

# Defence, Security and Resilience in Europe

The state of startups and venture capital

February 2025





## Leading \$1B+ fund investing in Deep Tech for Defence, Security, Resilience.

A standalone venture capital fund backed by 24 NATO allies deploying €1+ billion in deep tech. The NATO Innovation Fund empowers founders to address challenges in **Defence, Security, and Resilience**, and secure the future of the Alliance's citizens. It focuses both on direct investments in startups and fund investments.

### Key focus areas

The NATO Innovation Fund invests in emerging disruptive technology areas including artificial intelligence (AI), autonomy, quantum, biotechnology, hypersonic systems, space, novel materials and manufacturing, energy and propulsion, and next-generation communications.

#### Direct investments



#### Funds supported



## Global startup & venture capital intelligence platform.

Dealroom.co is a global intelligence platform for discovering and tracking the most promising companies, technologies and ecosystems. Clients include many of the world's foremost organizations such as Sequoia, Accel, Index Ventures, NATO Innovation Fund, NATO Diana, European Defence Fund, ESA, McKinsey, BCG, Deloitte, Google, AWS, Microsoft, Stripe.

Dealroom partners closely with local tech ecosystem development agencies and enablers, to create a comprehensive multi-dimensional blueprint of the tech ecosystem, including capital, talent, innovation, entrepreneurship and overall economic dynamism.



# Key Takeaways

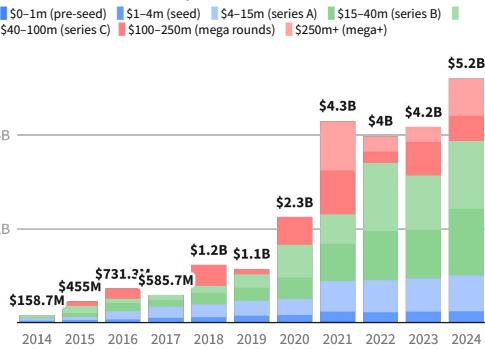
## Defence, Security and Resilience funding is on the rise in Europe.

VC funding in European Deep Tech **Defence, Security and Resilience (DSR)** is at an all time high, reaching \$5.2B in 2024. Funding is up 24% from last year and is up nearly 5x over the past six years. Early and breakout stages in particular are driving this growth, showing a strong pipeline for scaling in the coming years.

**Defence, Security and Resilience** is growing much faster than most VC sectors in Europe. It has seen the strongest growth in the last two years (+30%), while the overall VC market declined 45%.

In 2024, **Defence, Security and Resilience** represented an all-time high 10% of all VC funding, up 2.5x over the past two years. It also represented 1/3rd of all Deep Tech funding.

## VC funding in European Deep Tech Defence, Security and Resilience startups



## UK leads with Germany on the rise. Munich is now the top hub in Europe.

**The UK attracted the most VC funding since 2019, but Germany attracted the most in 2024.** France ranks 2nd overall and 3rd in 2024.

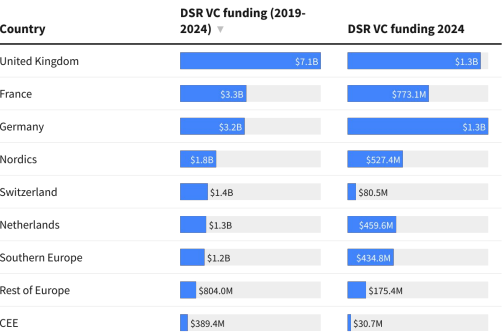
Switzerland and the Netherlands have the highest share of VC funding going to **Defence, Security and Resilience** since 2019 at over 7%.

**Munich has risen as the top hub** in Europe for VC funding in **Defence, Security and Resilience** in 2024.

**Oxford, Paris and Munich** are the top hubs in Europe for VC funding in **Defence, Security and Resilience** since 2019.

**The UK has 5 of the top 10 hubs** (Oxford, London, Cambridge, Bristol, and Reading) **followed by Germany with 2** (Munich, Berlin).

## Defence, Security and Resilience Deep Tech VC funding in Europe by region



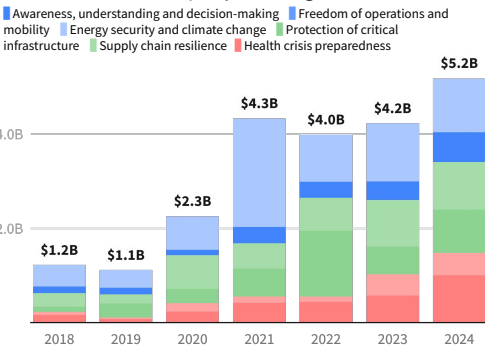
## Defence drove most of the growth in the sector, but growth also in segments of security and resilience.

**Most of the growth has come from startups focusing on addressing challenges in Defence**, such as Awareness, Understanding and Decision Making. VC funding in this sub-area reached a record \$1B in 2024, up 5x since 2020 and nearly 2x from last year.

VC funding in Energy security and climate change rebounded in 2024 to over \$900M, a bit shy of 2022 peak but still over 4x more than 4 years ago, driven by mostly by nuclear fission and fusion, and batteries.

Quantum and AI chips pushed funding in Protection of Critical Infrastructure startups to nearly \$1B in 2024, a record high on par with 2023.

## VC funding in European Deep Tech Defence, Security and Resilience startups by challenge areas



# This report focuses on Deep Tech for Defence, Security and Resilience, addressing six major challenges for Allied nations

## Defence



### Awareness, understanding and decision making

E.g. novel solutions to operating in complex environments, land and air situational awareness and threat detection



### Freedom of operations and mobility

E.g. novel and autonomous capabilities on the battlefield, space sovereignty infrastructure, novel maritime autonomy.

## Security



### Energy security and climate change

E.g. energy storage solutions, nuclear energy, and water management.



### Protection of critical infrastructure

E.g. quantum technologies, AI and compute hardware infrastructure

## Resilience



### Supply chain resilience

E.g. novel manufacturing, high-quality semiconductor materials, critical material supply

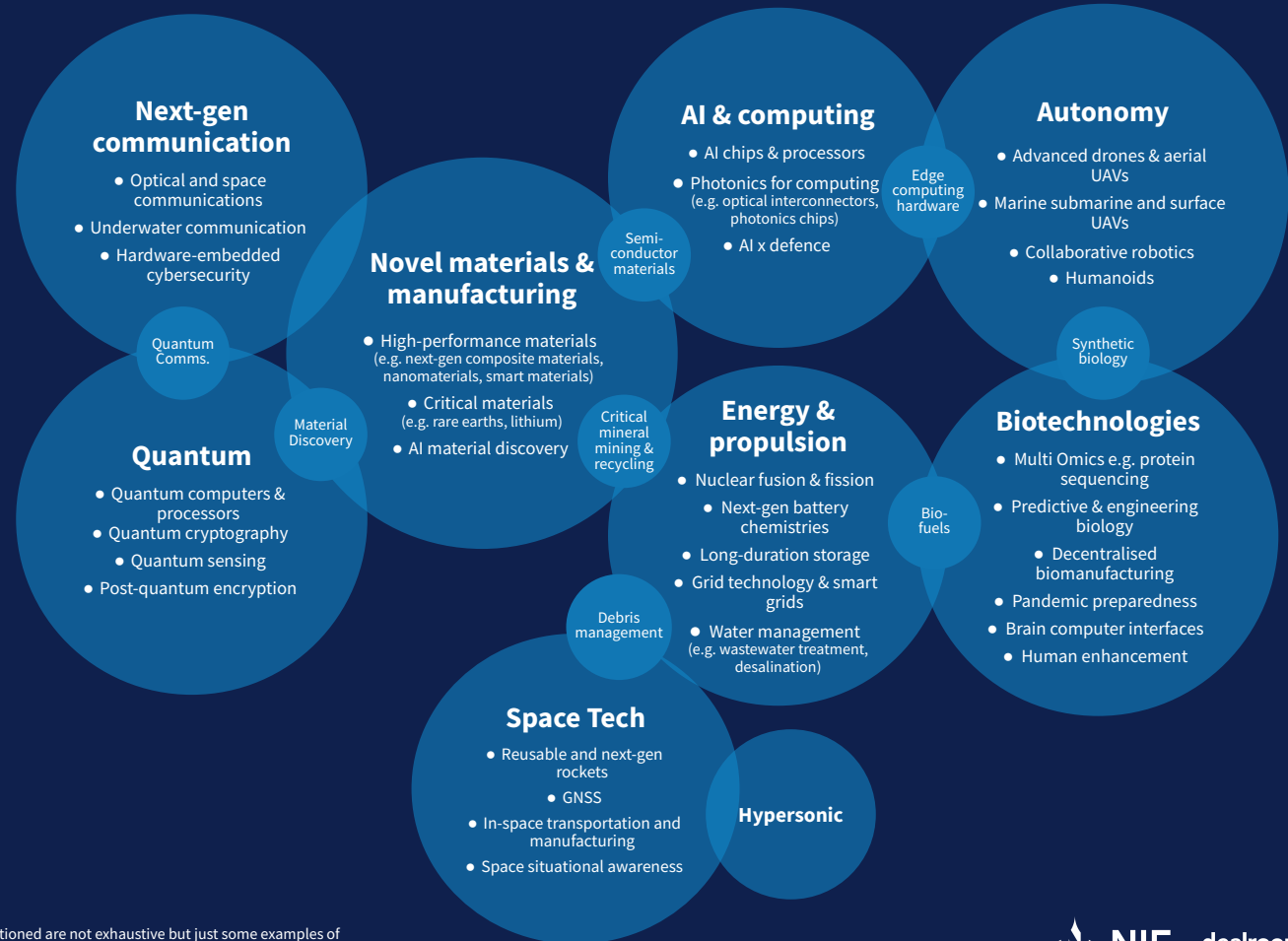


### Health crisis preparedness

E.g. biotechnologies, water access and food supply



# This report focuses on nine key technology areas within Defence, Security and Resilience



# Notable examples of Defence, Security and Resilience startups across the six challenge areas\*

Awareness, understanding and decision making	Freedom of operations and mobility	Energy security and climate change	Protection of critical infrastructure	Supply chain resilience	Health crisis preparedness
 <p>AI-enabled UAVs for military and civilian intelligence-as-a-service</p>  <p>Defence AI for sea, land, and air autonomy &amp; decision making.</p>  <p>Quantum clocks for position, navigation, and timing (PNT)</p>	 <p>UGV for mass deployment in defence and commercial applications</p>  <p>Next generation space rockets for small and medium satellites</p>  <p>Robotic for inspection, repair, and maintenance (IRM) of underwater assets</p>	 <p>Molten salt nuclear energy reactor (SMRs)</p>  <p>Next generation stellarator fusion reactor</p>  <p>Intelligent transformers for grid flexibility and resilience.</p>	 <p>Quantum technology for cryptography and computing</p>  <p>Quantum computers</p>  <p>In-memory computing for AI inference</p>	 <p>In-space manufacturing of advanced semiconductor materials</p>  <p>Advanced composite material and fiber manufacturing</p>  <p>Liquid-liquid direct lithium extraction (DLE) technology</p>	 <p>Full-length protein sequencing</p>  <p>Bio-manufacturing for industrial applications</p>  <p>Graphene-based Brain-Computer Interface technology</p>



**Kelly Chen**

Partner



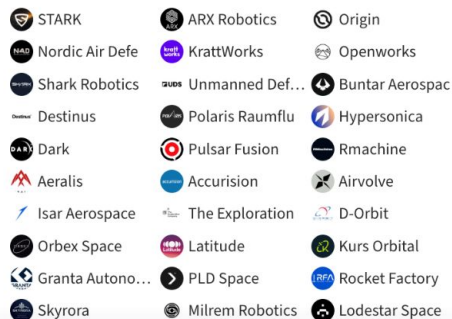
***“Europe has the talent and resources to become a global leader in technologies for Defence, Security and Resilience. We're excited to see this sector drive the momentum in Deep Tech this year and are committed to investing in technologies that can secure the future.”***

# 300+ selected Deep Tech Defence, Security and Resilience startups in Europe

» Explore the landscape

## Freedom of operations and mobility (Defence)

Combined funding \$ 1.4B



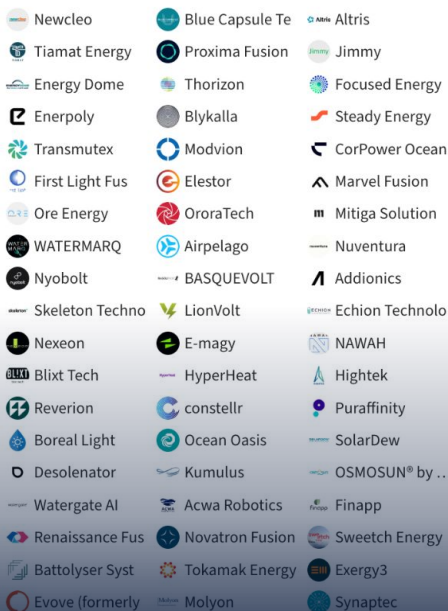
## Awareness, understanding and decision making (Defence)

Combined funding \$ 2.4B



## Energy security and climate change (Security)

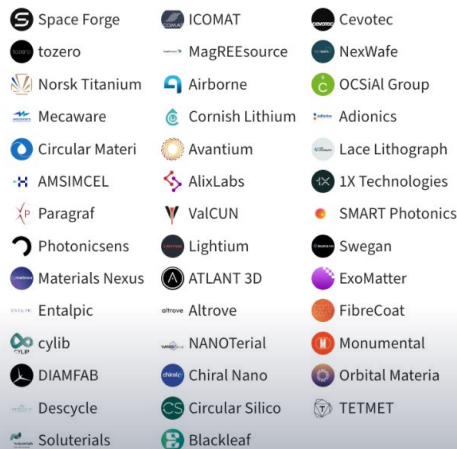
Combined funding \$ 2.9B



## Protection of critical infrastructure (Security)

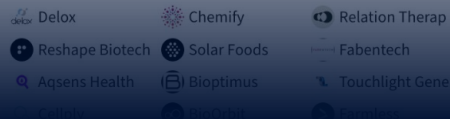
## Supply chain resilience (Resilience)

Combined funding \$ 1.5B



## Health crisis preparedness (Resilience)

Combined funding \$ 1.7B

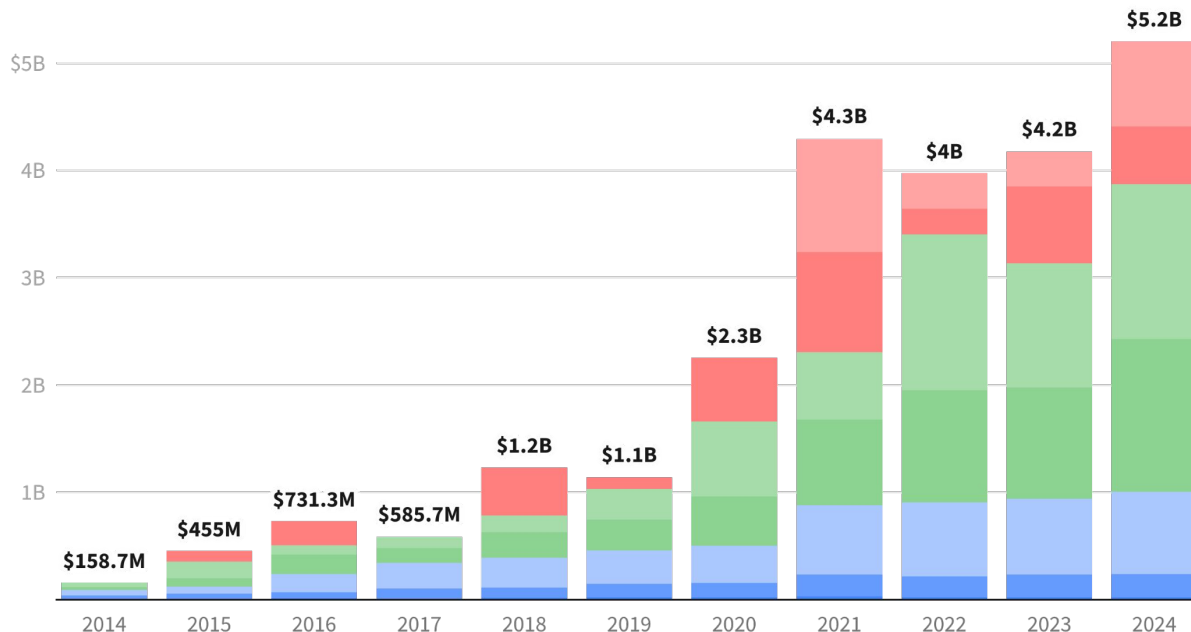


# VC funding in European Deep Tech Defence, Security and Resilience is at an all time high, reaching \$5.2B in 2024

Funding is up 24% since last year and went up nearly 5x over the last five years.

## Venture Capital investment in European Deep Tech Defence, Security and Resilience startups » [view online](#)

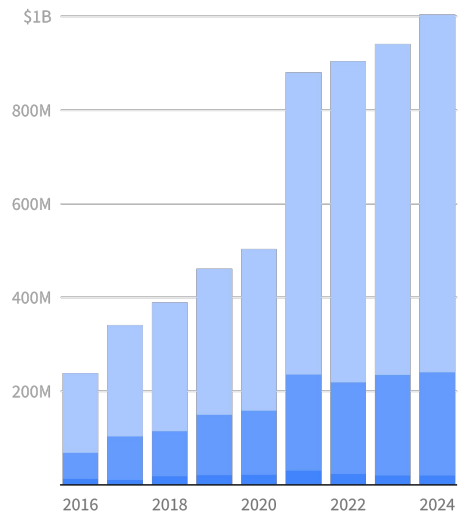
■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



**Early and breakout stages are at all-time high showing a strong pipeline for scaling for the coming years. Late stage is short just of its 2021 peak year.**

## Early

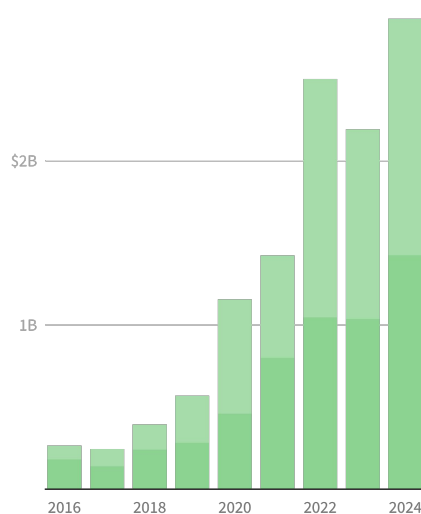
■ \$0-1m (pre-seed) ■ \$1-4m (seed) ■ \$4-15m (series A)



**FRACTILE** **NAD** **ARX**  
**Puraffinity** **ALDORIA** **ROBOTICS**  
**Altris**

## Breakout

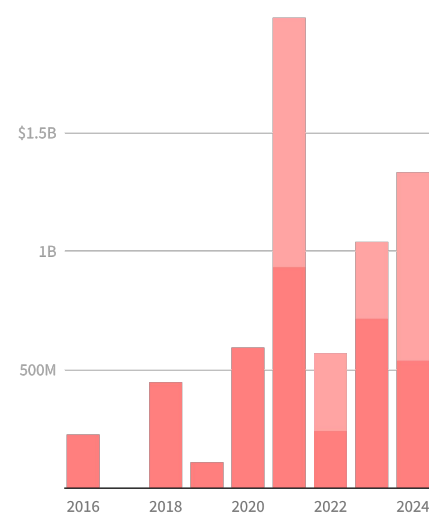
■ \$15-40m (series B) ■ \$40-100m (series C)



**TEKEVER** **QBLOX** **iCOMAT**  
**planqc** **black** **semiconductor** **MarvelFusion**

## Late

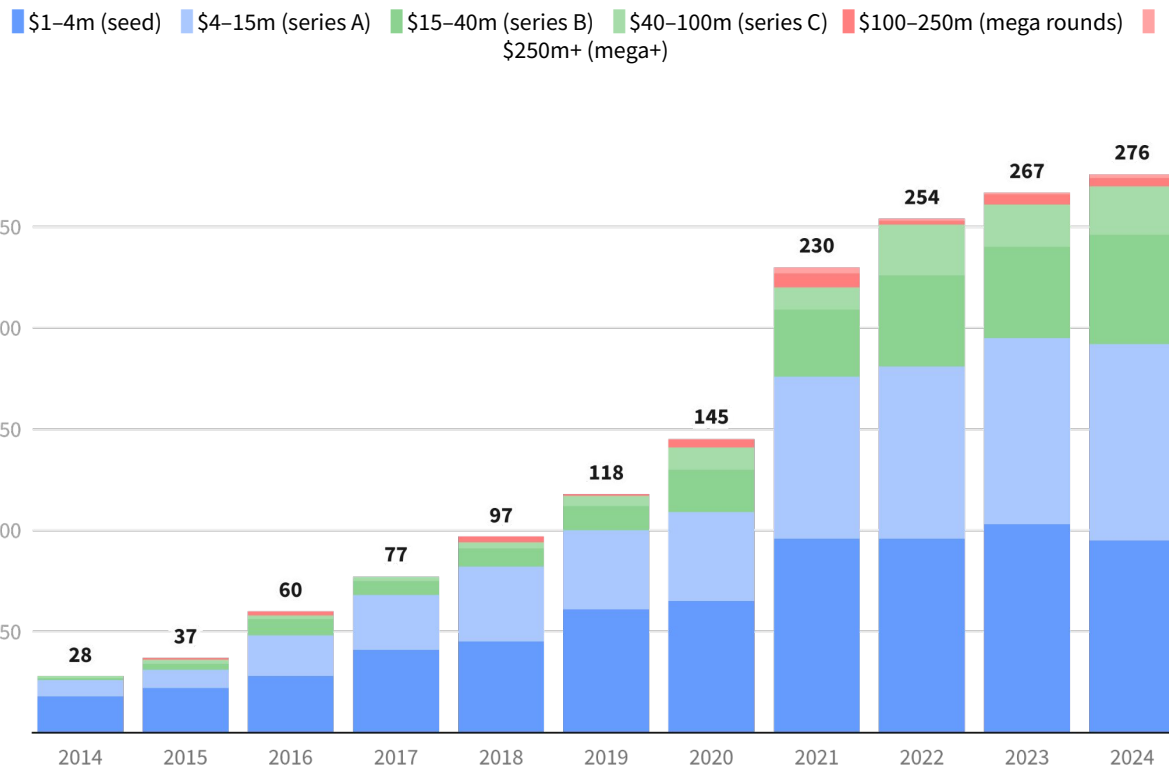
■ \$100-250m (mega rounds) ■ \$250m+ (mega+)



**The Exploration Company** **newcleo** **isaraerospace**  
**HHelsing** **QUANTINUUM** **Tokamak Energy**

# The number of VC rounds ( $\geq$ \$1M) in European Deep Tech Defence, Security and Resilience is at an all time high

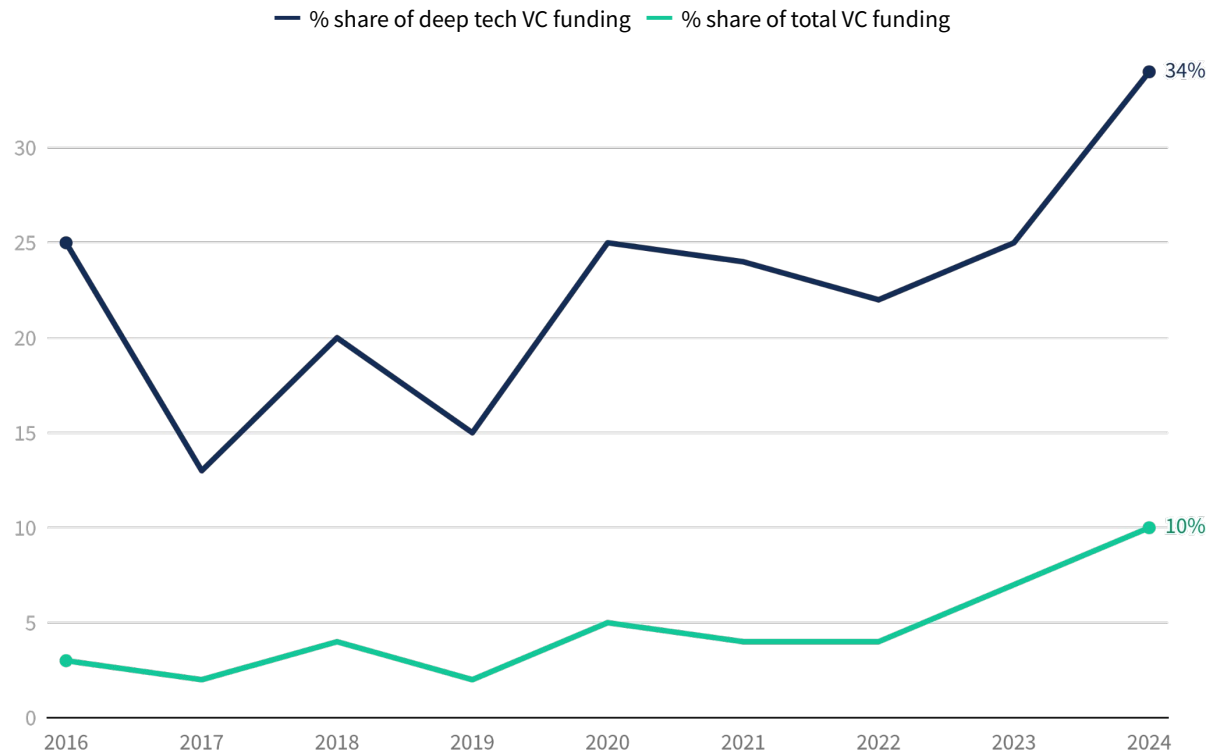
Number of VC rounds ( $\geq$ \$1M) in European Deep Tech Defence, Security and Resilience startups\* » [view online](#)



## A record 1/3 of all Deep Tech VC funding in Europe went to Defence, Security and Resilience in 2024

This also represented a record 10% of all VC funding, up 2.5x from two years back.

Share of European VC funding and Deep tech VC funding going to Defence, Security and Resilience startups































# Defence, Security and Resilience is growing much faster than most VC segments in Europe

It was the 3rd fastest growing segment in terms of European VC funding in the last year and the 1st over the last two years.

Only Enterprise Software and Robotics saw higher growth in the last year, driven by the AI race.

Comparison of VC funding by selected sectors in Europe

Vertical	% last 12 months growth ▼		% last 24 months	2024	2023	2022	2021	2020	2019
<b>Total VC</b>		-11%		<b>\$54B</b>	<b>\$60B</b>	<b>\$98B</b>	<b>\$116B</b>	<b>\$48B</b>	<b>\$47B</b>
Robotics		52%		\$2B	\$1B	\$2B	\$2B	\$644M	\$838M
Enterprise Software	31%			\$10B	\$7B	\$19B	\$17B	\$7B	\$6B
<b>Defense, security and resilience</b>		24%		<b>\$5B</b>	<b>\$4B</b>	<b>\$4B</b>	<b>\$4B</b>	<b>\$2B</b>	<b>\$1B</b>
Health		12%		\$11B	\$10B	\$12B	\$18B	\$10B	\$8B
Fintech		8%		\$9B	\$8B	\$24B	\$29B	\$11B	\$12B
Marketing		4%		\$2B	\$2B	\$6B	\$7B	\$3B	\$3B
Rest Of Deep Tech *		-24%		\$10B	\$13B	\$15B	\$14B	\$7B	\$7B
Food		-26%		\$4B	\$5B	\$7B	\$12B	\$4B	\$3B
Transportation		-32%		\$6B	\$9B	\$13B	\$13B	\$6B	\$6B
Semiconductors		-38%		\$1B	\$2B	\$1B	\$1B	\$899M	\$496M
Energy		-39%		\$9B	\$16B	\$13B	\$10B	\$4B	\$3B
Real Estate		-49%		\$1B	\$3B	\$3B	\$3B	\$2B	\$2B

Dealroom.co Data of 9/01/2025 \*This means Deep Tech not considered as part of Defence, Security and Resilience.

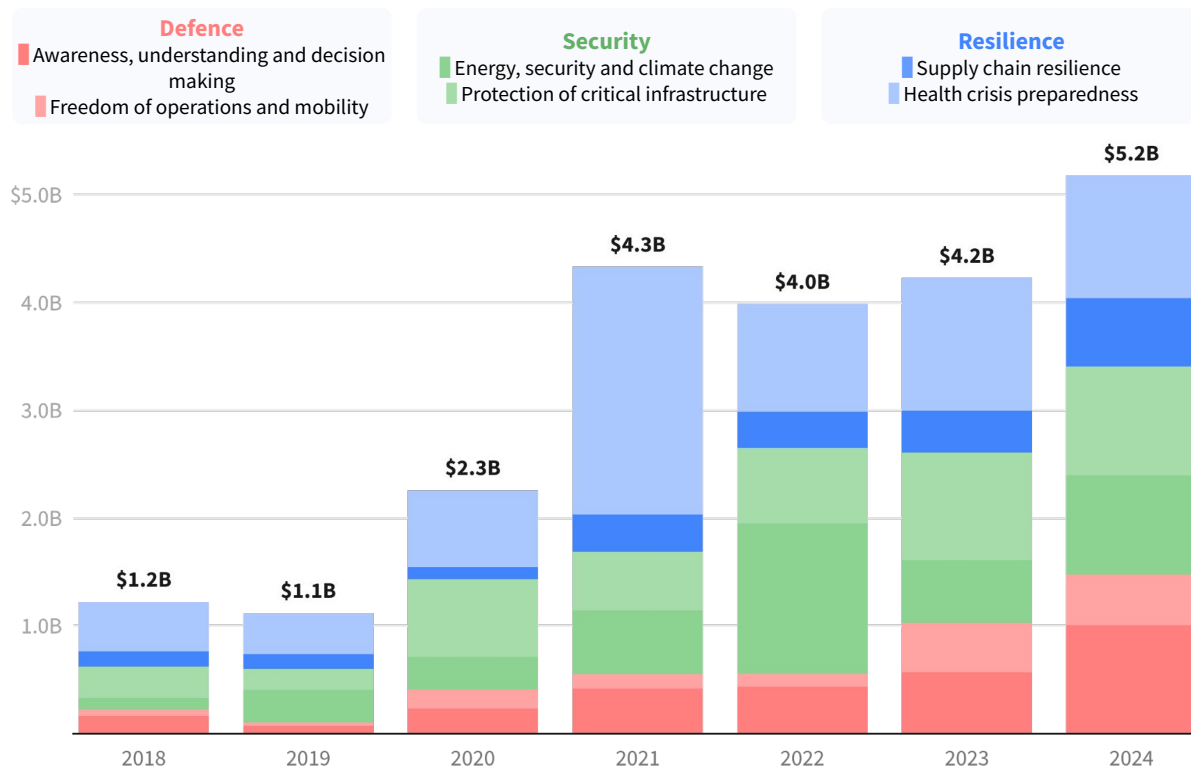
Source: There can also be overlap between segments, like nuclear energy being part of both Defence, security and resilience and Energy.



dealroom.co

**Most of the growth has come from startups focusing on Defence challenges**

VC funding in European Deep Tech Defence, Security and Resilience startups by challenge areas



# The largest Deep Tech Defence, Security and Resilience VC rounds in 2024

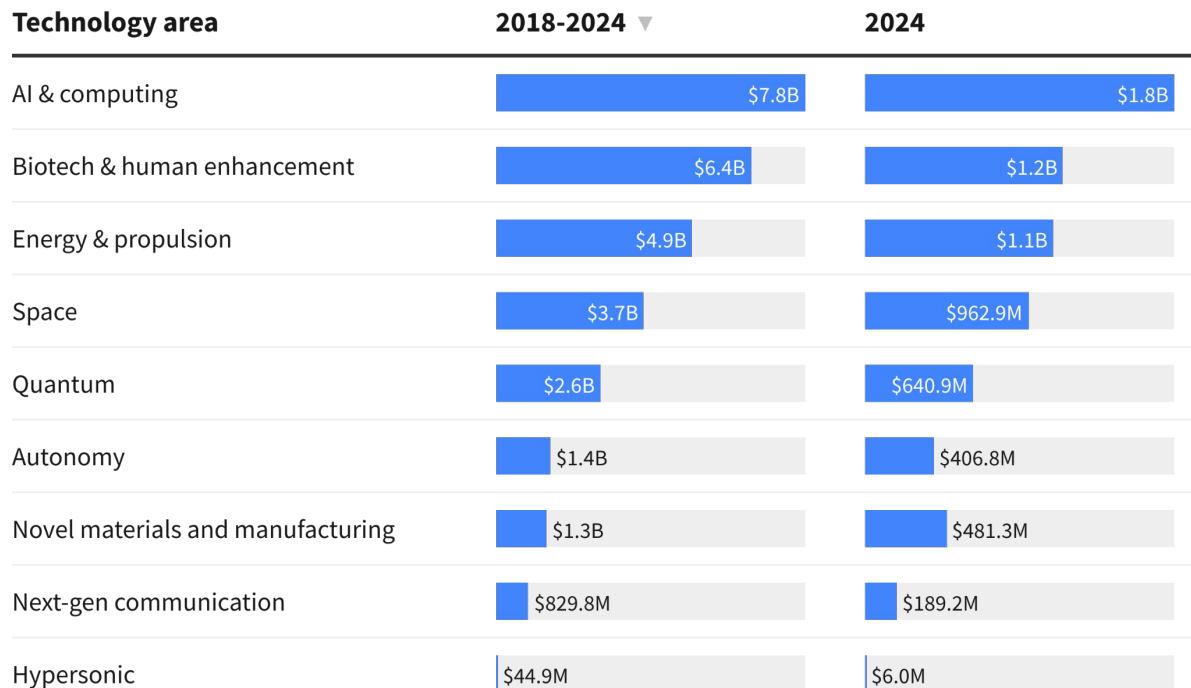
With a focus on AI & Autonomy, Quantum computing, Nuclear energy, and Space.

» [see rounds](#)

<p><b>Awareness and decision making</b> <b>AI for defence</b> Munich, Germany</p> <p><b>Helsing</b></p> <p>€450M Series C - Jul 2024</p>	<p><b>Protection of critical infrastructure</b> <b>Quantum computing</b> Cambridge, UK</p> <p><b>QUANTINUUM</b></p> <p>\$300M Late VC - Jan 2024</p>	<p><b>Freedom of operations and mobility</b> <b>In-space transportation</b> Planegg, Germany</p> <p><b>The Exploration Company</b></p> <p>€150M Series B - Nov 2024</p>
<p><b>Energy security and climate change</b> <b>Nuclear fission (SMRs)</b> Paris, France</p> <p><b>newcleo</b> <small>Puturable Energy</small></p> <p>€135M Series A - Sep 2024</p>	<p><b>Energy security and climate change:</b> <b>Nuclear fusion</b> Milton, UK</p> <p><b>Tokamak Energy</b></p> <p>\$125M Growth Equity VC - Nov 2024</p>	<p><b>Supply chain resilience and critical resources:</b> <b>Humanoids</b> Moss, Norway</p> <p><b>Humanoids</b></p> <p>\$100M Series B - Jan 2024</p>
<p><b>Awareness and decision making:</b> <b>Earth observation</b> Espoo, Finland</p> <p><b>ICEYE</b></p> <p>\$93M Series E - Apr 2024</p>	<p><b>Protection of critical infrastructure:</b> <b>Quantum computing</b> Cambridge, UK</p> <p><b>river lane</b></p> <p>£58.7M Series C - Aug 2024</p>	<p><b>Awareness and decision making:</b> <b>AI drones for surveillance</b> Lisbon, Portugal</p> <p><b>TEKEVER</b></p> <p>\$74M Series B - Nov 2024</p>

# AI & Computing have attracted the most funding as a technological area in Defence, Security and Resilience

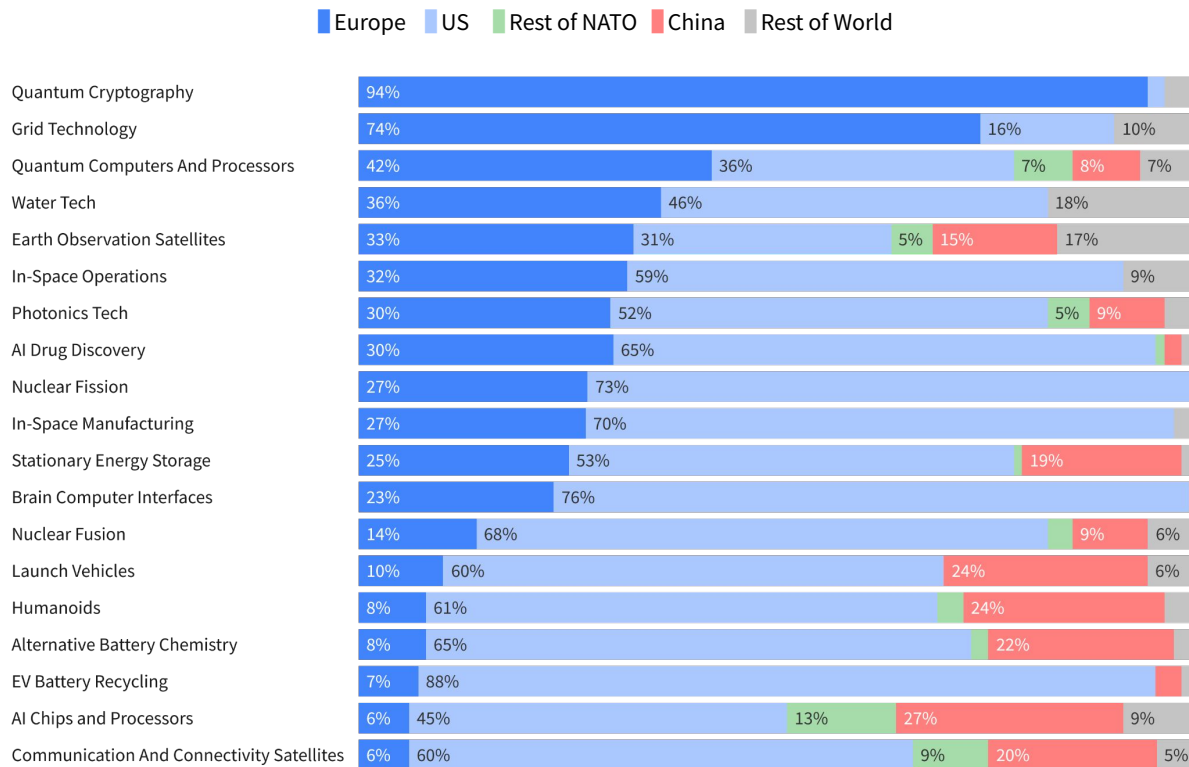
VC funding in European Defence, Security and Resilience startups by technology area



# Europe leads in quantum and grid technology VC investments and show strength in Earth Observation, In-space Operations and Photonics

Simultaneously, the region trails behind in AI chips and processors, launch vehicles and humanoids.




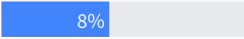
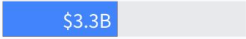
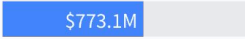


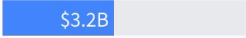
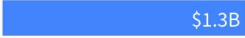

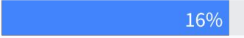
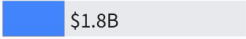
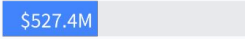

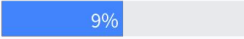
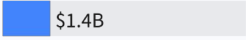
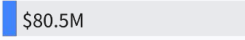

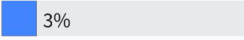
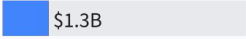
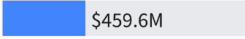


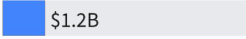
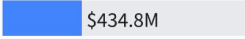


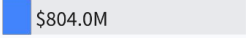
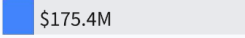
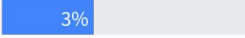
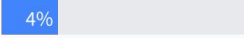
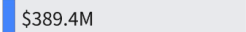
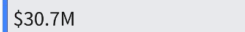
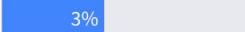
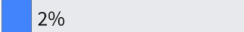
Share of VC funding in key Deep Tech areas (2022-2024)\*



Source: Dealroom.co. Some startups might be included in more than one category  
 \*China is a leader in some of these segments but not in the lens of VC funding, such as Quantum and Batteries.

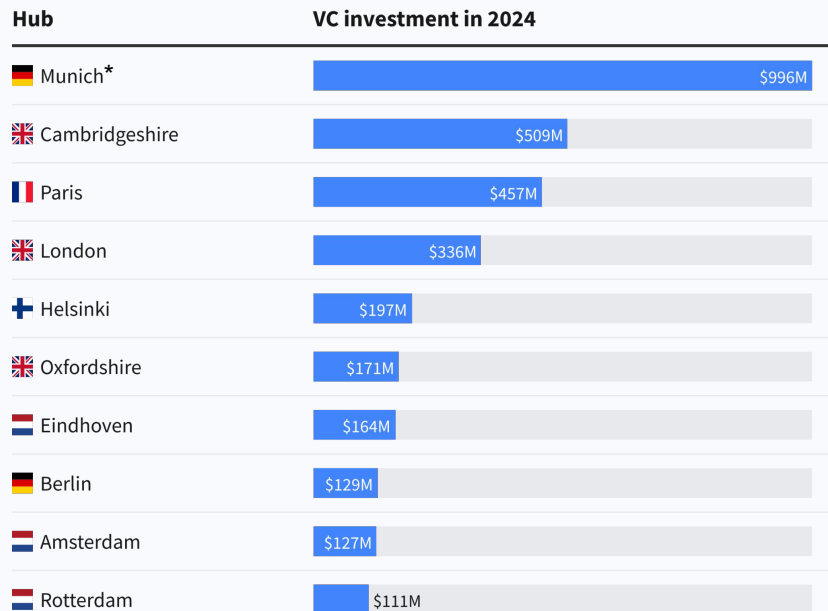
# The UK leads VC funding since 2019 whilst Germany tops in 2024; Switzerland and the Netherlands have the highest share of funding going to the sector

Defence, security and resilience (D.S.R.) VC funding in Europe by region

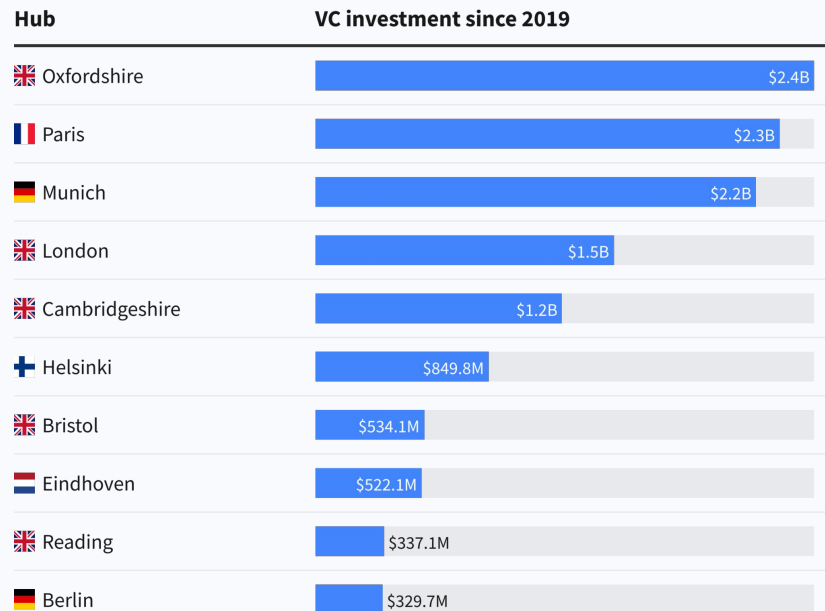
Country	D.S.R. VC funding (2019-2024)	D.S.R. VC funding 2024	% of country total funding (2019-2024)	% of country total funding 2024
United Kingdom	 \$7.1B	 \$1.3B	 5%	 8%
France	 \$3.3B	 \$773.1M	 6%	 10%
Germany	 \$3.2B	 \$1.3B	 5%	 16%
Nordics	 \$1.8B	 \$527.4M	 3%	 9%
Switzerland	 \$1.4B	 \$80.5M	 7%	 3%
Netherlands	 \$1.3B	 \$459.6M	 7%	 18%
Southern Europe	 \$1.2B	 \$434.8M	 5%	 11%
Rest of Europe	 \$804.0M	 \$175.4M	 3%	 4%
CEE	 \$389.4M	 \$30.7M	 3%	 2%

# Munich has risen as the top hub for VC funding in Defence, Security, and Resilience in 2024. The UK has five hubs in the top ten, followed by Germany with two

Top European cities for VC investment in Defence, Security and Resilience, 2024



Top European cities for VC investment in Defence, Security and Resilience, 2019-2024



# Munich has emerged as one of the leading **Defence, Security and Resilience** hubs in Europe

Key stats for Deep Tech **Defence, Security and resilience** in Munich

**38**

VC-backed startups

**\$996M**

VC funding in 2024

**3.8x**

In VC funding since 2021.

**\$8.1B**

Combined enterprise value

**1st**

Hub in Europe by VC funding in 2024

**1/3**

Of all VC funding in 2024 in Munich went to the sector.

## Successes



## Rising Stars



***“The Munich metropolitan region is becoming a hub for next-generation defence companies, offering industrial and testing facilities, top talent, a regional industrial supply chain, and connections to German defence customers and traditional primes.”***

***With ARX, we aim to bridge the gap between emerging players, new defence primes, and established contractors.”***

**Marc Wietfeld**  
Co-Founder & CEO,  
at ARX

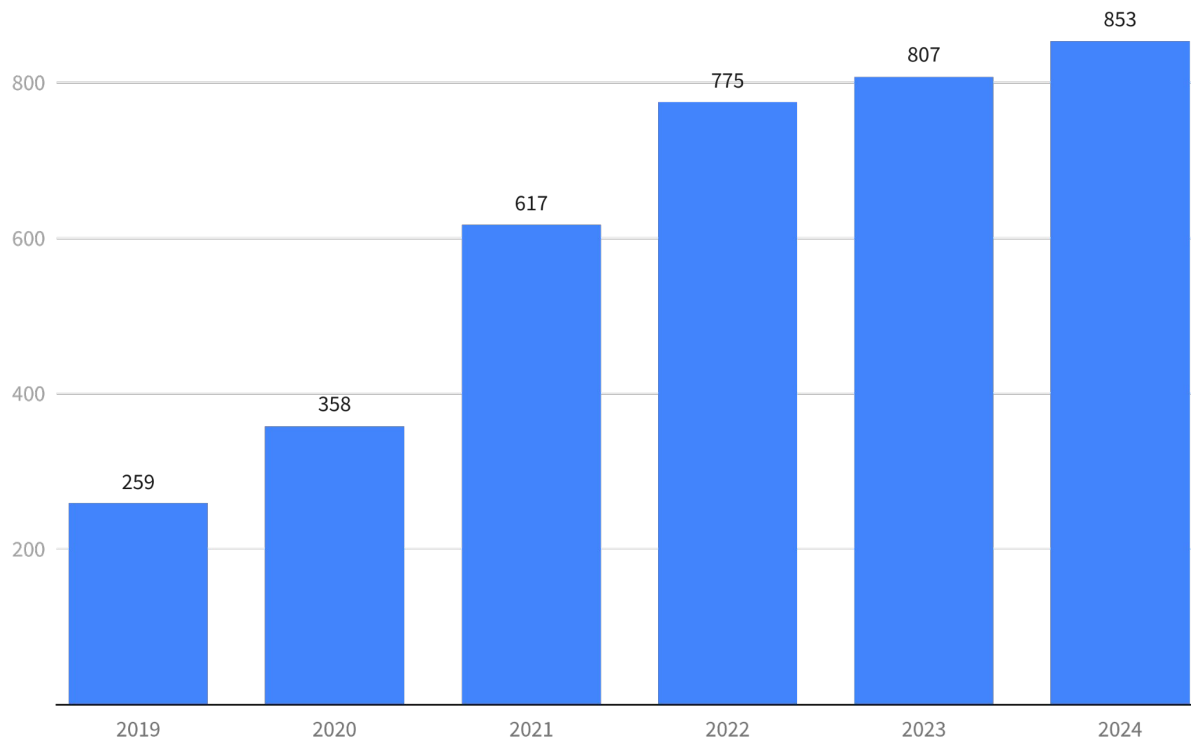




## More and more investors are becoming involved in the Defence, Security and Resilience sector

The number of investors doing at least one deal has increased 3.3x in the last five years.

Number of unique investors in European Defence, Security and Resilience (D.S.R.) by year

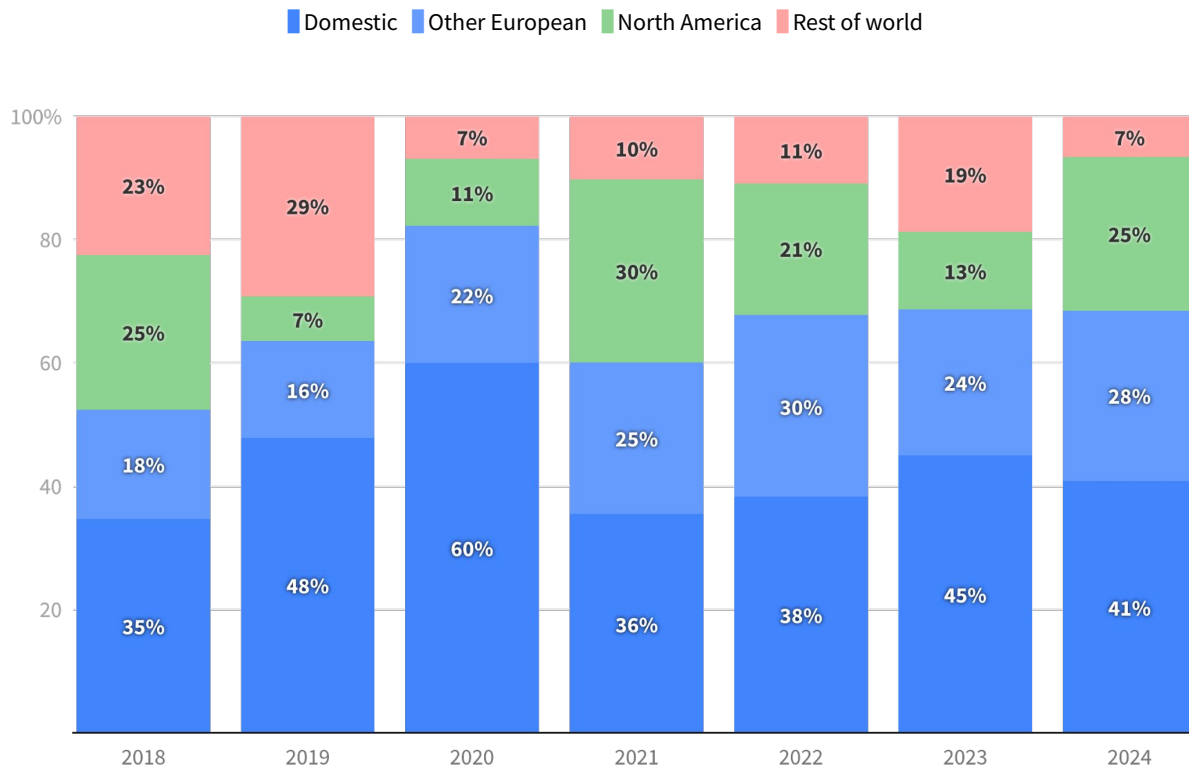


## More than half of VC funding in European Defence, Security and Resilience comes from domestic investors

In 2024, a quarter of VC funding in the sector has been from the US.











European Defence, Security and Resilience VC funding by investor HQ

» [view online](#)













# Most active investors in Defence, Security and Resilience in Europe in 2024

(Pre) Seed

Investor	Preferred round	Rounds (2024)	Rounds (2019-2024)
 bpi france	SEED	17	64
 European Innovation Council	SEED	12	59
 High-Tech Gründerfonds	SEED	10	37
 SFC Capital	SEED	10	21
 cdp	SEED	8	23
 Bayern Kapital	SEED	8	21
 SERAPHIM	SEED	7	32
 CDTI	SEED	7	17
 UK INNOVATION & SCIENCE SEED FUND	SEED	6	19
 Si Speedinvest	SEED	6	15

Series A+

Investor	Preferred round	Rounds (2024)	Rounds (2019-2024)
 NIF	SERIES A	8	8
 Innovation Industries	SERIES A	7	22
 INVESTNL	SERIES B	7	21
 DeepTech & Climate Fonds	SERIES A	7	8
 vsquared ventures	SERIES A	6	22
 IEQT VENTURES	SERIES A	6	10
 SUPER NOVA INVEST	SERIES A	5	21
 BGF	GROWTH EQUITY	5	16
 LAKE STAR	SERIES A	5	15
 VERVE VENTURES	SERIES A	4	26

# Notable European Defence, Security and Resilience investors

» view online

	Deep Tech funds	Other funds	Corporate investors**	International investors
<b>(Pre) Seed*</b>	ScaleWolf BSV Ventures EIC Fund Future Planet C Quantonation Primo Capital EIT InnoEnergy IQ Capital High-Tech Gründ Defence Innovat Possible Ventur Oxford Science HCVC EIT RawMaterial UK Innovation & Atlantic Labs Promus Ventures Elaia Partners Unruly Capital Takeoff Accelerator Deeptech Labs Voima Ventures APEX Ventures Join Capital Seraphim Space	CDTI Innviete Maki.vc 7percent Ventur Bayern Kapital 360 Capital Earlybird Ventu Export and Inve SFC Capital CDP Venture Cap Verve Ventures Speedinvest Plural Kindred Capital Cherry Ventures Scottish Enterp Bpifrance*	MBDA	E2MC Ventures Happiness Capit SOSV Big Idea Ventur In-Q-Tel Lowercarbon Cap Plug and Play AgFunder
<b>Series A</b>	NATO Innovation Fund (NIF) Alpine Space Ve OTB Ventures Sofinnova Partn Omnes Capital World Fund Vsqquared Ventur imec.xpand Runa Capital Cambridge Enter Amadeus Capital Parkwalk Adviso Supernova Inves	Astanor Venture UVC Partners Lakestar Tesi Demeter Partner HV Capital Octopus Venture Eurazeo Keen Venture	Lockheed Martin Porsche Venture Wa'ed Ventures GV SES* SES Satellites M Ventures	Walden Catalyst Decisive Point Lux Capital Accel S2G Ventures General Catalys DCVC
<b>Series B</b>	National Securi Innovation Indu	European Circul EQT Ventures Molten Ventures Invest-NL Baillie Gifford Cathay Innovati Innovacom	Applied Venture NGP Capital Marubeni Airbus Ventures Saab Automobile Bosch Ventures Cisco Investmen Nvidia Swisscom Ventur	Bessemer Ventur

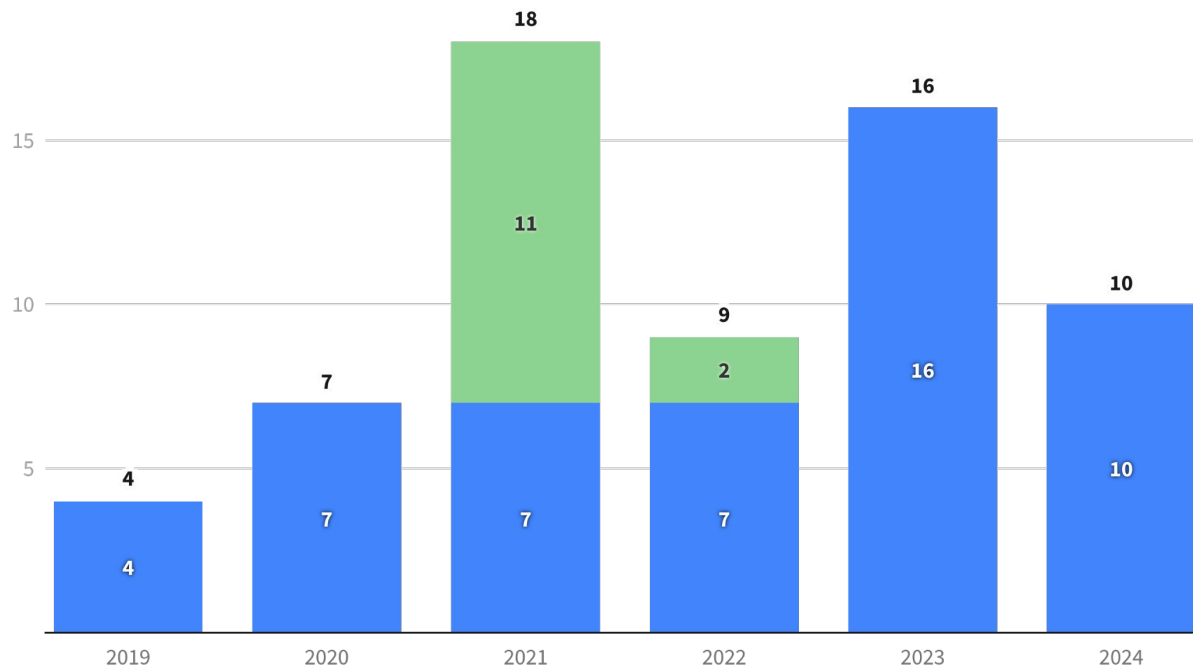
**M&A has increased in 2023-2024, while no public listing has taken place.**

**2021 had seen a flurry of public listings.**

Number of VC-backed exits of European Defence, Security and Resilience startups

[» view online](#)

■ M&A ■ IPO & SPAC's



Selected VC-backed European Defence, Security and Resilience exits since 2022

**Notable  
VC-backed  
Defence,  
Security and  
Resilience exits**

PRELIGEN<sup>IS</sup>

**Acquisition - €220M**

Jun. 2024

By



MALLOY AERONAUTICS

**Acquisition - Und.**

Feb. 2024

By



 **Exscientia** \*

**Acquisition - \$688m**

Aug. 2024

by



 **SKY-HERO**

**Acquisition - Und.**

Jul. 2023

By



# The European Deep Tech **Defence, Security and Resilience** landscape in a snapshot

## \$5.2B

In VC funding raised by European Deep Tech Defence, Security and Resilience startups in 2024.

## +30%

Growth in VC funding in the sector in the last two years

...while the overall VC market declined by 45%.  
5x growth for DSR in the last six years.

## 10%

Share of total VC in Europe going to European Deep Tech Defence, Security and Resilience startups in 2024.

## 1/3rd

Of all European deep tech funding in 2024 went to Defence, Security and Resilience startups.

## UK

Attracted the most funding towards the sector since 2019.

...whilst **Germany** attracted the most in 2024. .

## Munich

Top hub in Europe with \$996M in VC funding in 2024.

50% was raised by Helsing. Cambridgeshire and Paris follow with a combined \$966M.

## 850+

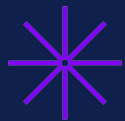
Investors were active in at least one DSR deal in Europe.  
Of this sample we also curated 100+ particularly notable DSR investors.

## 4x

Growth since 2020 in VC funding towards Awareness, Understanding and Decision Making with a record \$1B in 2024.

## \$1B

VC funding in Protection of Critical Infrastructure startups in 2024, driven by Quantum and AI chips.



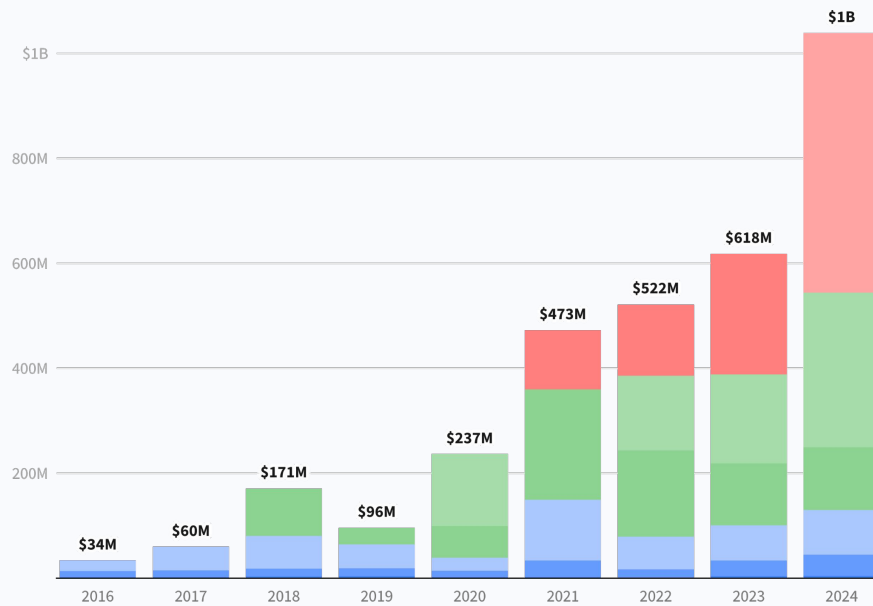
# Segments breakdown



# Awareness, understanding and decision making - VC funding in Europe nearly doubled in 2024, fueled by interest drones and UAVs, satellite imaging, AI x defence

VC investment in European Awareness, understanding and decision making Deep Tech startups » [view online](#)

■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)

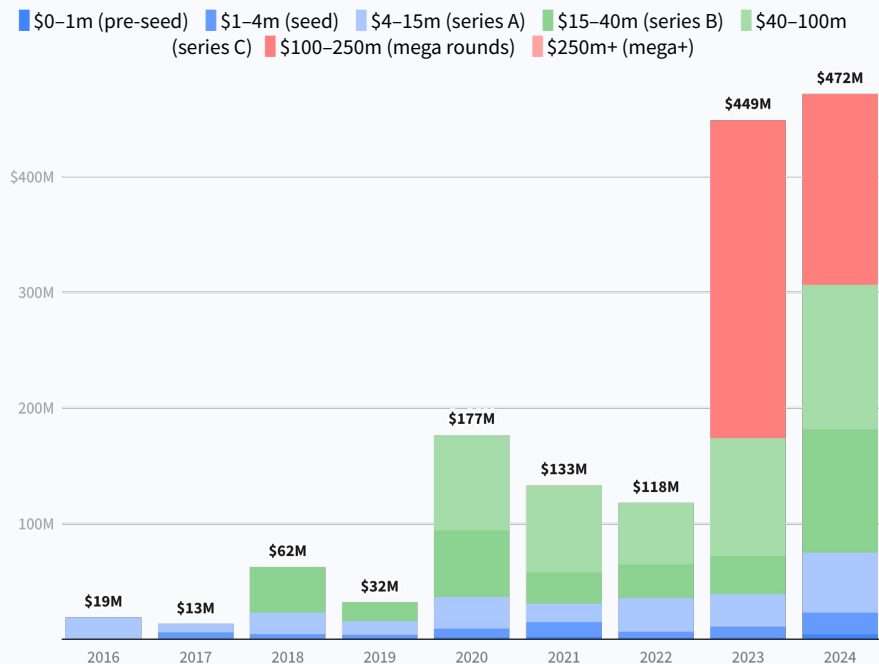


## Key insights

- Advancements in **Drones** for surveillance of critical infrastructure, **Earth Observation Satellites** and **Space Situational Awareness**, among others, are changing the game for Awareness, understanding and decision making.
- **VC funding reached \$1B in 2024**, up 4x since 2020 and nearly 2x from last year.
- The use of **drones for security** applications has grown by 21% annually between 2018 and 2023.
- The Royal United Services Institute estimated that Ukraine was losing **10,000 drones per month** last year, giving an indication of how many are in use. Most use-cases are for surveillance, intelligence gathering, and strikes.
- **Space Situational Awareness (SSA)** is on the rise to mitigate space-based threats, like the **30,000 tracked objects** larger than 10 cm in Earth's orbit (as of 2023) or hostile interference.

## Freedom of operations and mobility - Startups raised a record amount in 2024 driven by space sovereignty infrastructure, like launch vehicles, and autonomous capabilities for the battlefield

VC investment in European Deep Tech x Freedom of operations and mobility startups » [view online](#)



### Key insights

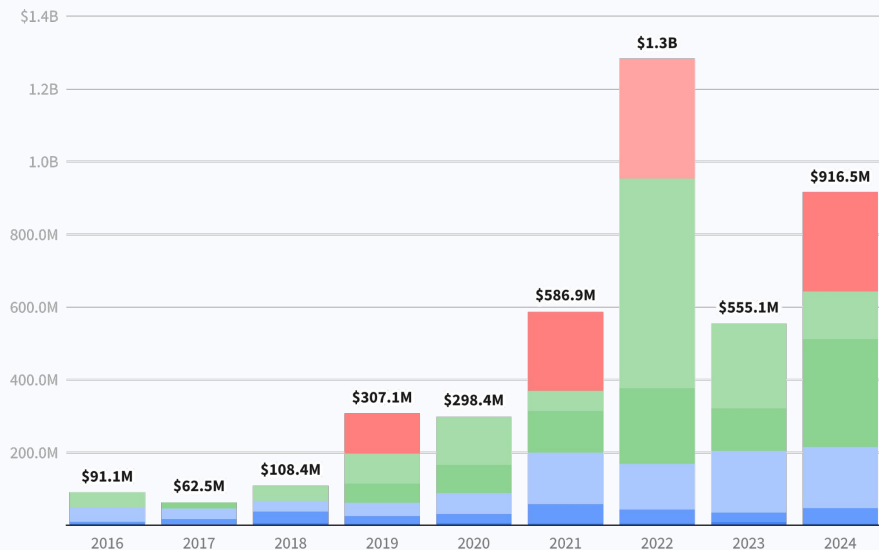
- The nature of warfare is rapidly changing, with small-scale, modular, low-cost, and often autonomous tech taking a major role, from **drones and UAVs**, to **UGVs and AUVs**. **Space** is also increasingly becoming a fourth major domain of confrontation.
- VC funding almost reached \$0.5B in 2024, **up 4x in two years**.
- Most of the funding went into **space sovereignty**, especially **launch vehicles**, but also in **autonomous capabilities for the battlefield**.
- Europe had fallen behind in launch capabilities, but now there is a strong pipeline of startups aiming to give Europe **sovereign access to space**.
- Beyond surveillance and intelligence gathering, **autonomous systems across air, land and sea** are being adopted to deploy forces and equipment, tactical striking, and infrastructure repair.

# Energy security and climate change - VC funding in Europe surpassed \$900M in 2024, the second most-active year ever, driven mostly by nuclear fission and fusion, and batteries

VC investment in European Energy security and climate change

Deep Tech startups » [view online](#)

■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



## Key insights

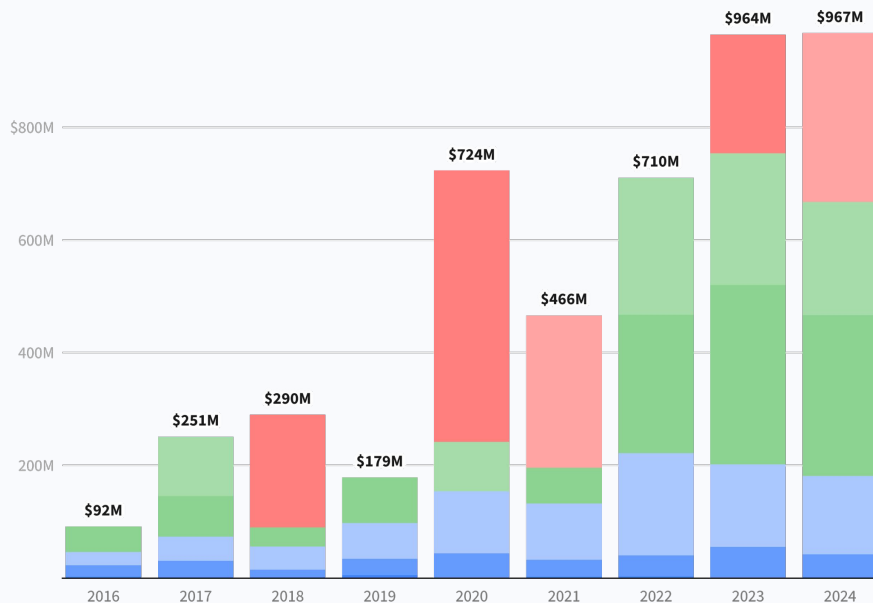
- **Clean and reliable energy generation** is a strategic imperative for Europe's energy security. Europe is dependent on costly (€600+ billion) and insecure fossil fuels imports.
- **VC funding rebounded** in 2024 to reach over \$900M. This is a bit shy of 2022 peak but still over 4x more than 4 years ago. **Early-stage** activity is performing the strongest, at an all-time-high.
- Most of the funding went into **nuclear fission and fusion, as well as batteries**.
- **Climate change** is also posing big challenges to security, from wildfires to flooding and droughts, resulting in more overlap in investments.
- **Water scarcity** is a key cause of instability. In 2023 over 350 new conflicts were associated with water resources and systems. 17% of Europe's people are at risk to face high to extreme water scarcity risks by 2050.

# Protection of critical infrastructure - Startups in Europe raised nearly \$1B in 2024, a record high on par with 2023, driven mostly by quantum computing and AI chips

VC investment in Protection of critical infrastructure Deep Tech startups\*

[» view online](#)

■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



## Key insights

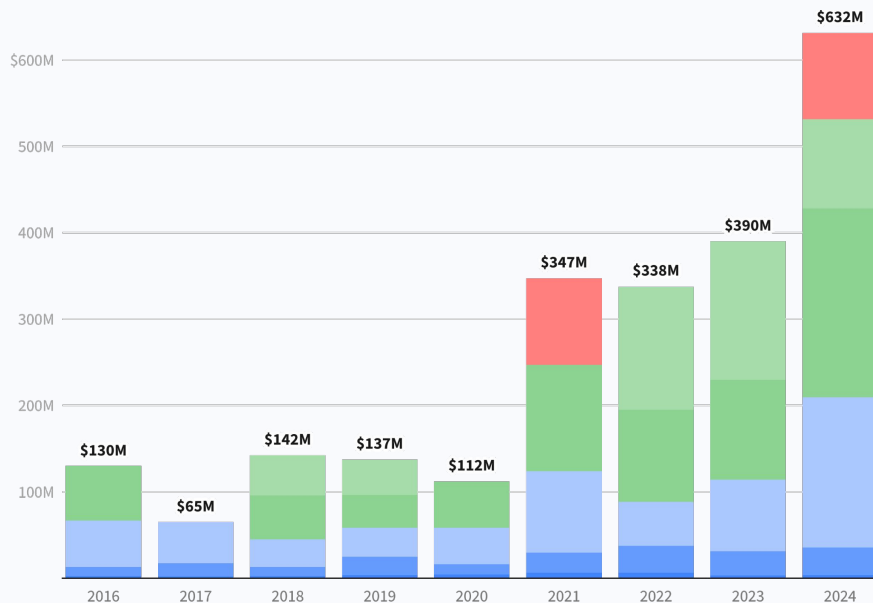
- Strategic **competition is increasing for critical capabilities** like quantum technologies, computing infrastructure, and secure communication technology.
- VC funding almost reached **\$1B in 2024**, with a strong performance at early and breakout stage.
- Most of the funding went into **quantum computing and AI chips**.
- **NATO** has recently released its first-ever **quantum strategy** to ensure the Alliance is "quantum-ready". Quantum can be applied to defence and security in areas such as sensing, imaging, precise positioning, navigation and timing. It can also improve the detection of submarines, and secure data communications via quantum resistant cryptography.
- Computing hardware, like **AI specialized chips**, is increasingly seen as a matter of national security and subject to export restrictions and geopolitical tension. Funding and support is on the rise to build domestic sovereignty in this area.

# Supply Chain Resilience - Funding is at all-time-high in Europe, with record activity at the early stage, showing a focus on securing a strong and resilient industrial base in Europe

VC investment in European Supply Chain Resilience Deep Tech startups

[» view online](#)

■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



## Key insights

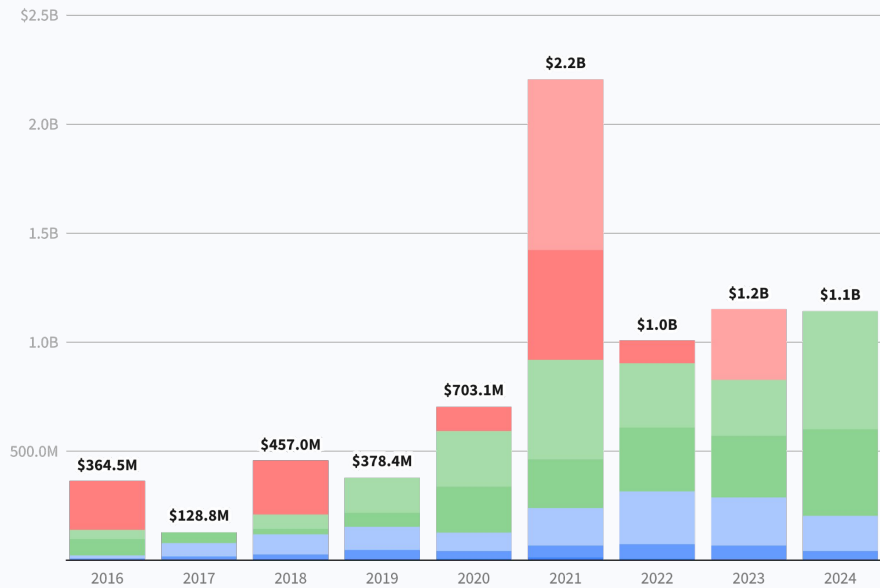
- A **strong and resilient industrial base** is key for both economic development and security. Key to this is **undisrupted access to critical resources** and boosting the resilience of critical sectors like defence, healthcare and transportation.
- VC funding reached an all-time-high of over \$600M in 2024. **Early-stage** also grew strongly, showing a strong future pipeline.
- Funding is spread across **many segments**, from battery recycling, to synbio and biomanufacturing, semiconductor materials, and advanced composites & other high-performing materials, and in-space manufacturing.
- **Europe has limited resources in critical materials** (e.g. rare earths, magnesium, high-purity silicon, graphite, cobalt, lithium) but innovation in recycling technology and alternative sourcing can help secure steady supply.

## Health crisis preparedness - VC funding in Europe is higher than pre-pandemic, but half of 2021. This is led to a lack of megarounds, while breakout stage is showing strong activity.

VC investment in European Health crisis preparedness Deep Tech startups

[» view online](#)

■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C) ■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



### Key insights

- Despite a **lack of \$100M+ megarounds**, VC funding activity has been **nearly on par with last year** and shy only of 2021 peak. Strong performance at the breakout stage.
- Bio-defence and bio-responsiveness is boosted by advancements in **proteomics and de novo sequencing** that both contribute to biosecurity by allowing faster and more accurate **pathogen detection**, as well as **accelerate critical drug development**. **AI and quantum powered** drug discovery is also critical for this.
- **Synthetic biology and bio-manufacturing** are also identified as key to decrease strategic dependencies by enabling reliable supply of critical health compounds.

# A few words on our methodology

## What is a startup?

Companies designed to grow fast. Generally, such companies are VC-investable businesses. Sometimes they can become very big (e.g. \$1B+ valuation). When startups are successful, they develop into scaleups (>50 people), grownups (>500 people) and result in big companies. Only companies founded since 1990 are included in this report.

Blog post: [What is a Startup?](#)

## Industries, Segments

Dealroom's Intelligence Unit has developed a proprietary technology taxonomy that acts as a foundation and helps navigate existing and emerging technologies. We welcome suggestions and feedback at [support@dealroom.co](mailto:support@dealroom.co).

Blog post: [Tech taxonomy](#)

## Defence, Security, and Resilience

In this report we define Defence, Security and Resilience according to the [NATO Innovation Fund challenge areas](#), as explained in [slides 4-6 of the report](#). We considered only Deep Tech startups focusing on these challenges to secure the future whether by protecting infrastructure from subsea to space, enabling the climate and energy transition, or ensuring resilient supply chains across all sectors.

For more on how Deep Tech is defined see the [European Deep Tech report](#).

## Venture Capital, Investors

Investment are referred to by their round labels such as Seed, Series A, B, C, ... late stage, and growth equity. VC investments excludes debt or other non-equity funding, lending capital, grants and ICOs.

Buyouts, M&A, secondary rounds, and IPOs are treated as exits: excluded from funding data, but included in exit data.

## Underlying Data

Dealroom's proprietary database and software aggregate data from multiple sources: harvesting public information, user-submitted data verified by Dealroom, data engineering. Data is verified and curated with an extensive manual process.

The data on which this report builds is available via [app.dealroom.co](http://app.dealroom.co). For more info please visit [dealroom.co](http://dealroom.co) or contact [support@dealroom.co](mailto:support@dealroom.co).

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