Ukrainian Defence tech market report

September, 2024

DataDriven delivers best-in-class research & consulting services to help deal with the Ukrainian market

DataDriven is a generalist consulting firm…

Research

Leveraging our long experience in collecting, analysing, and interpreting data, alongside creating tangible and data-based recommendations for public and private actors.

Consulting

Applying deep knowledge of Ukrainian politics and business to benefit our clients. Paving out a way for the world to deal with Ukraine and Ukrainian enterprises to open the world.

…with a particular expertise in defence & demining…

Our public reports include:

- **Ukrainian commercial demining market** (*April 2024*)

- **Legal problems of demining sector** *(September 2024)*

- **AI in demining** (*In progress, 2024*)
- **Lessons from Asia in demining** (*In progress, 2024*)

…advising several types of clients:

Equipment manufacturers
(market entry, partnership facilitation, risk assessment, vendor due diligence)

Investment funds
(due diligence, market insights, portfolio support)

Startups
(expansion, technology validation, access to finance)

More information about the defence & demining practice is available

Our perspective on the future of defence tech in Ukraine

Since the full-scale Russian invasion, Ukraine's defence tech market has transformed from a niche sector to a rapidly growing ecosystem with hundreds of startups, attracting increasing attention from both domestic and foreign investors. This surge is fueled by urgent strategic needs, record government defence spending, and a concerted effort to strengthen the domestic Military Industrial Complex, as well as significant charity and donor contributions.

Based on our interviews with startup representatives, investment funds, government officials, and industry experts, here's our assessment of the short to medium-term future of defence tech in Ukraine:

What could make Ukrainian defence tech market flourish:

1. **Access to Foreign Markets**: expanding into international markets is essential, particularly for startups specializing in UAVs, Electronic Warfare, Robotics and AI segments, where Ukrainian production capacity is starting to exceed the needs of the Ukrainian Defence Forces.
2. **Increased Market Transparency**: greater transparency in government contracts and procurement processes, along with long-term contracting, would improve the predictability of future cash flows and attract more private investment.
3. **Enhanced Access to Capital**: the entry of new investment funds specifically targeting dual-use and defence tech, including six new funds launched in 2024, is crucial for sustaining momentum and scaling the sector's capabilities.

What could hinder the development of Ukrainian defence tech market:

1. **Skills Shortage**: the rapid expansion of the sector and its recruitment needs is competing with mobilization efforts and starting to outpace the availability of specialized talent, potentially stifling innovation and development.
2. **Limited Offtake Capacity**: the Ministry of Defence's procurement capabilities are constrained, and ongoing export restrictions limit opportunities for Ukrainian companies, making it difficult for startups to scale.
3. **Technology and Brain Drain**: export restrictions are increasingly pushing defence tech innovators to register their innovations abroad. This risks a loss of key technologies and skilled professionals, which could undermine the sector's growth.

This report is an integral part of **DataDriven's objective** of contributing to making the defence tech market more transparent and attractive to potential investors.

This report is focused on light asset defence tech market

Our vision

Defence tech vs Military tech

At the global scale, Defence tech and Military tech markets cover every technological aspect of defence and warfare: from UAVs and software to tanks and space technologies.

As of 2024, Ukrainian Military tech market can be defined as follows:

- **Miltech** refers to innovative technologies used mainly in active combat. Including:
  - *Unmanned aerial, ground and maritime vehicles*
  - *Electronic and cyber warfare*
  - *Communication and ISR* systems*
  - *Robotic, Autonomous and AI systems,*
- **Defence tech** encompasses a broader pool of innovative technologies for use both in combat and in larger defence contexts (e.g. demining, cybersecurity, AI)

Research focus

Light asset defence tech market

Our view is that in the current Ukrainian context, the main growth in defence tech market is concentrated in **light asset defence technologies**.

This report is therefore focused on the following segments of the Ukrainian defence tech market:

- ***UAVs*** *(Unmanned aerial vehicles) for ISR* and combat operations*
- ***Cyber and Electronic warfare and defence***
- ***Communication and ISR* systems****: optics, radar systems, sensors, secure communication solutions.*
- ***Robotics, Autonomous and AI systems****, including for ground operations, logistics and demining.*
- ***Armor and Personal Protection***
- ***Software****: logistics, training, simulations...*

The report excludes weapon systems, heavy machinery, missile systems and heavy asset technology from the light defence tech market definition.

Notes: *ISR = Intelligence, Surveillance and Reconnaissance.

We are grateful to all organisations that contributed to our defence tech market research

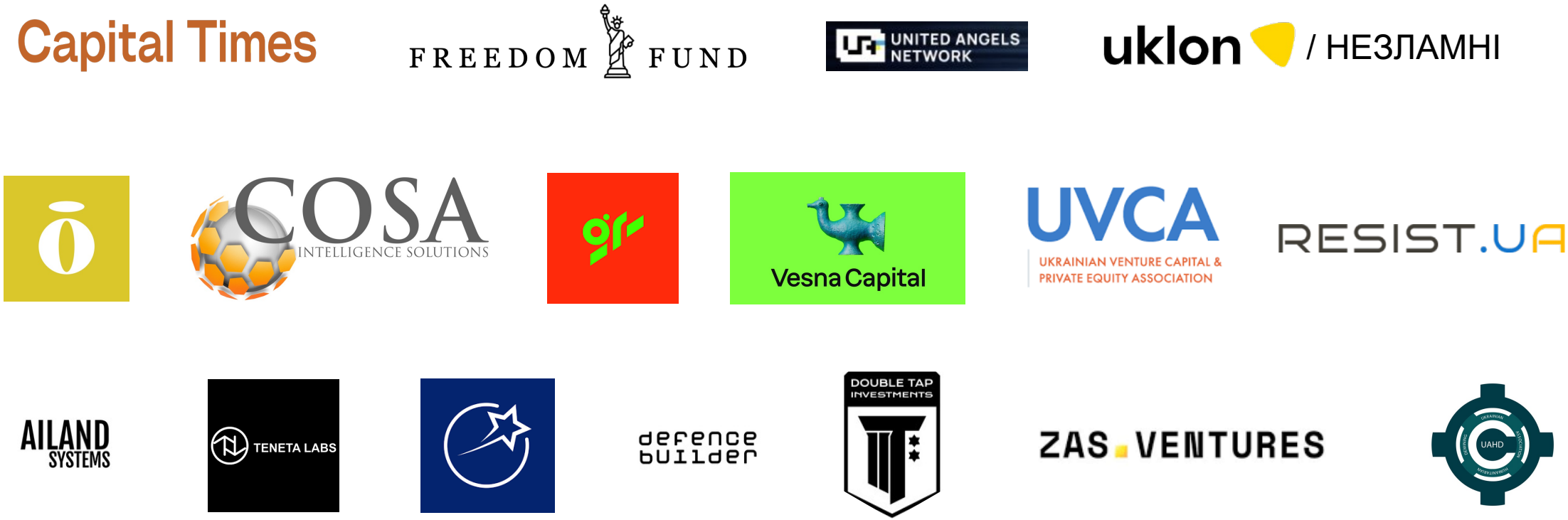


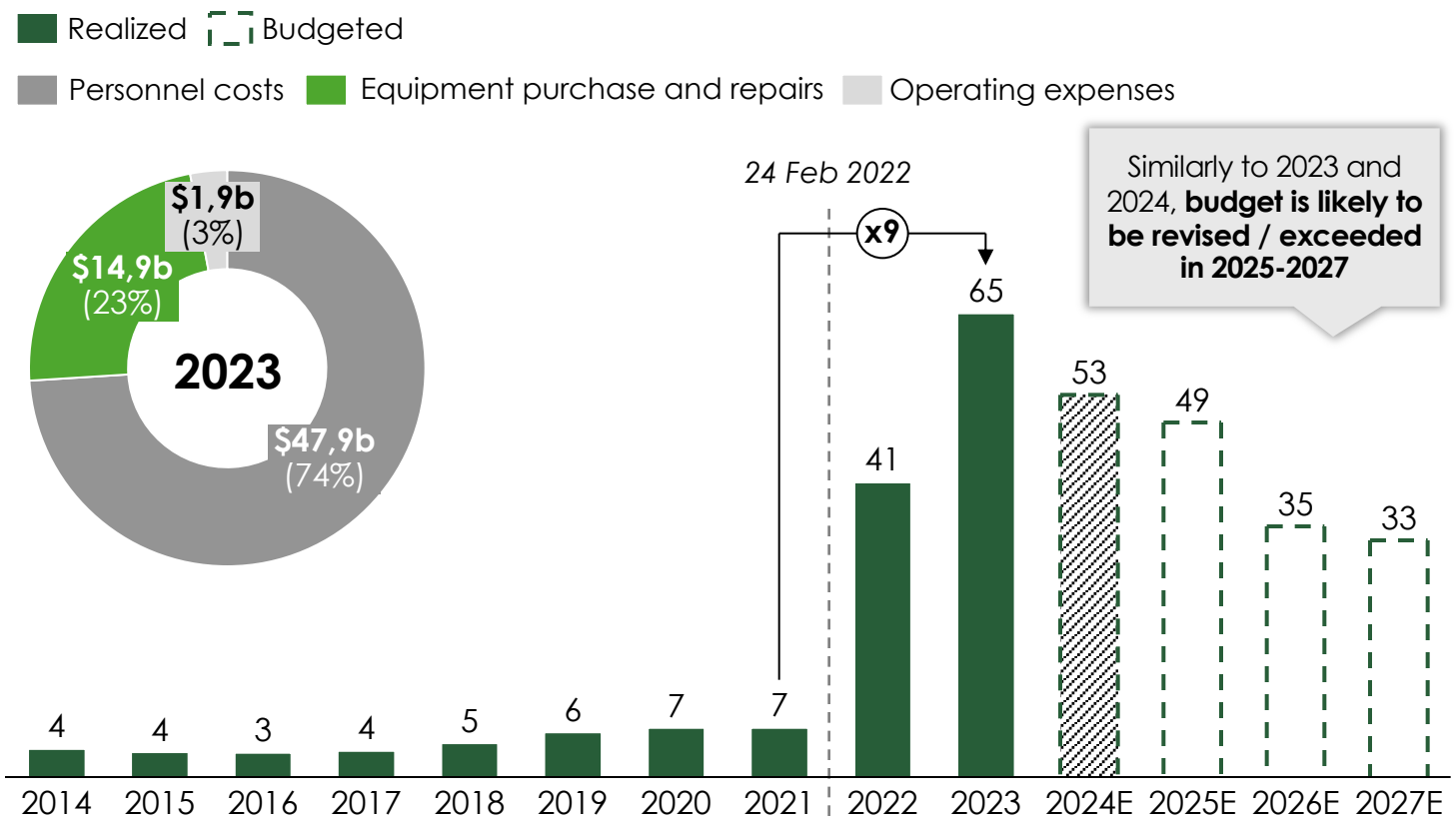
Table of content

1. Market Overview

In 2023, Ukrainian military spending was at a record high of $65bn (x9 since 2021), with up to $15bn on procurement

Ukrainian military spending 2014-2027E

In bn current USD



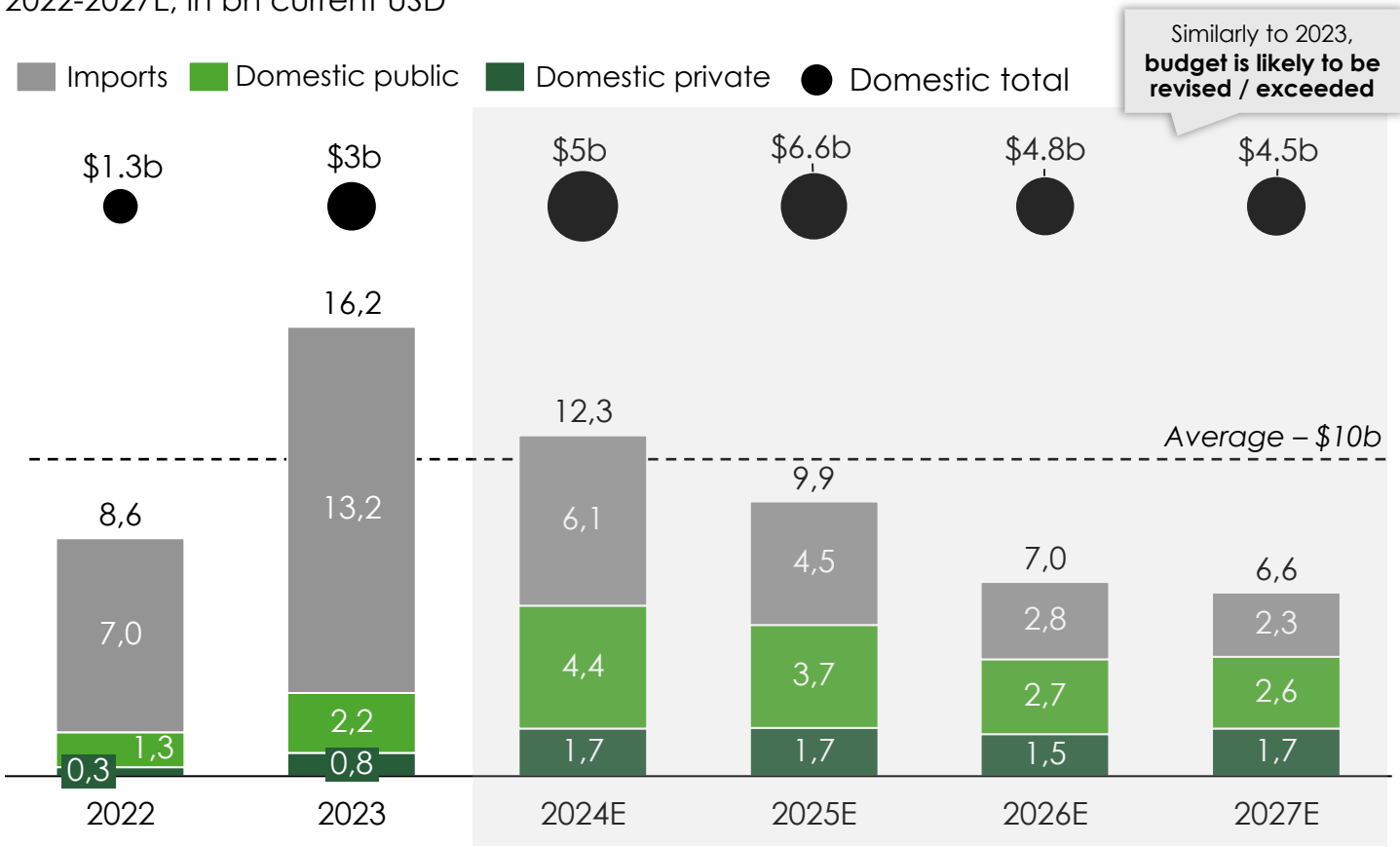
- Since the beginning of the full-scale war, military spending was distributed as follows:
  - **72-74%** budgeted for personnel expenses (ie mainly salaries);
  - **20-25%** budgeted for equipment repairs and purchases;
  - **~3%** budgeted for operating expenses;
  - **<0.1%** budgeted for Ministry of Defence apparatus.
- In **2023**, military spending represented **37% of GDP** and **58% of total government spending** compared to the initial budget of 18% of GDP and 43% of government spending.
- In **2024**, initial defence budget was $41b before its ~30% increase to $53b in July 2024.
- According to government officials, military spending budgets for **2025-2027** are based on the following **assumptions**:
  - Ukraine will face **increasing difficulty to cover its budget deficit** with external support.
  - Military action is expected to last **at least until the end of 2025**.

Sources: SIPRI, Cabinet of Ministers, Ministry of Defence, Politico, DataDriven analysis - see « Sources and methodology ».

Ukrainian domestic defence industry was estimated at $3bn in 2023 and is expected to reach $5bn in 2024

Ukrainian military spending on equipment purchases and repairs

2022-2027E, in bn current USD



- Total domestic defence industry is estimated at a yearly average of **$10b**, based on several key assumptions:
  - **Continued export restrictions for military products and services** limiting the market size (ie total revenues of market players) to Ukrainian government defence spending.
  - **Share of equipment purchases and repairs in the defence budget** to represent **20%** during 2024-2027 period – in line with NATO standards and 2022-2024 indicators.
  - **Donor funding** from foreign governments, institutions, domestic private stakeholders and individuals is disregarded in this analysis due to inherent volatility. Nevertheless, it is a significant funding source for Ukrainian defence industry: in 2024, it could reach $1bn (cf Zbroyari).
- **Share of domestic producers** is expected to **gradually increase** from **50% in 2024** (PM Shmyhal) to **65% in 2027**, in response to governments' efforts to develop Ukrainian Military-Industrial Complex.
- **Share of private companies** is expected **to gradually increase from 20% in 2022 to 40% in 2027** (vs estimated 28% in 2024) thanks to the scaling of private sector production capacities.

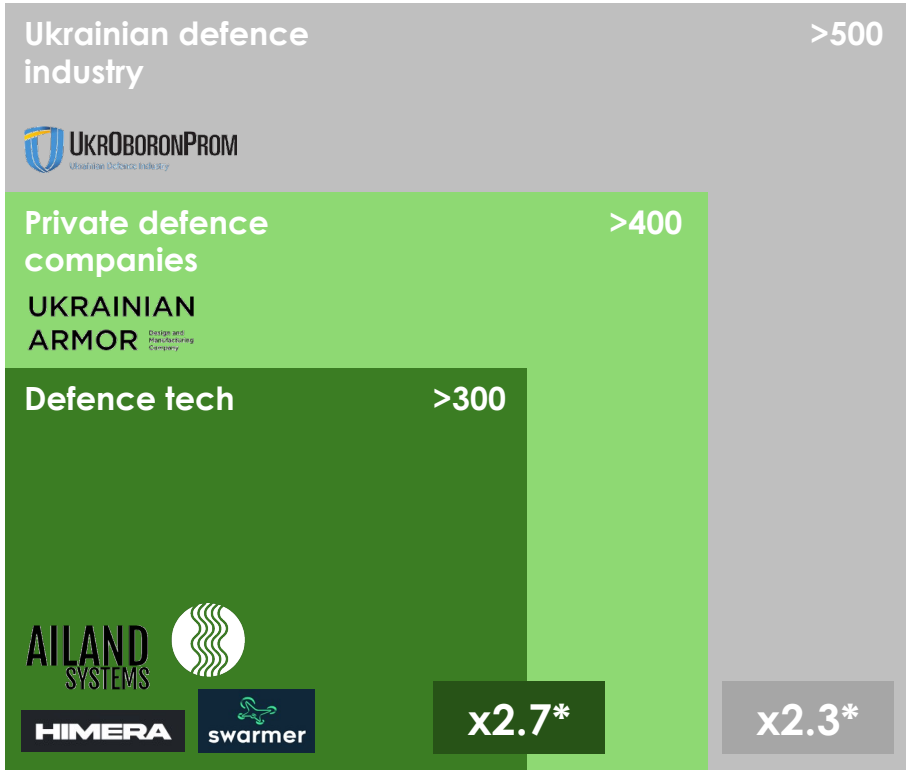
4/5 defence equipment suppliers were **private in 2024** (vs 1/5 in 2022)

Sources: Ministry of Strategic Industries, PM Shmyhal, Forbes.ua, Ukroboronprom, DataDriven analysis - see « Sources and methodology ».

In 2023, Ukraine's defence tech market of 300+ companies more than doubled in size to reach ~$0.4b

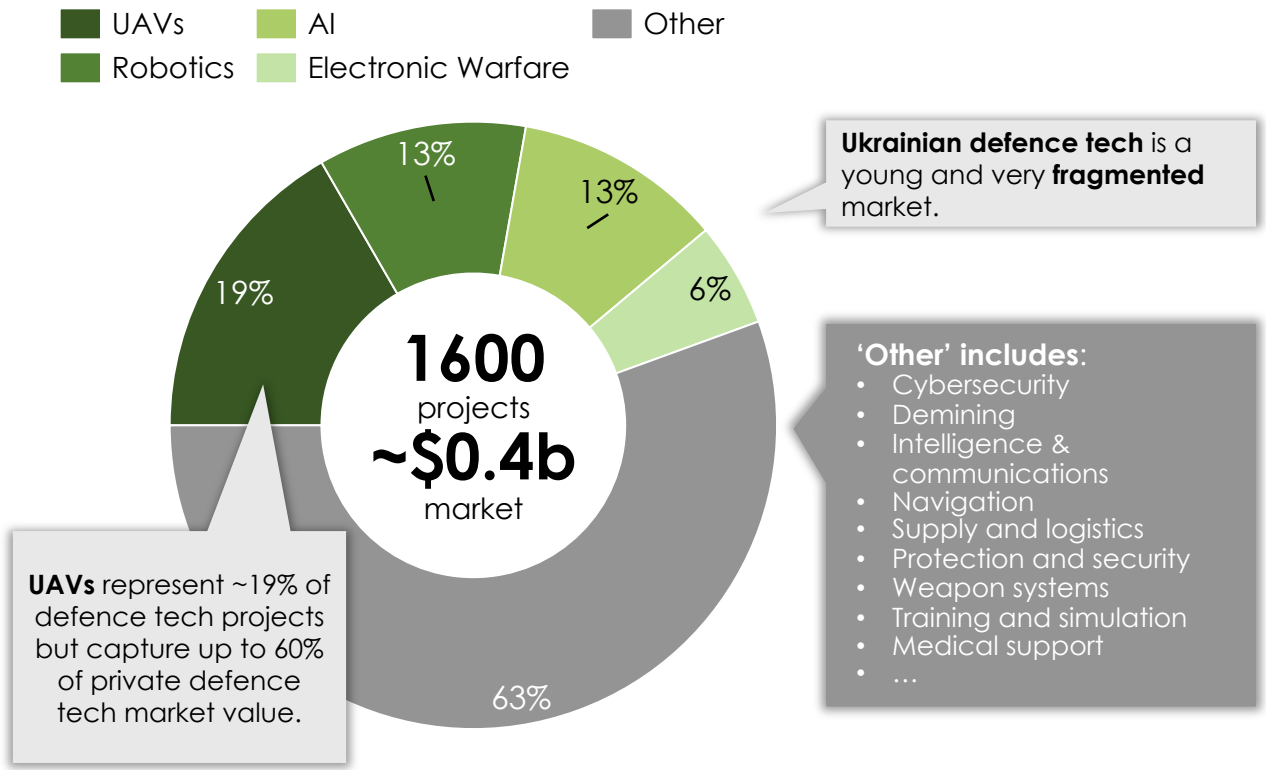
Structure of Ukrainian defence industry

Number of companies and revenue growth in 2023



Structure of Ukrainian defence tech market

Brave1 applications in 04/2023-04/2024 by category

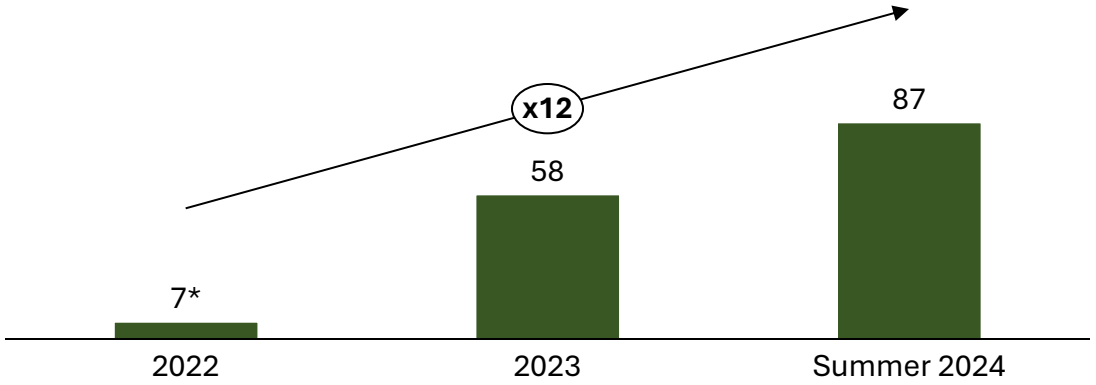


*see previous slide. Sources: Gov.ua, Brave1, Militarny, Forbes, DataDriven analysis - see « Sources and methodology ».

UAVs[1] are the most dynamic sector of Ukrainian defence tech, with 96% domestic share in state UAV procurement

Domestic UAV suppliers contracted by the state

Number & growth of number of state-contracted Ukrainian UAV manufacturers.



500+	Number of active Ukrainian drone manufacturers at different stages of development as of summer 2024
x100	Growth of Ukrainian UAV production capacities in 2022-2023 (in UAV units).
96%	Share of UAVs purchased by the state that are domestically manufactured as of summer 2024

The full-scale invasion prompted a surge in the use and development of UAVs:

- Between September and December 2023, the number of FPV strikes skyrocketed from 67 to 1,059 (709% increase).
- Ukrainian drones' production capacity increased x100 in 2023. According to Ministry of Strategic Industries, in 2024 it will reach 1m for FPV drones and 2m for all UAV types.

Rapid growth was facilitated by active state support:

- Funding and supporting initiatives: Brave1 accelerator and grants up to $50k, Army of Drones project, Drone Hackathon Anti-Shahed.
- Creation of Unmanned Systems Forces: Creation of a new branch in the Armed Forces of Ukraine accelerated the targeted state funding.
- Generous domestic spending: Western models used in Ukraine have proved costly, ineffective and subject to the risk of delayed military aid. Chinese UAVs pose a security risk. Thus, Ukraine focused on domestic production and increasingly spends large portions of its $1bn+ (2023) unmanned systems budget on domestically produced UAVs.
- Reduction of bureaucratic obstacles: VAT cancellation for imports of drone components, increased transparency of procurement and certification processes.
- Active and regular communication on the evolution of UAV needs of the Ukrainian Armed Forces (e.g., President's target of 1m FPV drones in 2024).

Notes: 1. Unmanned aerial vehicles (UAVs) – segment includes all types of unmanned aerial drones, but excludes unmanned or robotic ground and maritime systems. *Number of developers approved to sell drones to the State.
Sources: Ministry of Digital Transformation, Forbes, Defence Builder, Atlantic Council, Defence express, DataDriven analysis.

Defence tech companies have benefitted from the defence spending boom, but are now facing several obstacles

Key market growth drivers

Strategic necessity
- The full-scale war has spurred significant demand for modernisation and innovation in Ukraine's military capabilities.

Government Support and Defence Spending
- The government has prioritized defence spending, particularly in enhancing technological capabilities.
- Launch of several government initiatives to support defence innovation: mainly run by Ministry of Strategic Industries and Ministry of Digital Transformation.

Dynamic ecosystem
- Surge of accelerators, funds and initiatives providing tools, resources and support to defence tech startups.

Access to some funding
- Private capital funding: a dozen angel, pre-seed and seed investment funds have been created since 2022.
- State funding: several grant programs from Ministries of Digital Transformation, Strategic Industries, Defence.
- Donor funding: local and international donors provide funding for development & procurement of Ukrainian defence production.

Key obstacles to further market growth

Limited offtake
- Export restrictions in place since 2022 have limited the offtake for most defence tech producers to the Ukrainian defence sector.
- Ministry of Defence cannot fully absorb domestic defence production, leading to excess capacity in some market segments.

Lack of visibility on future cash flows
- Most private defence tech producers do not have access to long term supply contracts with Ministry of Defence.

Risk of skills shortage
- Very limited number of professionals combine business, tech and military experience.
- Key employees of most defence tech startups are not protected from the mobilisation risk.

Limited production capabilities throughout the supple chain
- Difficulty to scale up production due to limited funding, logistic issues caused by the state of war, reliance on imported components and materials (e.g., microprocessors) and talent shortage.

Sources: media, expert interviews, DataDriven analysis.

Despite harmonisation and standardisation challenges, the opportunity of accessing global markets is highly attractive

Key challenges

Standardisation
- Manufacturers and start-ups must prepare to the gradual implementation of governmental policies aimed at incentivizing certain categories of defence products and services.
- Non differentiated products that do not have the ability to scale up face the risk of increased competition.
- Aligning products with NATO standards will require resource-intensive quality controls.

Harmonisation & Systems Interoperability
- Ukrainian developers are faced with the task of adapting their products to the conditions of a potential integrated management system. In particular, the negative impact of own radio-electronic systems on the operation of ground robotic systems and unmanned aerial vehicles must be prevented.

Intellectual Property Protection
- Ukraine's legal framework for intellectual property protection is still developing, and enforcement can be inconsistent. This creates risks, particularly when entering international markets.

Key opportunities

Dual use
- Focus on dual-use technologies broadens the potential market and facilitates investment attraction.
- Conversely, due to the high-tech nature of the market, technologies developed and tested in combat can serve as an effective impetus for the rapid scientific advancement of civilian innovations.

International partnerships
- Today, Ukraine is a unique place for testing ideas, weapons and technologies in the conditions of modern warfare. Ukrainian defence companies increasingly seek partnerships with foreign companies.

Global Market Penetration
- Ukrainian defence tech companies combine cost-effectiveness with combat-proven technologies, allowing them to increasingly target global markets, particularly regions like Asia, Africa and Middle-East.

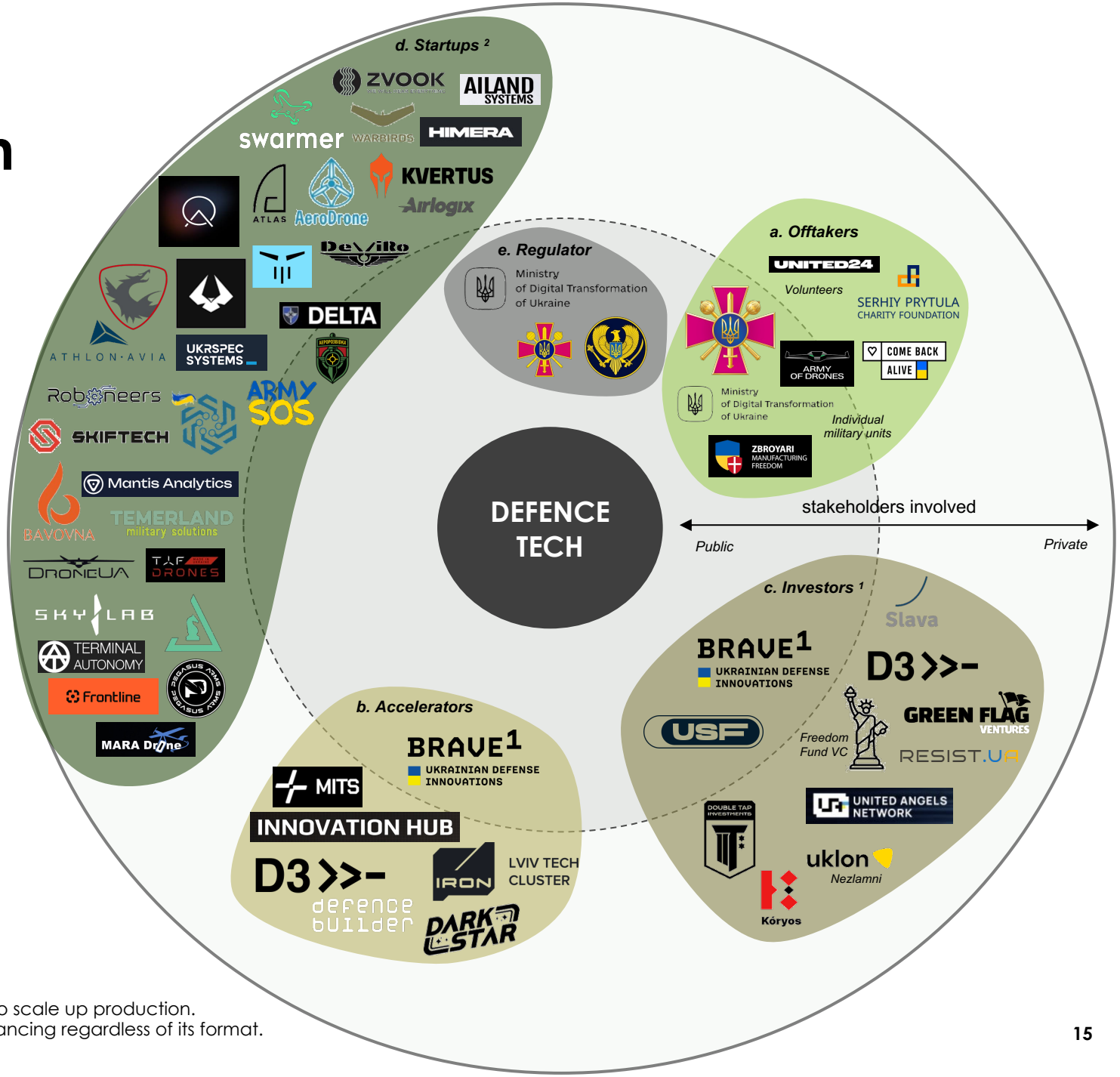
Sources: media, expert interviews, DataDriven analysis.

2. Defence Tech Ecosystem Overview

Defence tech ecosystem

Ukrainian defence tech ecosystem is characterized by:

- **Surge of tech startups**: Ukrainian defence tech is characterized by a surge of innovative startups and SMEs developing cutting-edge technologies in extremely short timelines with limited resources and access to funding, but with the opportunity of direct testing on the battlefield.
- **Limited offtake:** for most product categories, ultimate demand is limited to the Ukrainian defence sector due to export restrictions during martial law.
- **Narrow line between investors and accelerators**: the urgent need for rapid innovation and deployment of defence technologies demands that investors not only provide capital but also take an active role in accelerating technology development and deployment by offering mentorships, infrastructure, connections, help with regulatory navigation…



Source: DataDriven analysis.
1- The term startups refers to all companies that will potentially raise funds to scale up production.
2- The term investors refers to organizations that can potentially provide financing regardless of its format.
NB! The information on the slide is not exhaustive.

Key offtakers are defence institutions. Other state institutions, charities and foreign donors contribute to growing demand

Main end-consumer

Defence Institutions

- **Ministry of Defence** is the main public offtaker through the **National Defence Procurement Agency**.
- **State Special Communications Service of Ukraine** can publicly purchase UAVs and EW systems since 2024.
- **Other security and defence forces agencies** have private procurement procedures.

Other State Institutions

- **Ministry of Digital Transformation** is among the key offtakers of UAVs through the **Army of Drones** project launched in 2022 in collaboration with **United24 charity foundation** and **Ukrainian Armed Forces**.
- **Ministry of Strategic Industries** manages 3-year defence procurement planning and operations.

Volunteers and Charity foundations

- **Charity foundations** such as Come Back Alive foundation, Prytula foundation are among the key offtakers of UAVs, communications and other light military solutions.
- **Individual military units** can also occasionally receive dozens of UAVs, protection or communication systems thanks to **crowd fundings launched by volunteers**.

Foreign donors

- **Monetary donations from foreign states** finance purchases of Ukrainian defence products through:
  - **ZBROYARI: Manufacturing Freedom project** led by the Ministry of Strategic Industries: **~$675m of donations** from EU, Denmark, Netherlands and Canada (goal: $10bn)
  - **International Drone Coalition** led by Latvia with almost **$600m of pledges** as of August 2024.

Sources: Ministry of Defence, Forbes, Ministry of Strategic Industries, DataDriven analysis.

Incubators are a crucial enabler of the defence tech ecosystem development

Ukrainian Defence tech incubators are mostly focused on light asset startups (e.g., drones, software, production of components)

A reliable source of **financing**, usually backed by a fund with previously gained positive reputation

Brave1 has invested $2.7 million in Defence projects in 2023 and is to invest $39 million in 2024

Working with an incubator allows a startup to get a "**mark of quality**" – an ability to recommend itself to other investors after already gaining experience of being sponsored

Role of a financial incubator

Provides **access** to **exclusive connections** with credible partners (think tanks, universities, government) and **infrastructure** (offices, access to production facilities, etc).

Can act as an **advisory body**, providing necessary consulting, mentorship and idea generation for early-stage projects

BRAVE1 UKRAINIAN DEFENSE INNOVATIONS

defence builder

IRON LVIV TECH CLUSTER

MOD Innovation hub

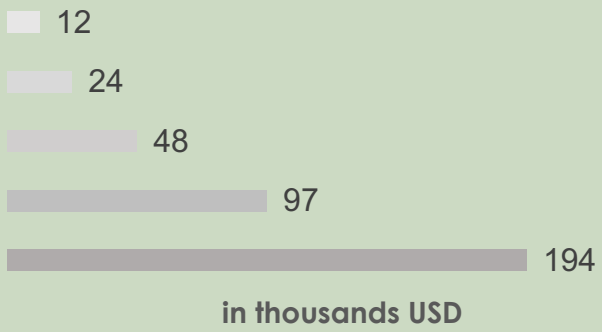
MITS

Examples of Defence tech incubators: Brave1, Defence builder accelerator, AMoD, MITS, Darkstar bootcamp, D3

Brave1 – the first and only government cluster to develop defence tech

2000+
defence tech solutions identified

$5+
million allocated for grants



Amounts of grants available under Brave1.

Funding is available at all stages of development, from application to codification according to NATO standards and contracting.

*US dollar exchange rate according to the NBU as of 14.09.2024

Successful investment cases

Roboneers
production of ground-based robotic platforms

KVERTUS
manufacturing of electronic warfare systems

SkyLab
development of advanced robotic systems

FoxFour
development of cutting-edge AI for autonomous drones control

Cluster's areas of focus

- **Invest:** Providing grants to developers who support the needs of the Armed Forces of Ukraine (AFU).
- **Invent: H**elping AFU find effective technological solutions among Ukrainian developers.
- **Platform:** Creating a platform that brings together all industry stakeholders.
- **Showcase:** Demonstrating products and receiving feedback on their use.
- **Boost:** Providing all-round support to projects that support AFU.

Investment directions

- Weapon systems
- Protection and security
- Supply and logistics
- UAV
- Robots
- Demining
- Cyber security
- Intelligence
- Navigation
- Medical support

Key stakeholders

- Ministry of Digital Transformation of Ukraine
- Ministry of Defense of Ukraine
- General Staff of the Armed Forces of Ukraine
- Ministry of Economy of Ukraine
- Ministry of Strategic Industries of Ukraine
- National Security and Defense Council of Ukraine

Data as of sources: Brave1, AIN, Suspilne Media, EU Today, Dia Business, Militarnyi.

c. Investors

Current investment landscape

Pure players

Specialized funds, mostly backed by Limited Partners (LPs), that invest only in defence-tech startups and established companies.

Generalist funds

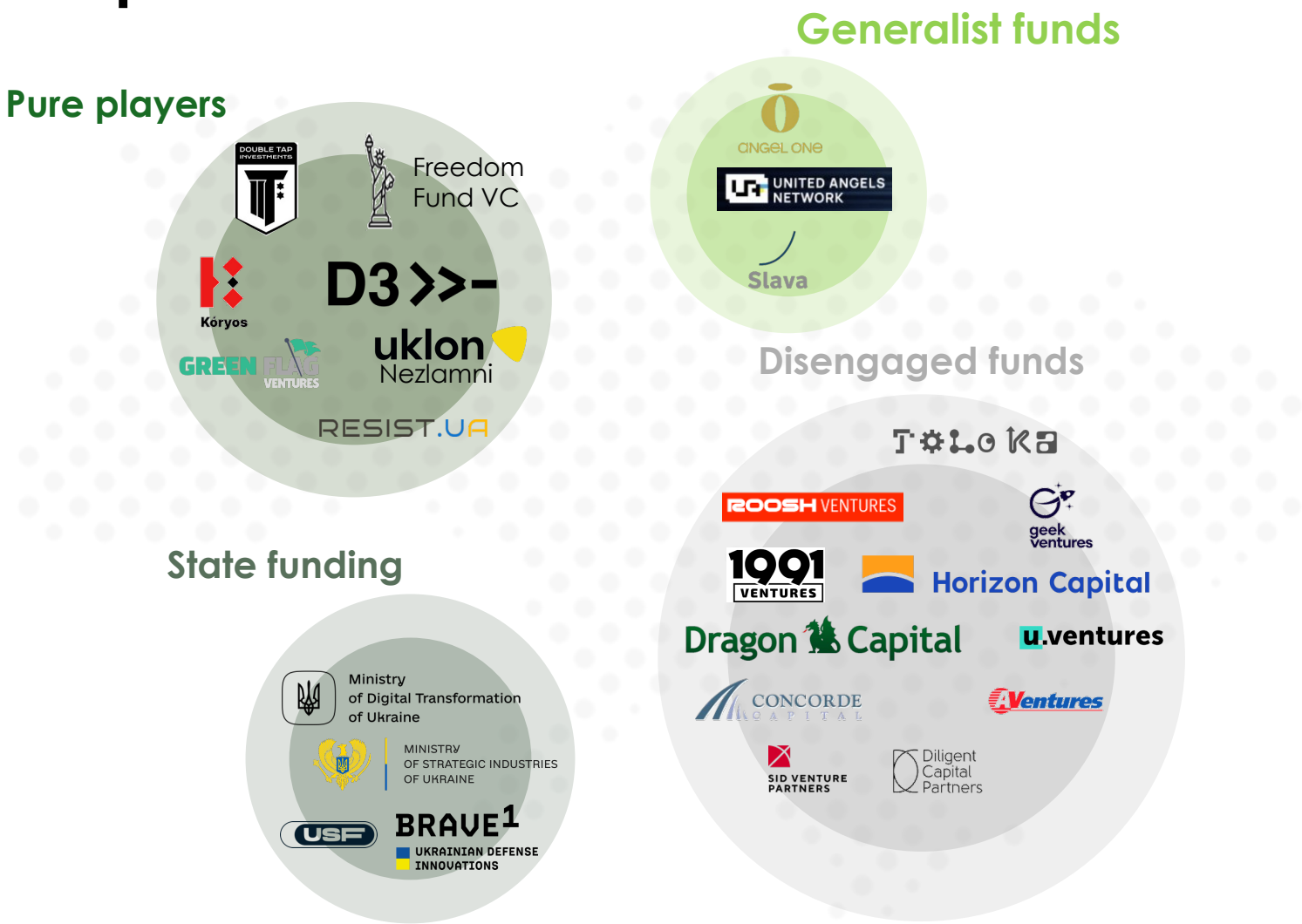
Generalist funds that have started investing in defence tech startups or are considering opening this area of investment activity.

Disengaged funds

Established funds that do not invest in defence tech companies, but only monitor the development of this market.

State funding

Ministries of Ukraine that invest in defence tech startups through various initiatives or directly.



Disclaimer: other funds may be privately investing in defence tech, but they do not disclose their activities in this sector.

Pure defence tech funds

Strategic approach

"Victory-based": driven by a strong patriotic duty to support Ukraine's defence, prioritizing the war effort over immediate financial returns.

"Business-based": driven by the potential of financial returns, focusing on traditional metrics like ROI and WACC.

Resource mobilisation

3F (Fools, Friends & Family): Many rely heavily on local capital from small and medium-sized Ukrainian businesses and private investors, as well as foreign angel investors who share the fund's mission.

But: funds typically do not rely / plan to rely on institutional investors like the European Investment Bank (EIB)

Investment thesis

The funds' investments are based on several key topics

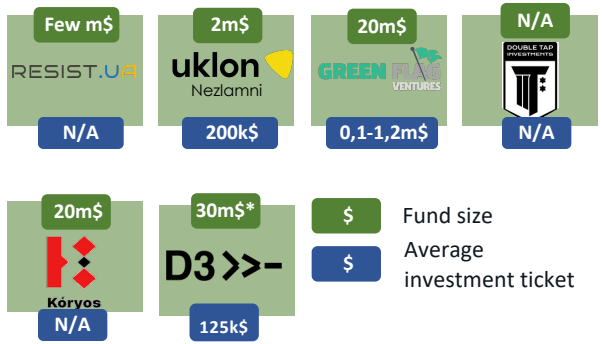
Preference for scalable solutions	Prioritizing technologies that can be rapidly scaled, both in terms of production and market reach
Focus on high-growth sectors	Investments centered on sectors with high growth potential and strong market demand, such as **drones, AI, cybersecurity, electronic warfare, etc.**
Market validation	Ensuring that the startups they invest in can attract follow-on investments from other venture capitalists. This serves as both a validation of the startup's potential and a way to mitigate exit risk
Rigorous vetting process	Conduct extensive due diligence, selecting only startups that meet stringent criteria for potential impact and can maintain relevance and profitability in the post-war environment

Examples of funds

Freedom Fund VC

Number of projects in portfolio 14(Himera HIMERA Zvook etc)
Average check size: $100-500k
Fund size: few million $
Potential areas of investment: AI, UAVs, Demining, Robotics, etc.

Other pure defence tech funds



Sources: Forbes Ukraine, Tvoe Misto, Expert Interviews, DataDriven Analysis
* Target size

Generalist funds

Funds overview

Generalist funds are investment vehicles that traditionally focus on a broad range of sectors, including both civilian and emerging military technologies.

These funds are now increasingly exploring opportunities in the defence tech space, driven by the potential for high returns and the strategic importance of dual-use technologies.

Strategic approach

Looking to integrate military technology verticals alongside their civilian investments.

This diversification allows them to leverage synergies, particularly in dual-use technologies that have applications in both civilian and military context.

Investment thesis

Features that characterize the investment behavior of generalist funds

Focus on dual-use and scalable technologies	**Synergy with civilian verticals**	Funds prioritize technologies that have both military and civilian applications, offering diversified revenue streams.
	Scalability and profitability	Seek startups that can demonstrate immediate profitability and scalability, with a focus on expanding into international markets.
Selective investments in high-impact areas	**Cautious investment decisions**	Funds carefully consider their investment decisions, based on strict criteria, such as strong teams, market potential, and the capability to navigate regulatory challenges.
	Focus on global market reach	These funds focus on investments that can scale into international markets, ensuring their portfolio companies are not overly dependent on domestic sales.

Examples of funds

Generalist funds that have already invested in defence tech

- 150k$: Mantis Analytics, swarmer
- slava 400-500k$[1]: Zvook (acoustic sensors)
- UNITED ANGELS NETWORK 50-200k$: Syndicate investments, HIMERA

Generalist funds that are considering / could consider such an investment

ZAS VENTURES, CHERNOVETSKYI INVESTMENT GROUP

Specific examples (not exhaustive list)

$ Average investment ticket

Notes: 1. Based on recent investments acessible via PitchBook
Sources: Expert inverviews, DataDriven analysis, Forbes Ukraine

Disengaged funds

Lack of understanding

Sector complexity: Many of the funds do not have the internal expertise to assess defence tech opportunities accurately, leading to hesitance in investing.

Unfamiliarity with market dynamics: Defence tech unique challenges, such as specialized regulations and high capital intensity, deter them from entering this space.

Institutional concerns

Banking and compliance issues: The proximity of defence-tech investments to wartime activities raises red flags with banking institutions, so they tend to scrutinize transactions and investments.

Specialized investment needs: Defence tech often requires a specialized fund structure, as well as experience and connections, which some funds are not equipped to provide.

Investment thesis

Reasons why funds do not consider defence tech startups for investment for the moment

Market size and maturity	The Ukrainian defence-tech market is still in its early stages, **with few companies reaching the Series B stage**. This limited maturity makes it less attractive to larger private equity funds that typically look for more established markets.
LPs restrictions	Many of these funds have mandates from their Limited Partners (LPs) that exclude military technology.
Regulatory and export restrictions	Funds are hesitant to invest when the market is so heavily **reliant on a single off-taker**, like the Ministry of Defence, which provides short-term and unstable contracts.

Examples of funds

Funds that currently do not invest in the defence tech

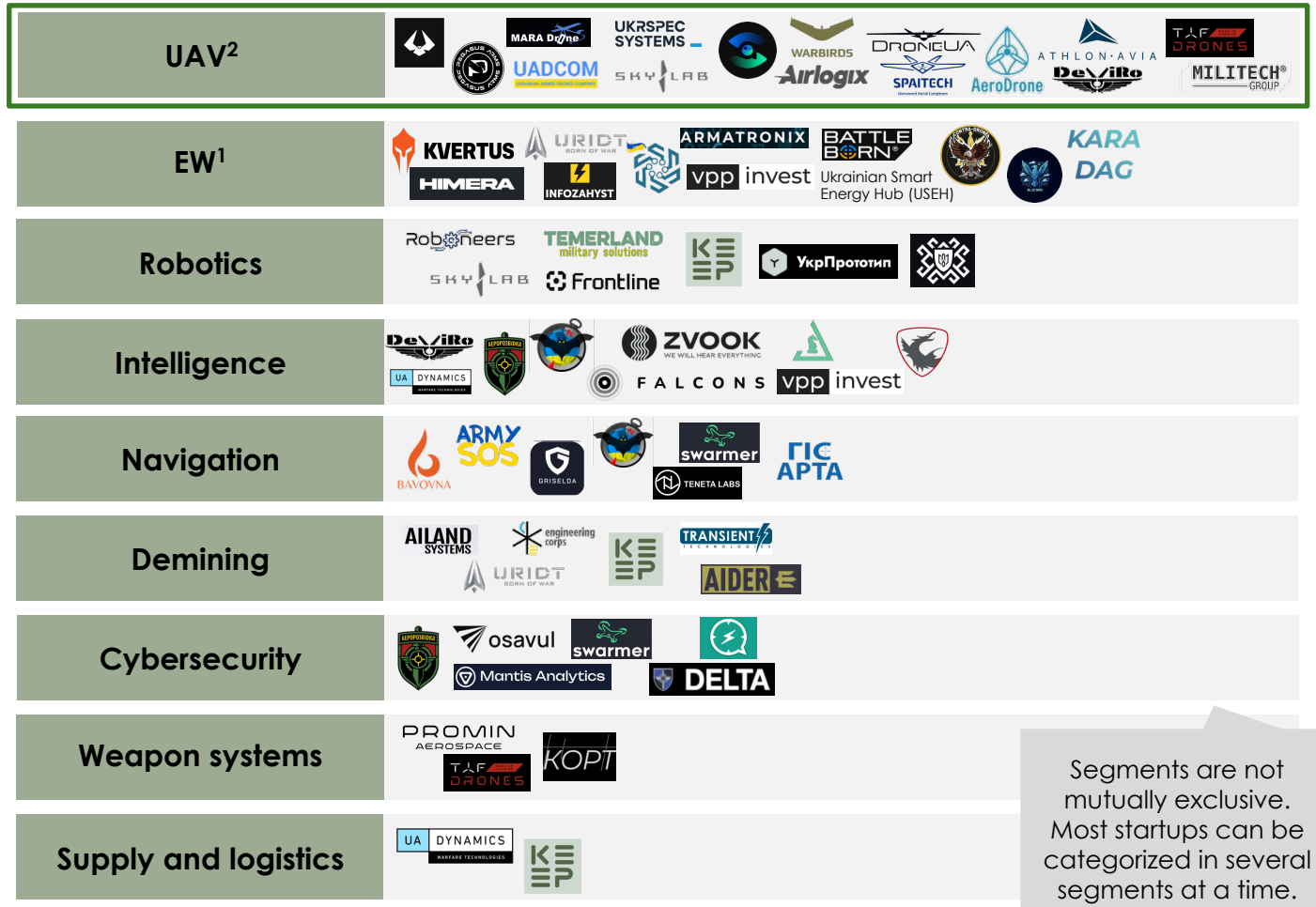
Horizon Capital · Toloka · Roosh Ventures · Dragon Capital · Concorde Capital · geek ventures · 1991 Ventures · ICU · u.ventures · SID Venture Partners · Diligent Capital Partners · AlmazCapital

Sources: Expert inverviews, DataDriven analysis.

d. Startups

Ukrainian defence tech market is represented by a multitude of heterogenous startups: UAVs are the most dynamic segment

Key market segments by technology



UAV Startups lead the market:

- Unmanned Aerial Vehicle (UAV) startups currently dominate Ukraine's defence tech market, holding the largest share.
- This is followed closely by companies specializing in Electronic Warfare (EW) and Robotic systems.

Rising popularity of Intelligence and Navigation tech:

- Technologies in intelligence and navigation, particularly those enhanced by AI, are seeing increased interest and adoption.

Why?

These categories of goods are in high demand by the Ukrainian state and military, representing a significant sales opportunity.

Investment trends:

- Venture funds are directing the most substantial investments toward UAV companies, recognizing their market dominance and potential.
- There is growing investor interest in Electronic Warfare, communication technologies, and AI-driven solutions.

Notes: Order of market segments is not necessarily representative of their ranking by size in volume nor value. The list is non-exclusive, only selected startups are included.
1. EW – Electronic warfare, 2. UAV – Unmanned aerial vehicles.

What makes a good defence tech startup for investors?

Experienced and versatile team 1

Need for a team with a blend of engineering expertise, operational experience, and strong managerial skills. This ensures the team can navigate both military demands and the business landscape effectively.

Proven practical application 2

Having tested and validated the product in real combat scenarios or within military units is crucial. It demonstrates the product's necessity and practical utility, making it more attractive to investors.

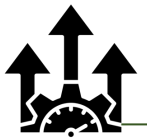
Global market vision 3

Planning for international expansion, especially targeting NATO countries and the Global South, is essential. Diversifying markets helps ensure sustainability and growth beyond the local demand, which may decline post-war.

External validation and partnerships 4

Support from reputable accelerators and international partnerships can enhance startup's credibility. They serve as strong signals of potential and reliability to investors.

Competitive edge and dual-use potential 5



Having a unique competitive advantage and the potential for dual-use applications, appealing to both military and civilian markets for greater market appeal.

Sources: Expert inverviews, DataDriven analysis.

AiLand Systems, a key developer of high-tech demining equipment

Market segment	**Demining, UAVs, AI**
Year of foundation	**2022**
Founders	 **Dmytro Titov**  **Heorhii Shakula**
Financing raised	**$125k** from D3 >>- **$200k** from uklon **$100k** from Google for Startups
Traction	MoUs with key stakeholders and demining operators (e.g. UkrOboronService)

Ailand Systems specializes in **autonomous drones for mine detection and handling explosive devices**.

Ailand systems is a good example of a company's successful **transition to the dual-use segment**. In fact, Ailand Systems' first product was the RT1 debugger aimed at the agricultural sector, designed to control insects on farmland. Its products have since been also actively used in demining operations.

As of today, the key feature of Ailand that allows for sustainable fundraising is the **unique high-tech nature of the product and its usage flexibility** – allowing the products to be used both in humanitarian demining and for military purposes.

Sources: AiLand systems website, Forbes, Interviews with AiLand Team

Himera, a leading military radio manufacturer

Market segment	**Intelligence & communications**
Year of foundation	**2022**
Founders	 **Misha Rudominski**  **Oleksiy Oliynyk**
Financing raised	• **$550k** from several **angel investors** (incl. United Angels Network) in 2024 • **$100k** from **Freedom Fund** in 2023
Key customers	**Charity funds** and **individual military units**
Products deployed	**2500+**

Himera is a developer and manufacturer of **secure radio communication systems** for military, police and rescue services.

The success of Himera's products relies on their **resistance to russian electronic warfare**, **low probability of detection or intercept** and **user-friendliness**, allowed by rigorous battle-testing and active feedback by the Ukrainian defence forces. Himera combines functionality with scalability and **affordability**.

Himera **plans to secure its first public procurement contract in 2024**. The company has also signed an exclusive distribution agreement with Reticulate Micro, a US-based defence tech company, and expects **additional revenues from export**.

Sources: Himera tech website, Forbes, AIN, Reticulate Micro.

Buntar aerospace, a promising UAV startup

Market segment	**UAVs, military software**
Year of foundation	**2023**
Founders	 **Ivan Kaunov**  **Bohdan Sas**
Financing raised	• **$1m** from **anonymous investors** in 2023 • **$200k** from **Uklon** in 2024
Key customers	**Charity funds** and **individual military units**
Products deployed	**1000+**

Buntar aerospace is a developer and manufacturer of **UAVs** and drone-related **software** mainly for **military applications**.

Its leading product is **Buntar One**, a reliable **reconnaissance drone** with advanced cameras and information transmission technologies, controlled by an incorporated AI system. Its system **Buntar copilot** is designed specifically for surveillance purposes, and is able to conduct **90% of the flight by itself.**

Plans of Buntar aerospace include promoting and enhancing the Buntar Copilot system and adapting it to other Ukrainian UAVs, while making **surveillance and reconnaissance its mainstay**. Besides, some improvements in the **Buntar one** are also announced.

Sources: Buntar aerospace official site and Linkedin profile, Forbes, Ain.capital

d. Regulatory Environment

Ukrainian defence tech market is regulated by several major state agencies

According to the current legislation, three key ministries can organise defence procurement through tenders:

- **Ministry of Strategic Industries** - responsible for *planning* such procurements;
- **Ministry of Defence** - responsible for their *implementation;*
- **Ministry of Digital Transformation** - one of the implementers of the project of system procurement of drones - "Army of Drones";

Since 2020, leading private manufacturers also have their own structure - the National Association of Defence Industry Enterprises of Ukraine (NAUDI).

The National Defence Procurement Agency is a state-owned enterprise established by the MoD to directly implement the following task:

- The agency receives commercial offers from both producers and importers through its website.
- In the domestic market, contracting is direct with manufacturers. For imported products, the agency strives for the same in the long term.
- From January 1, 2024, purchases of weapons for the Ministry of Defence go exclusively through the Agency.
- Procurement of dual-use goods goes through the transparent Prozorro platform with a special procedure protecting sensitive information.

$5.8bn The total amount of arms purchase contracts for 2024 concluded by the Agency.

Tender proposals are evaluated based on the following criteria:

Price
If it is a one-time product from an industry where a full-fledged market already exists and no specific technical documentation is required.

Price + other criteria
If, despite being a one-time item, it is of a complex or specialized nature (including consulting services, research, development).

Other criteria
Including the availability of service, test results and other critical indicators of the effectiveness of the device and the project team.

Life-cycle cost of the procurement item
If the procurement item is characterized by multiple or long-term use.

Sources: CMU Order 363 (2021).

The Ministry of Defence is the key regulatory body and is responsible for certification procedures

High-tech military products, like any other weapons and equipment for use by the Defence Forces, **require a certificate of quality and compliance**. Such a certificate is issued by the **Ministry of Defence**[1]

Manufacturer's path

Submitting an application

- Applying to the Ministry of Defence (with a description, tactical and technical characteristics, technical documentation).

Application assessment

- Consideration by the Ministry of Defence commission[3].
  At this stage, the commission checks the compliance of all documentation, including preliminary (factory) test reports with final tests conducted under the control of the certifier.

Codification

- Assignment of internal and NSN (NATO) codification.

Regulatory simplifications for UAVs manufatures

From 2022 in the field of UAVs, there is the **Army of Drones Project** that involves drone procurement, delivery, maintenance and replacement, as well as pilot training.

Thanks to the project, **MoD, State Special Communications Service and Ministry of Digital Transformation purchase drones under a simplified procedure**. For this, VAT and import duty on drones and their components were abolished.

Ukraine is currently working on developing a reasonable AI regulation in the military sphere

The main challenges:

- Russia does not regulate the use of such developments, which gives it an advantage over the human rights-oriented Western world;
- Ukraine is expecting to see how AI defence systems will be regulated in the EU and the USA.

Sources: 1. CMU Order 345, 2. CMU Order 256, 3. Order of MOU 354.

Export restrictions remain a major obstacle to market growth and capital attraction

Military and dual-use technologies export restrictions

Exports restrictions

- The State Export Control Service has "frozen" existing arms export licenses for special exporters until the end of martial law

Rationale

- There are fears among the military that the state will not be able to ensure control to prevent exported goods from falling into the hands of actors hostile to Ukraine.
- The state does not have enough funds to buy the rights to exclusive versions of goods, and manufacturers do not have enough funds to produce a separate "export version".

Consequences

- **Loss of opportunities** for manufacturers to **enter foreign markets**
- Investors' desire to **register technologies abroad** to circumvent restrictions and gain market capitalization
- The state **risks losing technology** and post-war economic and geopolitical opportunities.

The State Export Control Service

Issues permits for the export of military and dual-use goods

To request a permit the manufacturer must submit a set of documents, including the "*Right to exercise export powers*" authorization from the Cabinet of Ministers

Export request may be refused for national security reasons

Even before the full-scale invasion, the service faced criticism for its conservatism and for hindering the market model

The Service has established a list of dual-use goods[1] that are subject to export control and are regulated in accordance with their characteristics

Notes: 1. State Service for Export Control of Ukraine list of dual-use goods
Sources: official websites of the Government of Ukraine and of the SECS, interviews with the stakeholders, SCESU

3. Sources and Methodology

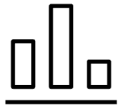
General methodology

Main sources of information

- Public sources, such as official portals of state institutions and agencies
- Officially published materials of public researches
- Reputable Ukrainian and international media sources
- A short survey DataDriven administered among investors and manufacturers / start-ups
- Interviews with investors, startups and other industry stakeholders

Approach to interviews

- Interviews included both confidential and public conversations with representatives of the regulator, investors, start-up teams and independent experts
- Interviews were complemented by baseline questionnaires, distributed through direct contact with representatives and industry associations.



Approach to forecasting

- Our data analysis allowed us to transform a set of statistical quantitative data into a qualitative assessment.
- At the same time, we took into account a wide range of market trends that could affect market development in different time frames.
- A special attention was paid to integrating the insights from a comprehensive set of interviewed stakeholders who are currently shaping the market.

Market sizing methodology

Sources & Inputs	• **Ukraine historic military spending**: SIPRI Military Expenditure Database • **Ukraine budgeted military spending 2025-2027**: Government portal • **Share of defence budget spent on equipment purchase**: 21% in 2022, 25% in 2023 and 23% in 2024 (Ministry of Defence, PM Shmyhal, Armyinform) • **Exchange rates (yearly averages)**: 1 USD = 32.34 (2022), 36.57 (2023), 41 UAH (2024), 45.0 UAH (2025), 46.5 (2026), 46.4 (2027), (Ministry of Economy, NBU). • **Defence industry market size in 2023 and number of companies**: $3bn in 2023, 400 private 100 public companies (Forbes) • **State-owned defence companies' revenues**: 79bn UAH in 2023, 41bn UAH in 2022 (Ministry of Strategic Industries) • **Share of military spending on domestic goods and services**: 50% in 2024 (PM Shmyhal) • **Defence tech market structure** based on Brave1 applications by category (Government portal)
Assumptions	• **Ukrainian defence sector is considered as the only off-taker of defence products and services in Ukraine** during the period of analysis. On one hand, this hypothesis is based on the impossibility for Ukrainian manufacturers to export their production due to the **export ban** since 2022. On the other hand, offtake of defence products by **donor institutions and private stakeholders** in Ukraine is considered **negligible and is not guaranteed in the long term**. • **Share of military spending on equipment in 2025-2027**: 20% in 2025-2027 based on 2022-2024 data and NATO standards. • **Share of military spending on domestic production**: +5% every year after 2024 (reaching 65% in 2027) • **Share of private sector in domestic military spending**: +4% every year since 2022 (20% in 2022 vs 40% in 2027) • **Defence tech market** is assumed **at least at 50% of Ukrainian private sector defence market**.
Methodology	• Defence market size is computed based on the military spending dedicated to equipment purchases from domestic producers. • Share of private sector is based on above-mentionned hypotheses and data, as well as historic performance of Ukroboronprom.
Limitations	• Market size expressed in USD is highly **sensitive to UAH / USD exchange rate projections in 2025-2027**. • **Public spending only takes into account Ukroboronprom** and disregards ~30 other state-owned defence companies, revenues of which are considered negligible compared to Ukroboronprom (ie <5% of total market)

office@datadriven.group

DataDriven | Research & Consulting

Kyiv Paris London