-housewives-drones-comments-2026-03-30/> (Accessed: 5 April 2026).
- Prykhodko, A. (Head of the International Cooperation and Business Development Department at Athlon Avia) (2026) Interview with the author, 13 January.
- Robertson, P. (no date) 'Military PPP Data', *Military Purchasing Power*. Available at: <https://militaryppp.com/blog/> (Accessed: 15 January 2026).
- Ruitenbergh, R. (2025) 'Going Danish: How a small Nordic country is aiding Ukraine's defense', *Defense News*, 30 January. Available at: <https://www.defensenews.com/global/europe/2025/01/30/going-danish-how-a-small-nordic-country-is-aiding-ukraines-defense/> (Accessed: 1 February 2026).
- Ruitenbergh, R. (2026) 'Ukraine says more than 80% of enemy targets now destroyed by drones', *Defense News*, 28 January. Available at: <https://www.defensenews.com/global/europe/2026/01/28/ukraine-says-more-than-80-of-enemy-targets-now-destroyed-by-drones/> (Accessed: 5 April 2026).
- Safronov, T. (2026) 'Ukraine Plans to Produce Over 7 Million Drones in 2026', *Military*, 26 January. Available at: <https://military.com/en/news/ukraine-plans-to-produce-over-7-million-drones-in-2026/> (Accessed: 4 February 2026).
- Semenov, A. (Chief Executive Officer at Cyber Squad), Kovalova A. (UADUT Board Member, CEO) (2025) Interview with the author, 3 November.
- Spinner, D. (Head of Ukraine Operations at Prevail Partners) (2025) Interview with the author, 10, 19 December.
- Statbase (2026) *Active military manpower | 2025*. Available at: <https://statbase.org/datasets/military/active-military-manpower/> (Accessed: 11 February 2026).
- Stetsyk, V. (Project Manager at the Defense Procurement Agency at the Ministry of Defense of Ukraine.), Chmil K. (Advisor on Strategic Communications and Transformation at the Ministry of Defense of Ukraine) (2026) Interview with the author, 9 January.
- Terekh, I. (Technical Director at Fire Point) (2026) Interview with the author, 11 February.
- The Odessa Journal (2025) *597 million euros in investments: How the 'Danish model' strengthens Ukraine's defense industry*, 6 February. Available at: <https://odessa-journal.com/597-million-euros-in-investments-how-the-danish-model-strengthens-ukraines-defense-industry> (Accessed: 5 February 2026).
- Tran, D. (2025) 'Netherlands' F-35s Shoot Down Russian UAVs – At What Price?' *European Defense*, 12 September. Available at: <https://www.youtube.com/watch?v=yoFTUPvUyqq> (Accessed: 4 November 2025).
- Trofimov, Y. and Pancevski, B. (2026) 'Ukraine Depended on Western Weaponry. Now That Script Has Flipped', *The Wall Street Journal*, 1 March. Available at: https://www.wsj.com/world/europe/ukraine-depended-on-western-weaponry-now-that-script-has-flipped-c3484728?mod=author_content_page_1_pos_6 (Accessed: 3 March 2026).
- Ukrainian Council of Defence Industry (2025) *Ukraine Defence Tech Investment Overview – 2023-2025*. Available at: <https://drive.google.com/file/d/1oY-ans8OVPOSYXUNSpib9n7ngm8Mc16oH/view> (Accessed: 8 January 2026).
- Yarova, M. (2025) 'Ukraine to Launch Defense Exports Under "Build with Ukraine" Program', *Scroll*, 23 June. Available at: <https://scroll.media/en/2025/06/23/ukraine-to-launch-defense-exports-under-build-with-ukraine-program/> (Accessed: 1 February 2026)



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■

A Unique Programme in Strategy Designed for Decision Makers

LSE IDEAS, a centre for the study of international affairs, brings together academics and policy-makers to think strategically about world events.

This one-year **EXECUTIVE MASTERS PROGRAMME** is at the heart of that endeavour. While studying in a world-leading university you will be able to learn from top LSE academics and senior policy practitioners.

The programme will sharpen your ability to challenge conventional thinking, explore new techniques for addressing risk and threats, and coach you in devising effective strategies to address them.

Residential and non-residential options allow students to learn while holding demanding positions in the public, private and non-governmental sectors.

'Right from the first week I was able to apply the lessons I had learnt to our operational and policy work and to coach my teams to look at issues differently.'

—**Dame Karen Pierce DCMG**

UK Special Envoy to the
Western Balkans, Former
UK Ambassador to the
United States

CONTACT US

ideas.strategy@lse.ac.uk

+44 (0)20 7955 6526
lse.ac.uk/ideas/exec





LSE IDEAS is the LSE's foreign policy think tank. Through sustained engagement with policymakers and opinion-formers, IDEAS provides a forum that informs policy debate and connects academic research with the practice of diplomacy and strategy.

The views and opinions expressed in this publication are those of the author(s) and do not represent those of the London School of Economics and Political Science (LSE) or LSE IDEAS. This publication is issued on the understanding that if any extract is used, the author(s) and LSE IDEAS should be credited, with the date of the publication. While every effort has been made to ensure the accuracy of the material therein, the author(s) and/or LSE IDEAS will not be liable for any loss or damages incurred through the use of this publication..

LSE IDEAS
Floor 9, Pankhurst House
1 Clement's Inn, London
WC2A 2AZ+44 (0)20 7107 5619
ideas@lse.ac.uk
lse.ac.uk/ideas

