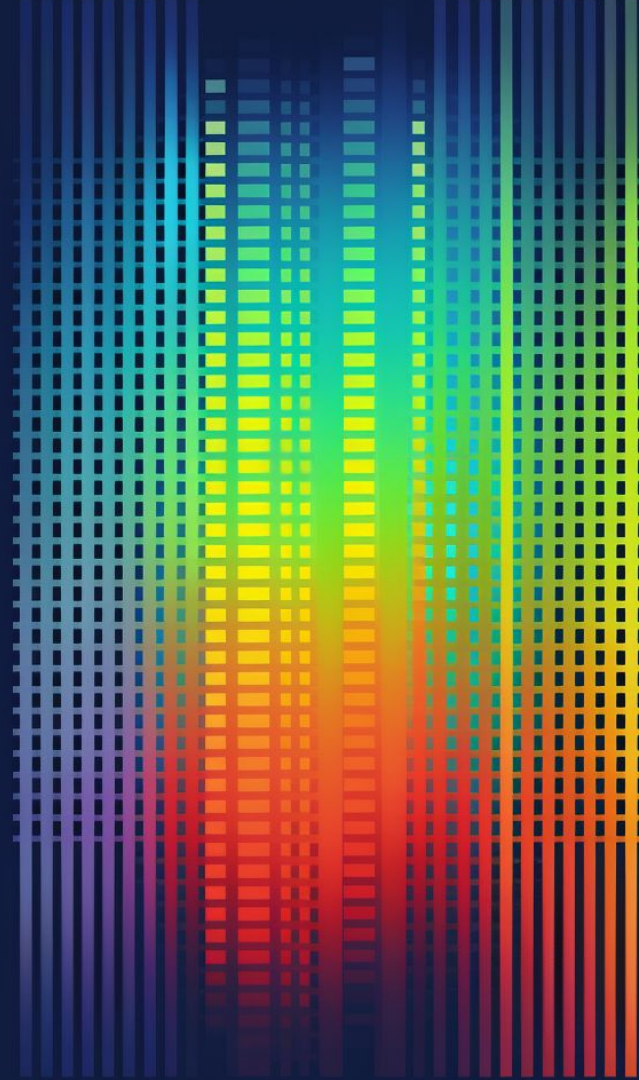




AI Europe report 2024

Startup and VC data in the AI arms race

June 2024





Roosh Investment Group

Roosh is an investment group based in Kyiv, London, and Paris. It scales remarkable businesses globally, backing founders, funders and forward-thinkers to grow companies and co-create the technologies that will enrich the world. The group invests in companies focused on capitalization (Roosh Ventures) and profitability (Roosh X).

Roosh Ventures has already backed stars such as Deel, TheGuarantors, Oura, Pipe, Alma, Playco, Dapper Labs, Arkis, and 35+ other companies.

Roosh's team of over 100 experts across Europe have decades of experience and is composed of successful founders, venture capitalists and operators, including Co-founders and General Partners Den Dmytrenko, Serhiy Tokarev and Kyle Ukho.



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, McKinsey, BCG, Deloitte, Google, AWS, Microsoft, and 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.

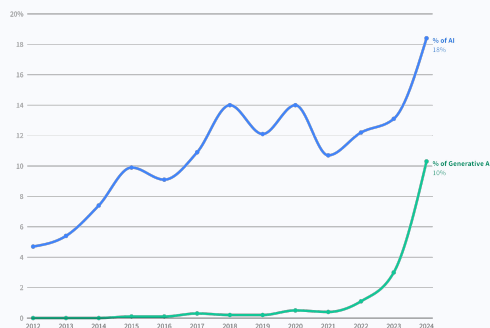
Key takeaways.

AI now accounts for a record share (18%) of VC funding in Europe.

AI funding in 2024 is on track to vastly surpass last year but fall slightly short of 2021 peak in absolute dollar terms. Zooming out, AI funding in Europe grew 10x in a decade.

Europe lags US AI leadership, with 4x less VC funding, much fewer publications and patents. But has a high concentration of AI engineering talent.

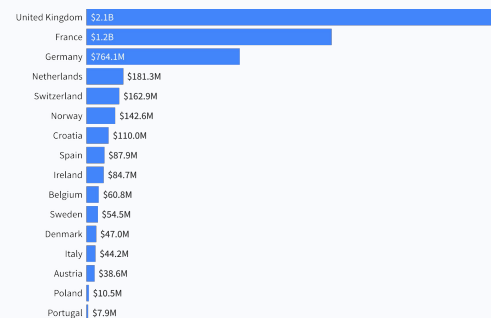
AI share of total VC funding in Europe



The UK, France and Germany are dominating AI investing in Europe, led by London, Oxford, Paris, Munich & Berlin.

The UK is the top geography in 2024, so far, with \$2.1B, followed by France and Germany. France has the highest share of funding going to AI. AI funding is also much more concentrated. UK, France and Germany attracted 77% of all AI funding in Europe in 2023-2024, compared to 59% for rest of tech. The Nordics and Southern Europe are lagging behind.

Top European countries by AI VC funding (2024)

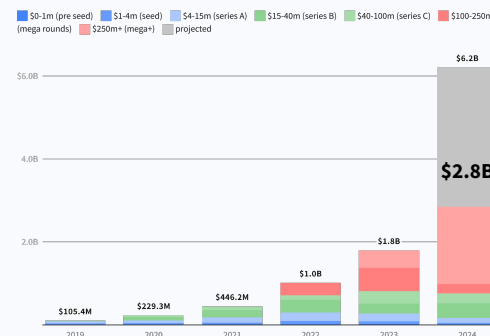


Generative AI funding in Europe in 2024 already surpassed any previous year after less than six months.

Most Generative AI funding is going to model makers and applications with proprietary models.

AI is increasingly being adopted in gaming, from in-game intelligence to game development. AI's increasing data needs are also bringing increasing importance to privacy-enhancing technologies (PETs), such as homomorphic encryption and synthetic data.

Generative AI VC funding in Europe



- 1 AI is taking over

- 2 Europe on the global AI scene

- 3 Sector deep dive

AI is now everywhere.

Using some AI

Nearly every startup and company uses AI in some processes and products today, but in many cases AI is not a key distinctive feature of the product or service.

AI-first

Core product is built around AI.

Examples include autonomous driving (e.g. Wayve), robotics (e.g. Agile Robots), health (e.g. Exscientia), enterprise software (e.g. Builder.ai), fintech (e.g. Quantexa), defense (e.g. Helsing) and much more.

AI-enablers & tools

Develop new AI technologies or provide tools to train and deploy AI models.

Examples include GenAI model makers (e.g. Mistral, Aleph Alpha), MLOps (e.g. Weaviate, Flower Labs) and AI chips & computing infrastructure (e.g. SiPearl)

The **global artificial intelligence market** size was valued at **\$137 billion in 2022** and is projected to expand at a **compound annual growth rate (CAGR) of 37.3% from 2023 to 2030**. It is projected to reach **\$1,812 billion by 2030**. AI is also expected to **contribute \$15.7 trillion to the global economy by 2030**, more than the current output of China and India combined.*

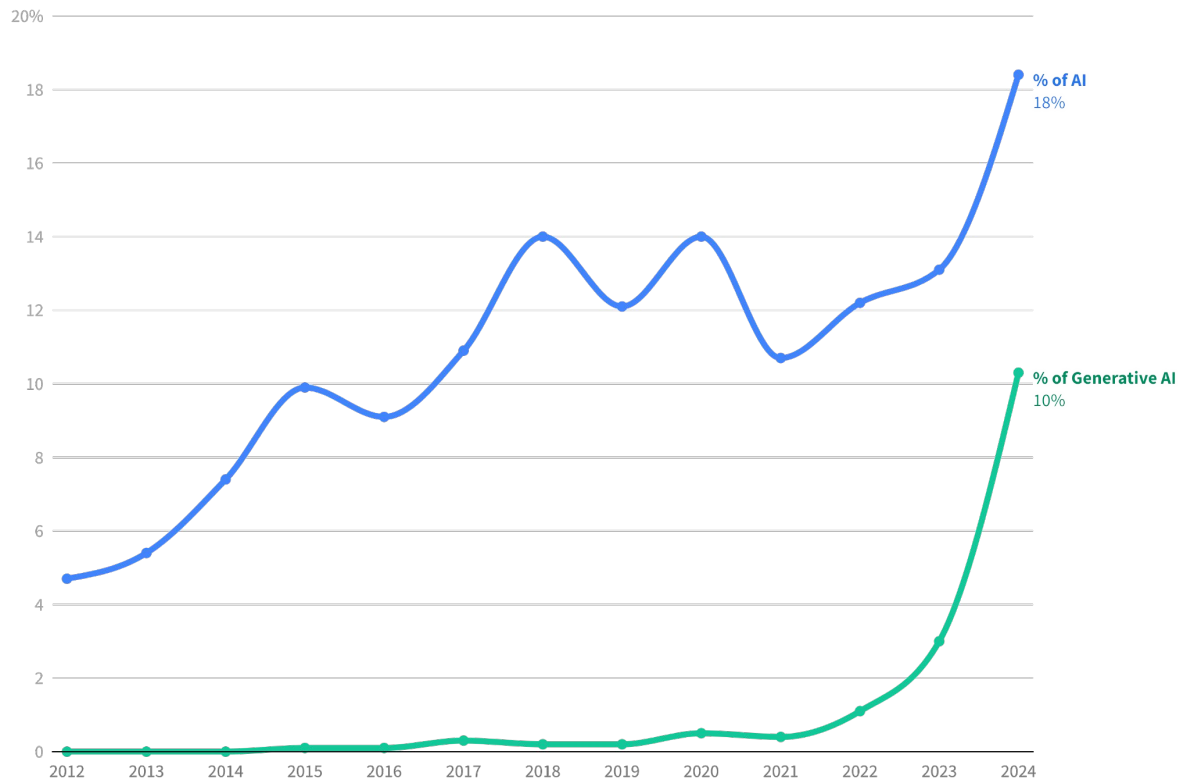
AI is eating VC, as it now accounts for a record share (18%) of VC funding in Europe.

AI has become a core segment in venture capital, up from just over 4% of allocation in 2012.

After a steady rise, AI funding flatlined, until Generative AI kick-started a new wave of growth.

GenAI alone now represents over 10% of VC funding in Europe.

AI share of total VC funding in Europe



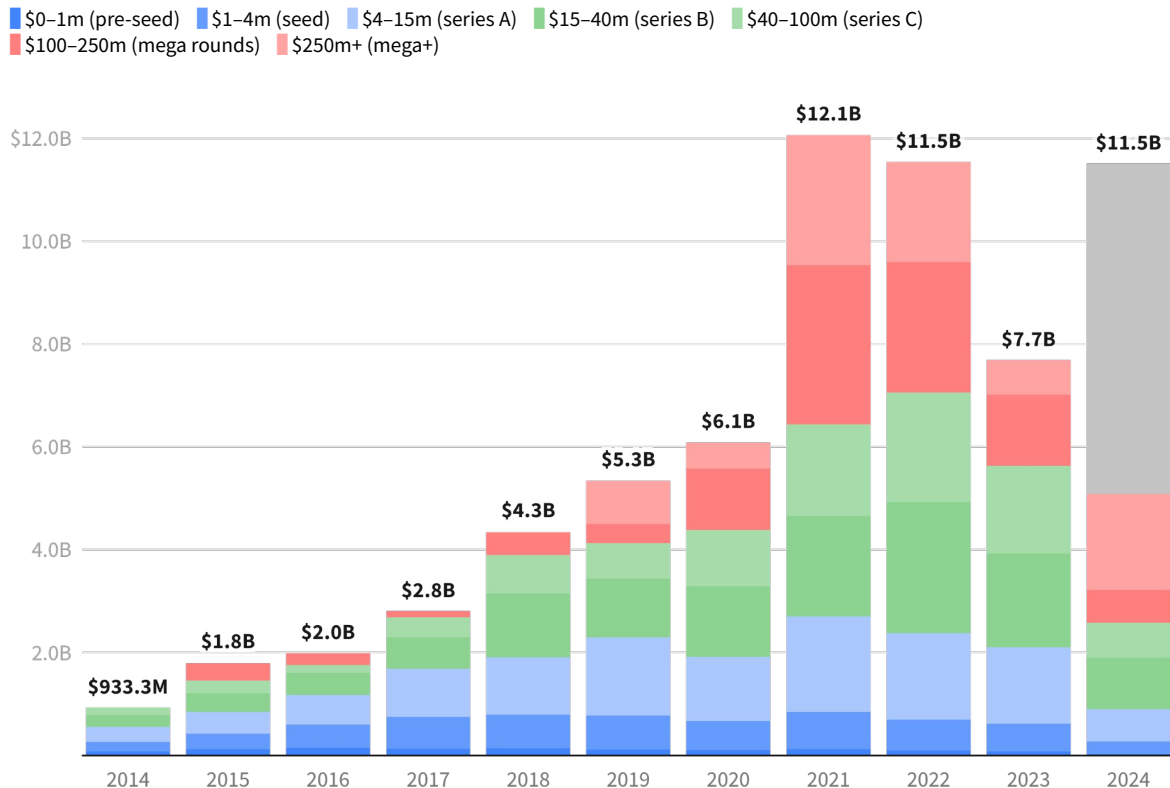
Source: 2024 data as of 12th June 2024

AI funding in 2024 is on track to surpass last year by nearly 50% and match 2022 levels.

AI VC funding in Europe peaked in 2021 before decreasing 37% to 2023.

AI VC funding has grown more than 10x in the last decade in Europe.

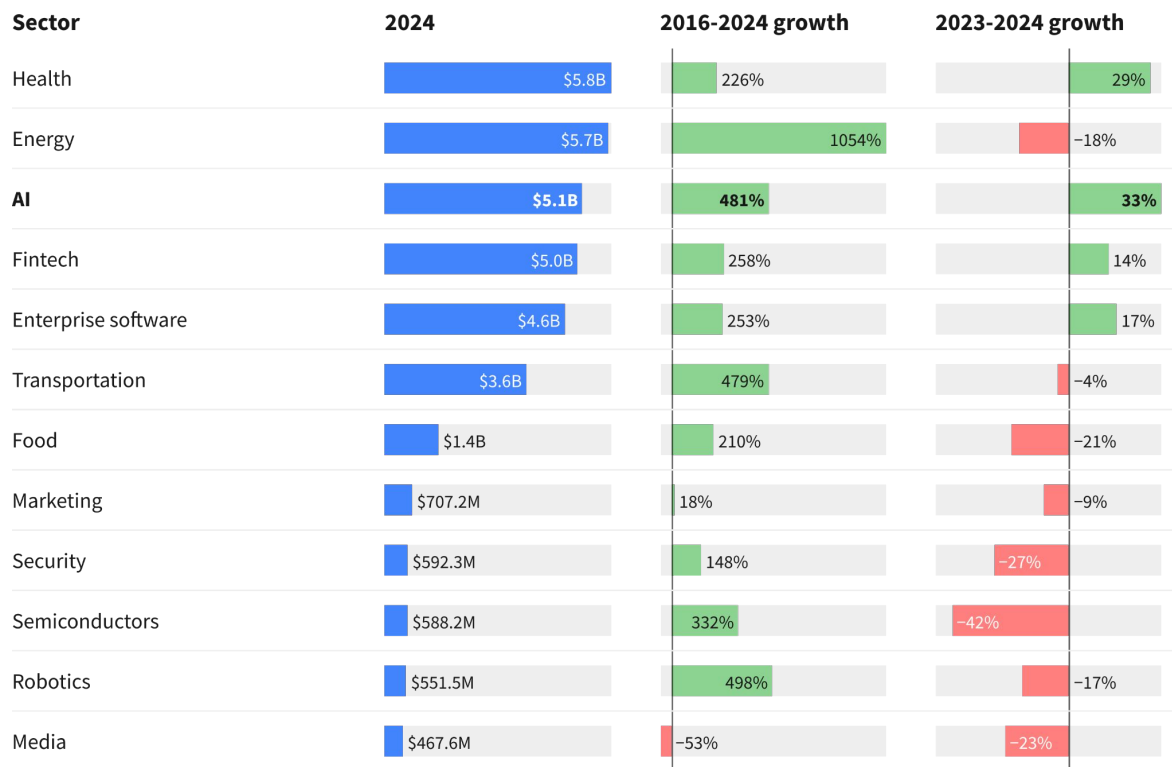
Europe AI VC investment by stage » [view online](#)



AI is the third sector by funding in Europe in 2024 and the fastest growing this year so far.

AI has been the third fastest growing sector since 2016, surpassed only by Energy and Robotics.

VC funding by sector in Europe

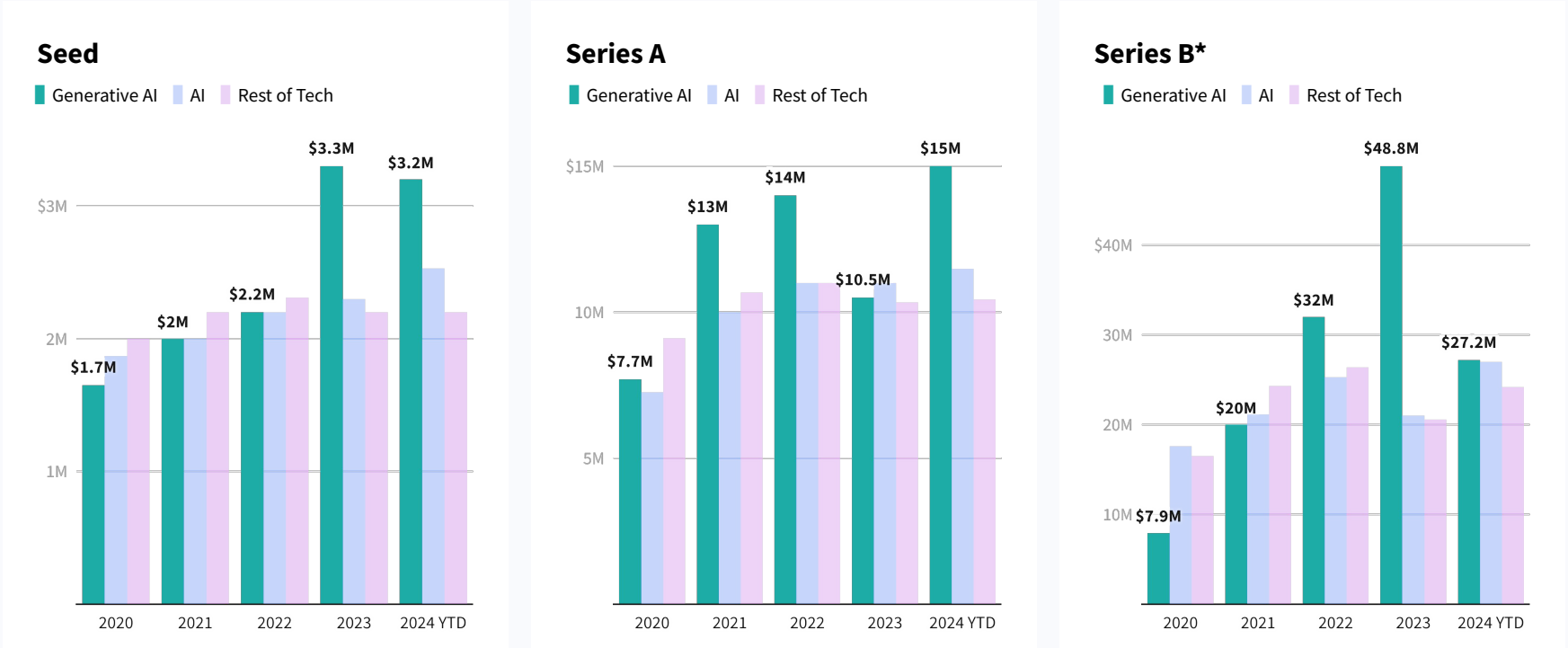


Dealroom.co 2024 data as of 12th June 2024, growth computed comparing 2024 projected amount with the other years mentioned. Segments overlap with one another. An AI x fintech company will be counted in both categories.

Source:

Generative AI sees unprecedented growth in funding median round size, outpacing conventional AI and non-AI sectors.

Median round size in Europe





Serhiy Tokarev
Co-founder and general partner,
Roosh

***“The current venture capital landscape is undergoing a significant transformation, focusing on optimization and automation, driven primarily by the accelerated development of AI technology.*”**

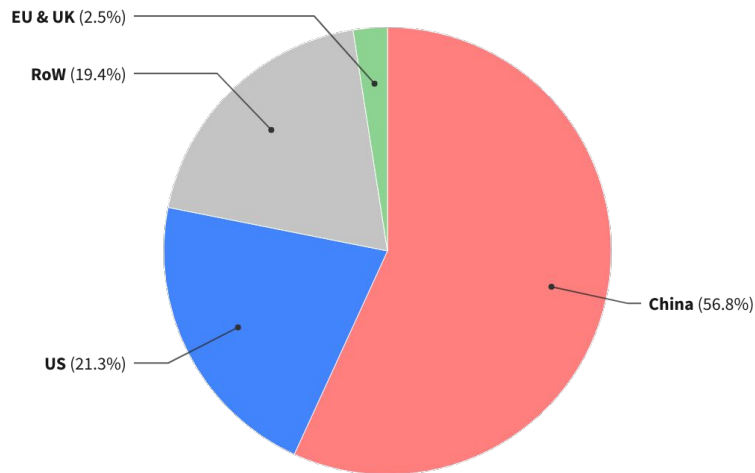
This trend is complemented by the rise of numerous AI vendors, whose applications enable users to spend less time on routine tasks like searching for information, draft generation, and document synthesis - and more on responsibilities that deliver maximum value. The true heroes among these are vertical solutions, particularly in sectors like healthcare, where AI's ability to define patterns and personalize user experience is revolutionizing drug discovery and care.

For both established companies and startups, developing AI expertise is crucial for navigating its complexities and efficiently integrating AI into workflows to outperform the competition. Investors must also deepen their AI understanding and seek investment firms with relevant expertise to stay competitive. Ideally, these firms should have long-term exposure to AI and portfolio companies across multiple AI layers”

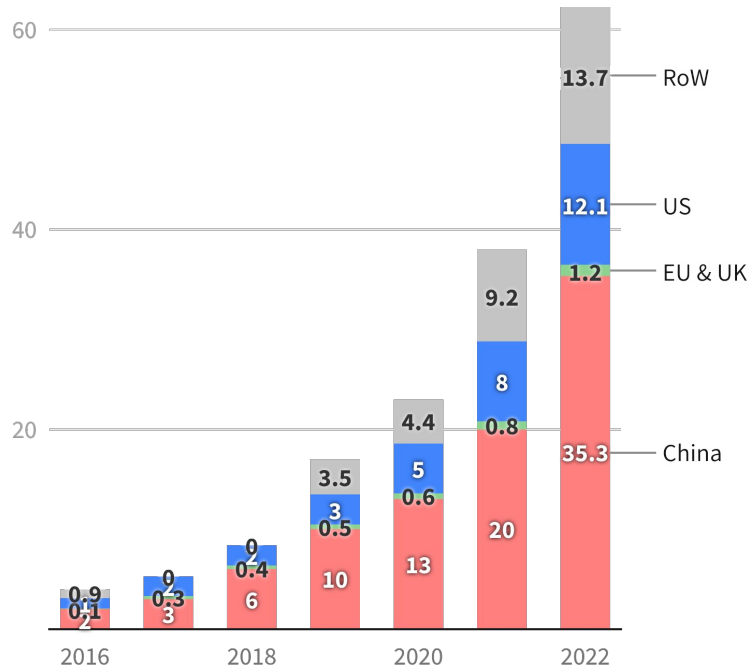
China and the US dwarf Europe's number of AI patents.

From 2021 to 2022, AI patent grants worldwide increased by 62.7%. Since 2010, the number of granted AI patents has increased more than 31 times.

Share of cumulative granted patents since 2012

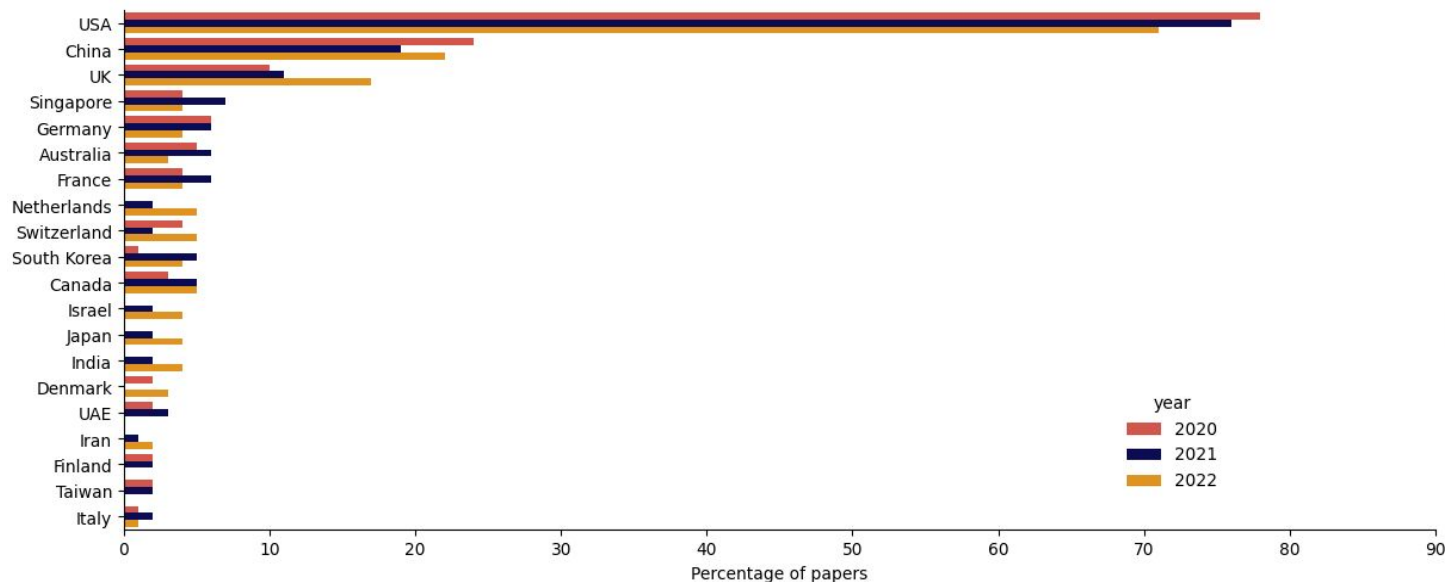


Number of AI patents granted by year (in thousands)



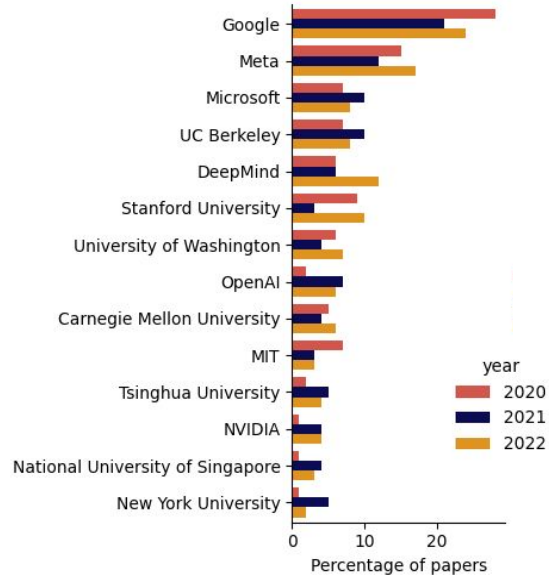
UK is Europe's leader in highly-cited papers. Globally, the US dominates, with over 70% of highly-cited papers having at least one US-based author.

Share of highly-cited AI papers with at least one author by country (2020-2022)

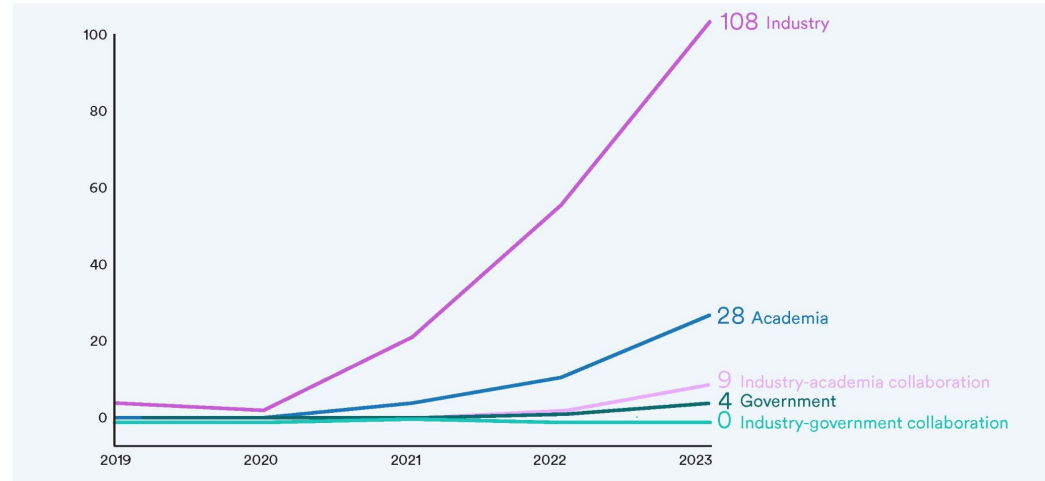


European corporates and universities lag behind US ones in highly cited publications. US big tech also dominates notable AI model releases.

Share of highly-cited AI papers with at least one author by institution (1)



Number of foundational models by sector (2)



- 1 AI is taking over
- 2 Europe on the global AI scene
- 3 Sector deep dive

The US invested nearly 7x more in GenAI than Europe since 2022, and 3x more in the rest of AI.

Europe has grown slower in the past few years, but is now accelerating, especially in the EU.

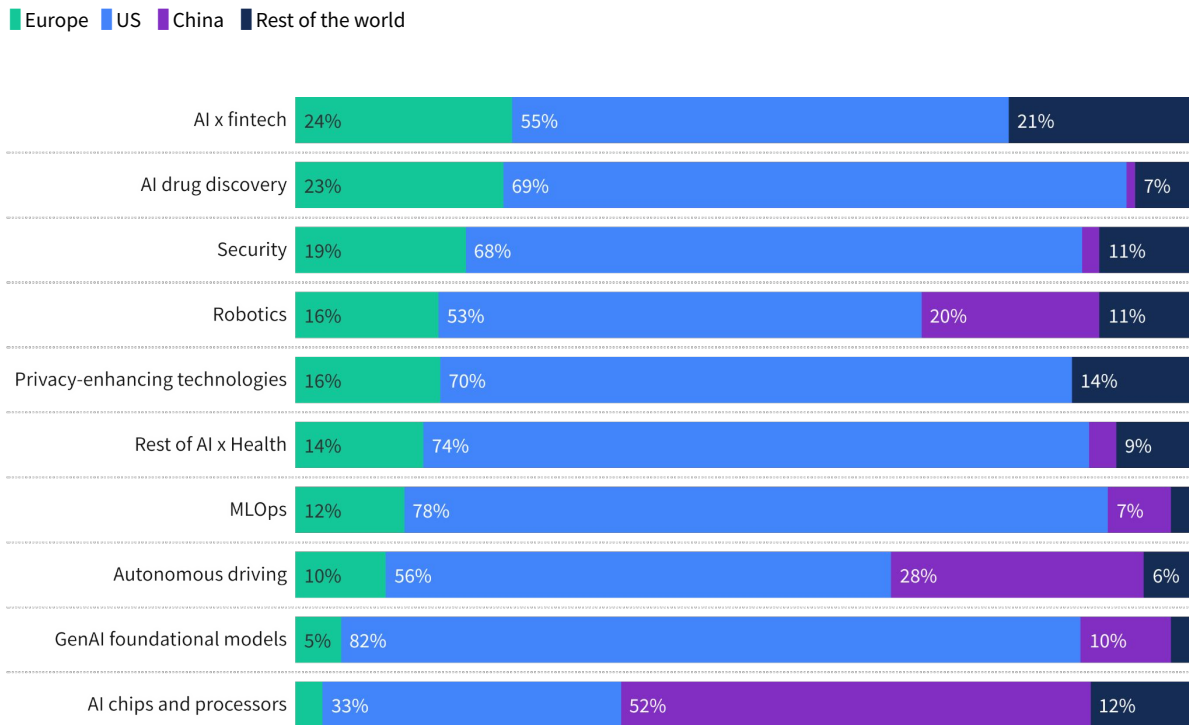
AI VC funding by region

Regions	AI excl. GenAI (2022-24)	GenAI (2022-24)	AI growth 2016-23	growth 2023-2024 projected
US	\$54B	\$42B	400%	47%
Europe	\$19B	\$6B	284%	62%
EU27	\$11B	\$3B	106%	113%
China	\$10B	\$3B	387%	130%
Rest of the World	\$16B	\$2B	351%	49%
Global	\$99B	\$53B	336%	61%

**Europe is strong
in AI x Fintech,
Drug Discovery,
Security and
Robotics.**

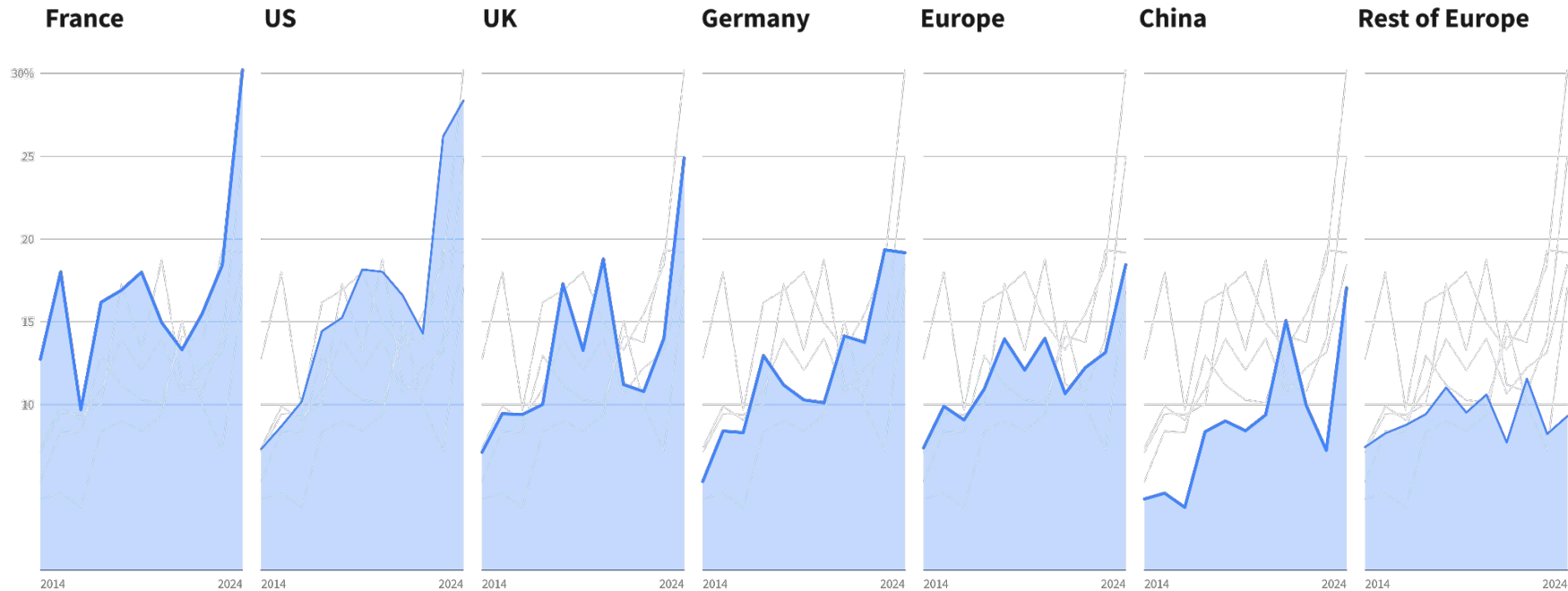
**It is lagging
behind in GenAI
foundational
models and AI
chips and
processors.**

Share of VC funding in key AI segments (2021-2024)



Every major country shifted to AI, led in 2024 by France - vastly due to Mistral. The UK and Germany are also ahead of the European curve.

AI share of total VC funding by country



France has emerged as an AI powerhouse in Europe.

Key stats

1000+

VC-backed AI startups,
50%+ based in Paris

\$1.2B

AI VC funding in 2024

+63%

AI VC funding in 2024 vs
2023 so far

\$60B

Combined enterprise value
of VC-backed AI startups

2nd

Country in Europe by AI
VC funding in 2024

1st

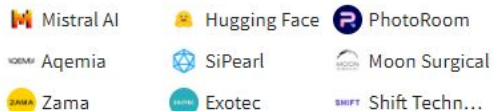
Country in Europe by AI
share of total VC funding in
2024 (30%)

“France now holds a central position in the field of artificial intelligence (AI). Thanks to a strong AI culture, quality education, and dynamic research, France is a key player among global actors.

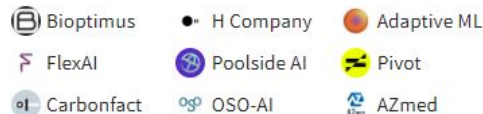
The French government’s proactive policies have played a crucial role in this success. Through various successive plans, such as the Deeptech plan and massive investment in innovative technologies (France 2030), France supports innovation and the development of industry players. Bpifrance funds nearly one billion euros annually for AI across all sectors.

We are only at the beginning of the AI revolution. We firmly believe that AI is the major challenge for our future. Our role now is to guide our entire ecosystem in adopting and deploying AI solutions. Tomorrow’s market share and competitiveness depend on today’s actions: We have to keep on investing collectively in a solid manner on AI, with public and especially private funds. Bpifrance will keep on leveraging many AI investments in France, in parallel with the promising momentum of French and international private funds for our ecosystem.”

Success



Rising Stars

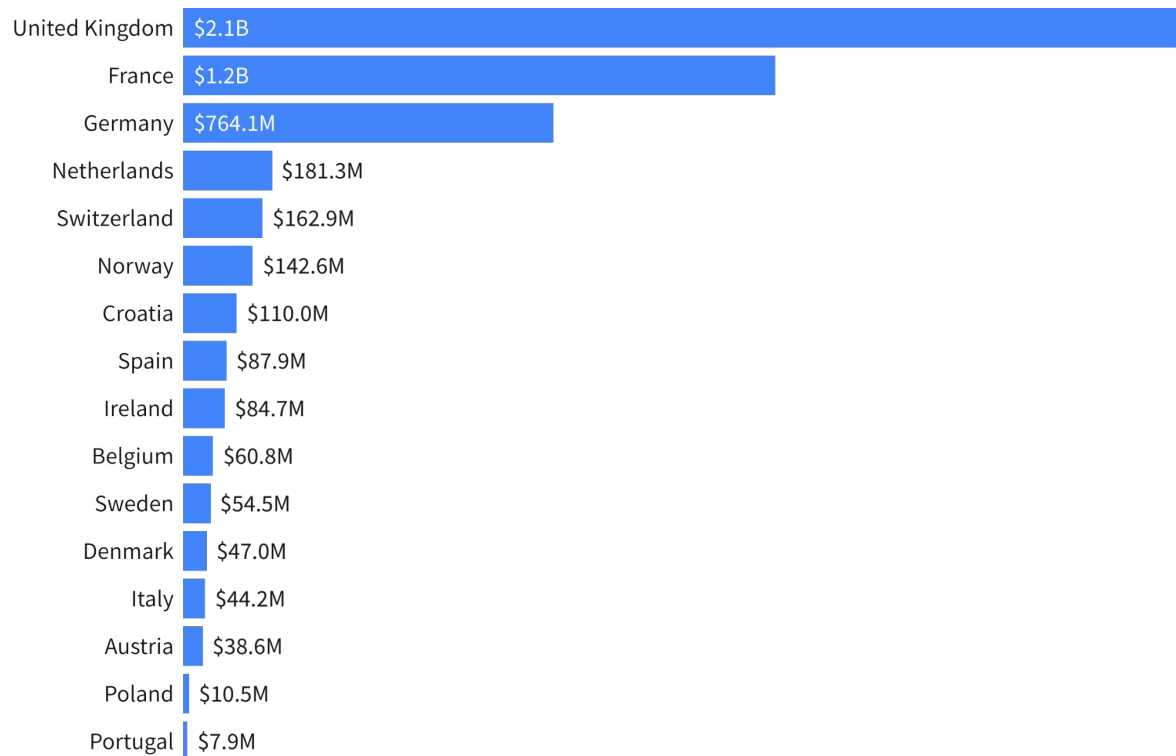


Paul-François Fournier
Senior Executive VP Innovation
Bpifrance



The UK and France are dominating AI investing in Europe in 2024.

Top 15 countries in Europe by AI VC funding in 2024 » [Customize data](#)



UK is keeping its spot as the top AI ecosystem in Europe.

Key stats

2000+

VC-backed AI startups,
65%+ based in London

\$2.1B

AI VC funding in 2024

+77%

AI VC funding in 2024 vs
2023 so far

\$102B

Combined enterprise value
of VC-backed AI startups

1st

Country in Europe by AI
VC funding in 2024

2nd

Country in Europe by AI
share of total VC funding in
2024 (25%)

*“The **"Golden Triangle"** between the London, Cambridge and Oxford ecosystems **forms immensely fertile ground for innovation.** High calibre talent has the **opportunity to cross-pollinate ideas** across various multiple domains.”*

Success



Rising Stars



Amar Shah

Co-founder **CHARM Therapeutics**
Co-Founder **Wayve**

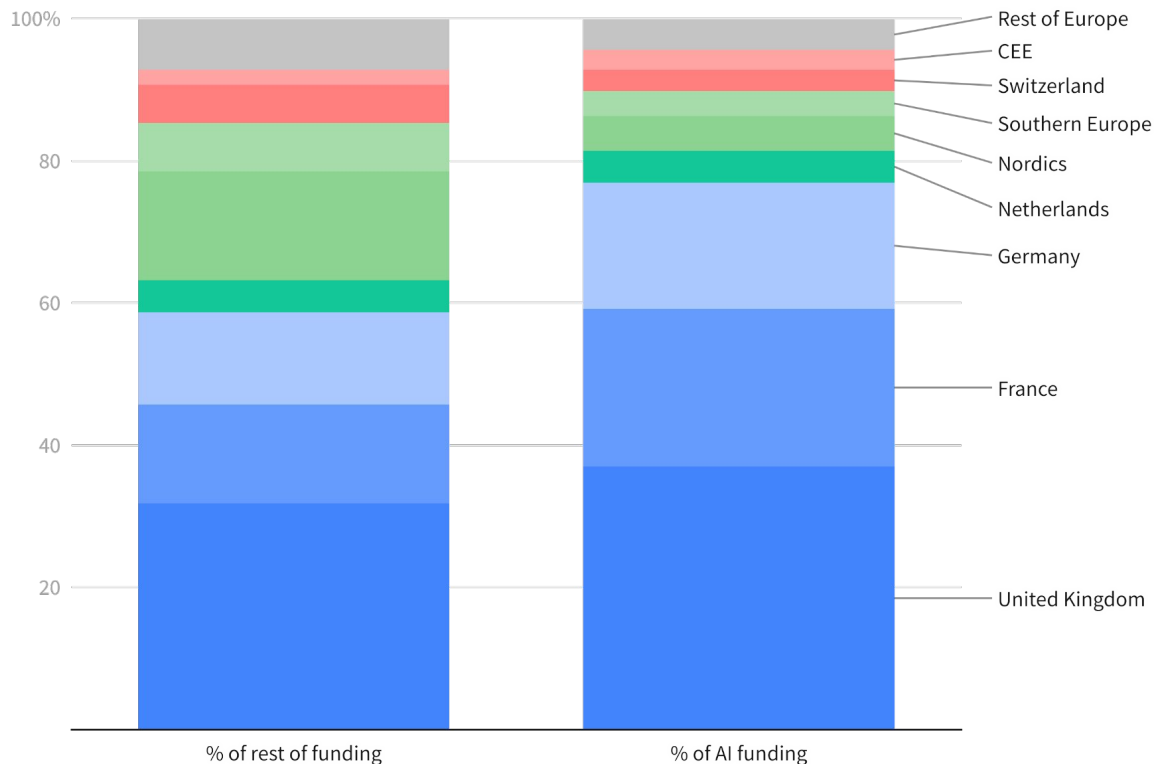


AI funding is strongly concentrated in the UK, France, and Germany.

Together, they attracted 77% of all AI funding in Europe in 2023-2024, compared to 59% for rest of tech.

The Nordics and Southern Europe have much less AI focus in their tech scene.

Share of European VC funding by country HQ (2023-2024)



The UK, France and Germany have raised by far the most AI VC funding in Europe since 2020.

France and Germany have grown more over the last five years, but the UK is now accelerating.

Top 10 European countries by AI VC funding » [Customize data](#)

Country	2020-2024	growth 2020-2023		growth since 2023*	
United Kingdom	<div><div>\$14.9B</div></div>	<div><div></div></div>	<div><div>-28%</div></div>	<div><div></div></div>	<div><div>77%</div></div>
France	<div><div>\$7.9B</div></div>	<div><div></div></div>	<div><div>43%</div></div>	<div><div></div></div>	<div><div>63%</div></div>
Germany	<div><div>\$7.5B</div></div>	<div><div></div></div>	<div><div>12%</div></div>	<div><div></div></div>	<div><div>12%</div></div>
Switzerland	<div><div>\$2.1B</div></div>	<div><div>-55%</div></div>	<div><div></div></div>	<div><div></div></div>	<div><div>62%</div></div>
Netherlands	<div><div>\$1.4B</div></div>	<div><div>21%</div></div>	<div><div></div></div>	<div><div></div></div>	<div><div>3%</div></div>
Spain	<div><div>\$1.3B</div></div>	<div><div>-40%</div></div>	<div><div></div></div>	<div><div>-22%</div></div>	<div><div></div></div>
Sweden	<div><div>\$928.0M</div></div>	<div><div>-29%</div></div>	<div><div></div></div>	<div><div></div></div>	<div><div>26%</div></div>
Finland	<div><div>\$846.5M</div></div>	<div><div>-99%</div></div>	<div><div></div></div>	<div><div>-94%</div></div>	<div><div></div></div>
Austria	<div><div>\$730.8M</div></div>	<div><div>-36%</div></div>	<div><div></div></div>	<div><div></div></div>	<div><div>23%</div></div>
Denmark	<div><div>\$664.1M</div></div>	<div><div>-36%</div></div>	<div><div></div></div>	<div><div></div></div>	<div><div>9%</div></div>

London, Paris and Munich have raised the most AI funding.

Notably, Oxford attracted more AI funding than Berlin in the last four years, but Berlin has been growing much faster in the last year.

Top 10 European hubs by AI VC funding » [View live](#)

City	2020-2024	growth 2020-2023		growth since 2023*	
London	\$10.1B		-5%		151%
Paris	\$6.1B		110%		86%
Munich	\$3.8B		108%		-75%
Oxford	\$1.9B		-46%		-79%
Berlin	\$1.7B		-7%		54%
Zurich	\$1.4B		-13%		-56%
Amsterdam	\$955.2M		209%		19%
Madrid	\$862.3M		207%		-35%
Stockholm	\$820.4M		23%		32%
Helsinki	\$803.5M		-63%		-93%

Top AI hubs in Europe.

The **London, Oxford & Cambridge** area is the main hub for AI, home to over one-third of top rated AI startups and attracting nearly 1/3 of the AI funding in Europe since 2020.

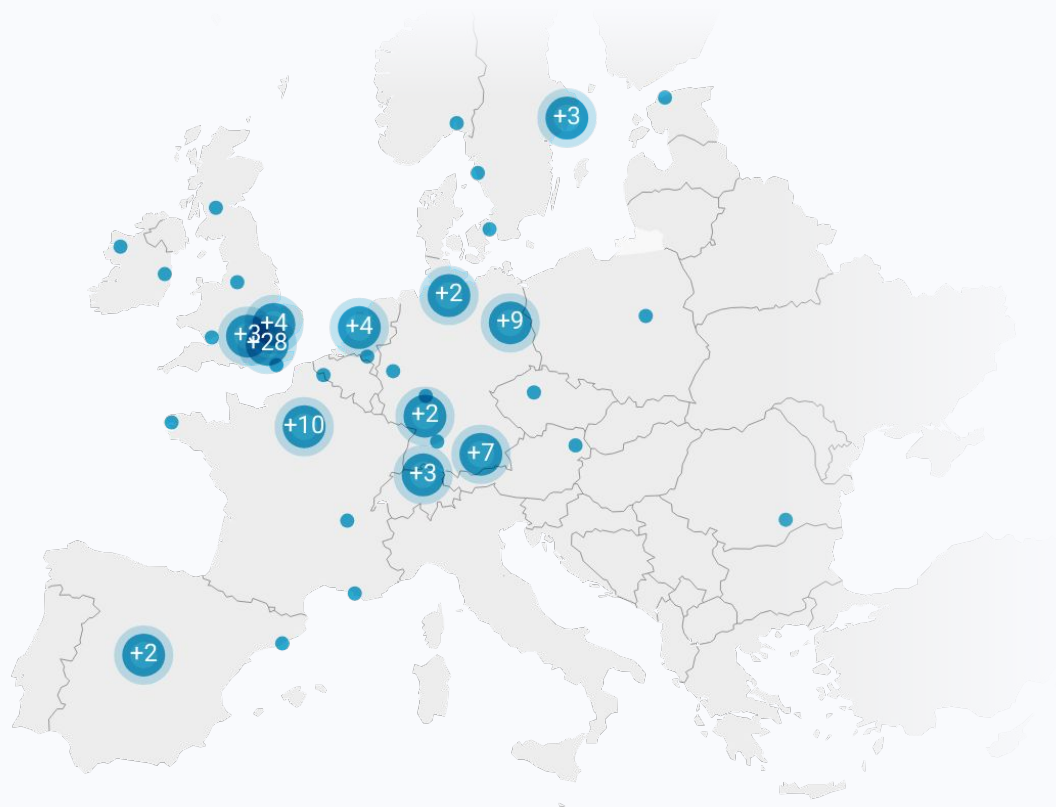
The area is in fact home to the top four universities for AI in Europe (Oxford, UCL, Cambridge, and Imperial College) and three of the top ten global universities for computer science (Oxford, Cambridge, Imperial)*.

Paris and Berlin notably follow with ~10% of top-rated startups in Europe. Paris has also attracted 14% of all European AI VC funding since 2020.

Other notable hubs include **Munich, Amsterdam, Stockholm and Zurich**.

The **Heidelberg-Heilbronn** area in Germany is also home to Aleph Alpha and now has the ambition to become one of Europe's newest AI hubs.

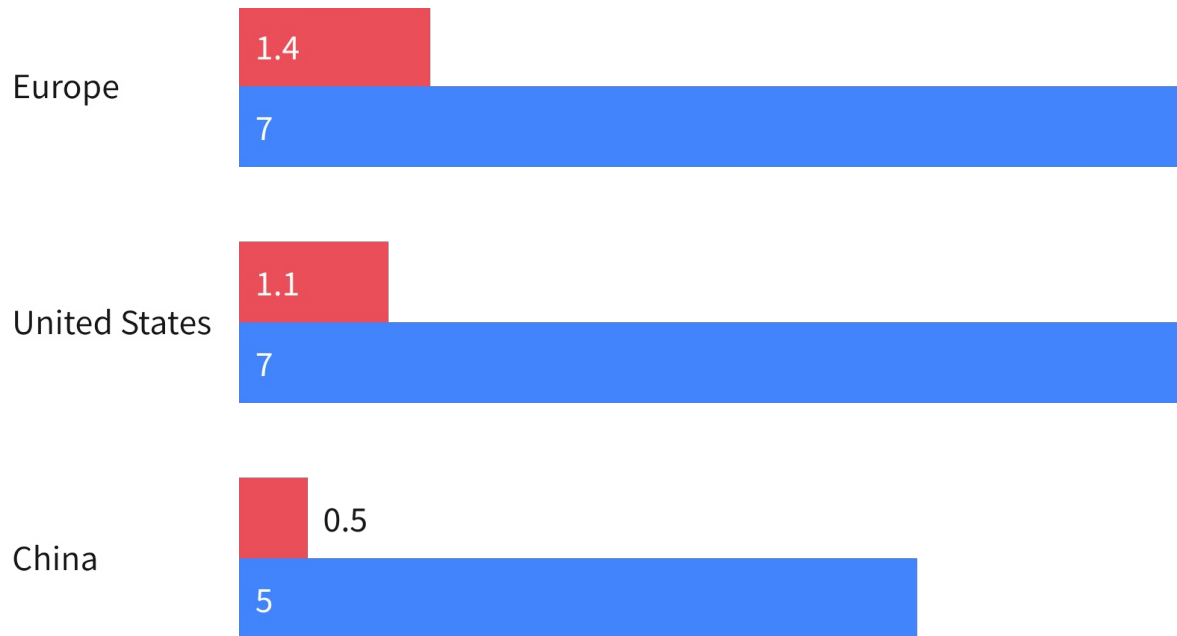
Distribution of top 100 AI startups in Europe by Dealroom signal



Europe has a per-capita concentration of AI experts among software engineers 30% higher than the US and almost three times as high as China.

AI practitioners as % of software-engineer populations

■ Dedicated AI expertise (%) ■ Some AI experience (%)



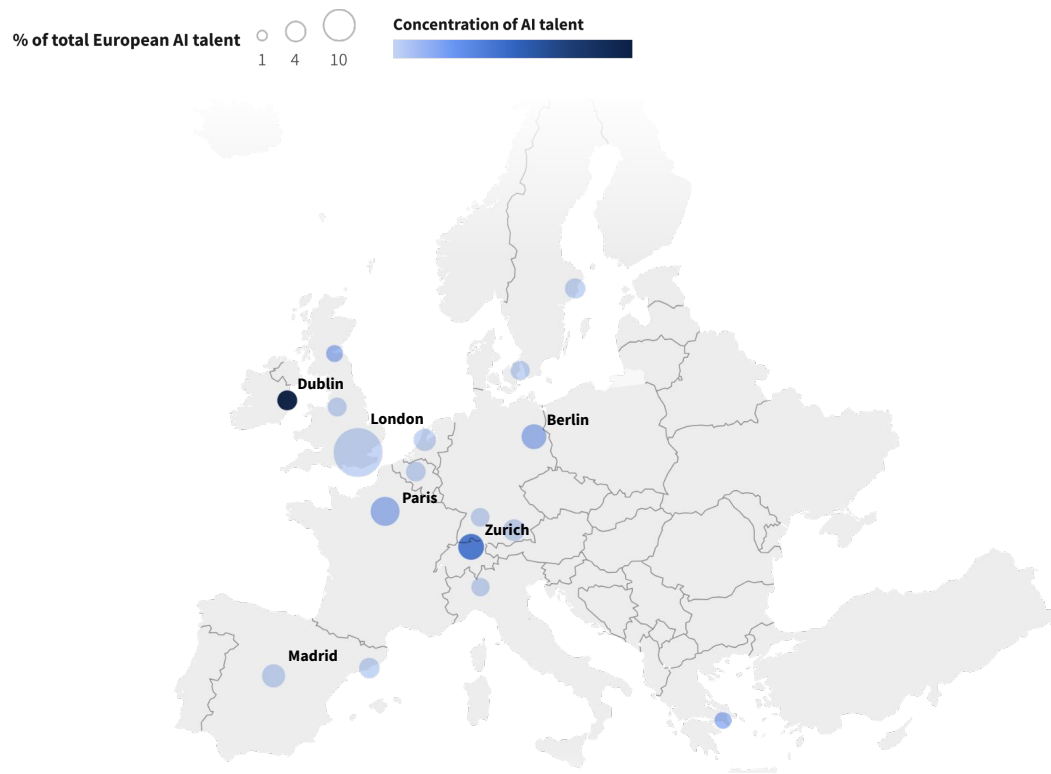
London has nearly four times more AI engineers than any other European city.

Paris, Berlin, Zurich and Madrid follow.

Dublin has the highest density of AI engineers.

Followed by Zurich.

Top European Hubs by number of AI talent and AI talent concentration



Ukraine AI ecosystem in a snapshot

5200

AI/ML professionals. Up fivefold in a decade.

44 funds

Investing in Ukrainian AI startups, mainly focusing on early stage.

40-80% of Ukrainian startups raise funding from international investors, including Andreessen Horowitz, LightSpeed Venture partners and General Catalyst among others.

Top Universities



<1%

Of the 307,000 Ukraine IT specialists are AI specialists.

This opens up ample room for growth, an estimated 330% in the near-distant future.

\$16B

Combined valuation of Ukraine AI startups*

Nearly 3 in 10

IT specialists in Ukraine are women.

And the share has been growing in recent years.

21-25 years

Most prevalent age group among specialists in the AI/ML industry.

Young professionals under 30yrs make up 67% of the AI workforce

Selected Ukraine AI startups*



[Check out the full report »](#)

Top AI investors in Europe

Preferred entry round

European funds with strong AI focus

Sector agnostic European funds

Corporate investors

Global Investors active in Europe

Series C+
(Growth)

BGF

SoftBank Group

NVIDIA

Qualcomm ventures

BlackRock

TEMASEK

WARBURG PINCUS

QIAA QATAR INVESTMENT AUTHORITY

Series A/B

Amadeus Capital Partners

MMC

IQ CAPITAL

octopus ventures

atomico

IEGT VENTURES

NOTION

b2venture

AlbionVC

Balderton

Index Ventures

EURAZEO

VERVE VENTURES

LAKE STAR

EARLYBIRD

CREANDUM

Google

intel capital

Tencent 腾讯

Salesforce ventures

swisscom ventures

MACSF

Sony Innovation Fund

Microsoft

Future Quantum Ventures

Accel

INSIGHT PARTNERS

khosla ventures

SEQUOIA

GENERAL CATALYST

true Ventures

NEA

TIGERGLOBAL

Bessemer Venture Partners

Lightspeed

POINT 72 VENTURES

CATHAY INNOVATION

(Pre) Seed

Armilar

Hummingbird

AIR STREET CAPITAL

CAP

Playfair

hoxton Ventures

Bayern Kapital

ENTREPRENEUR FIRST

ROOSH

elaia

curiosity

APEX VENTURES

European Innovation Council

bpi france

Seedcamp

High-Tech Gründerfonds

SFC

Enterprise Ireland

o

Kima ventures

Demium

Motier ventures

KARISTA

C

SI

Speedinvest

Frontline

wayra Telefonica

Accquia Capital

ANTLER

PLUGANDPLAY

betaworl

SUSV

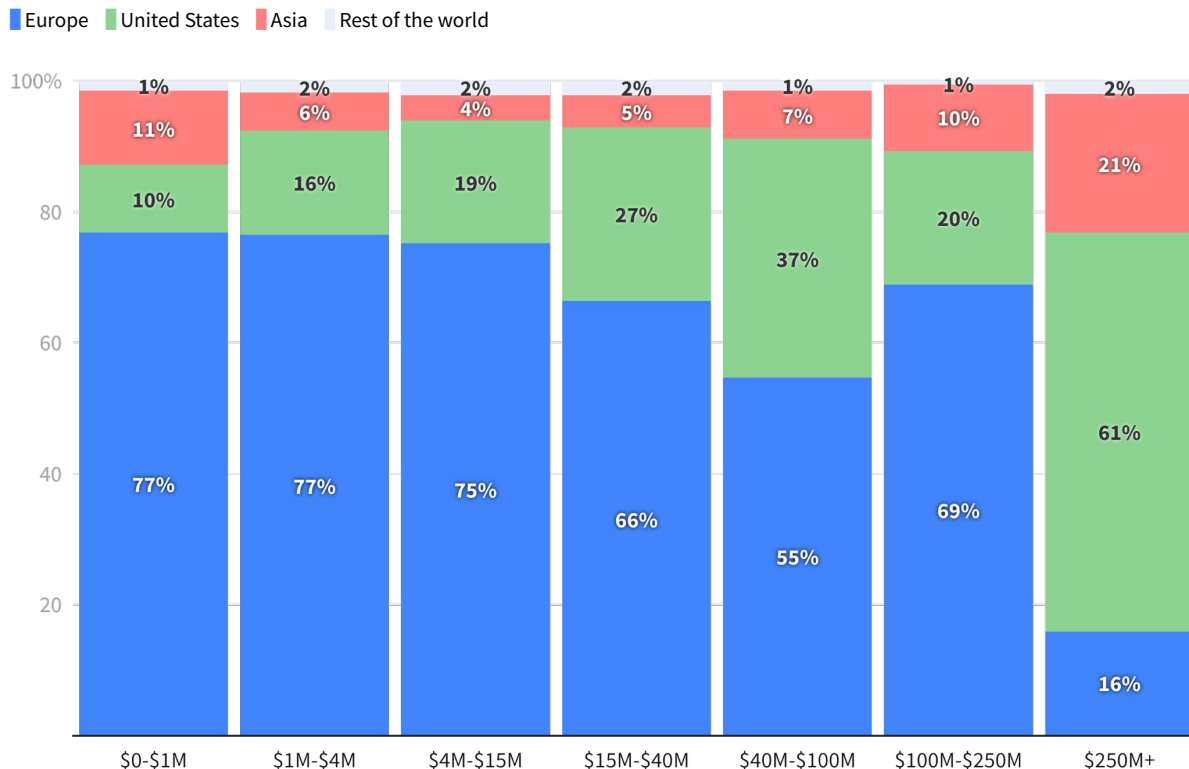
FJ LABS

a16z

Non-European investors account for over 80% of \$250M+ rounds in AI, up from less than 25% at early stage. Mostly coming from US investors.

US investors participated in [490+](#) rounds in European AI startups in 2023-2024.
Over [70% of rounds of \\$40M+](#) had at least one US investor participating.

VC funding in European AI startups by investor HQ and stage (2023-2024)



Can European AI companies scale without US Big Tech?

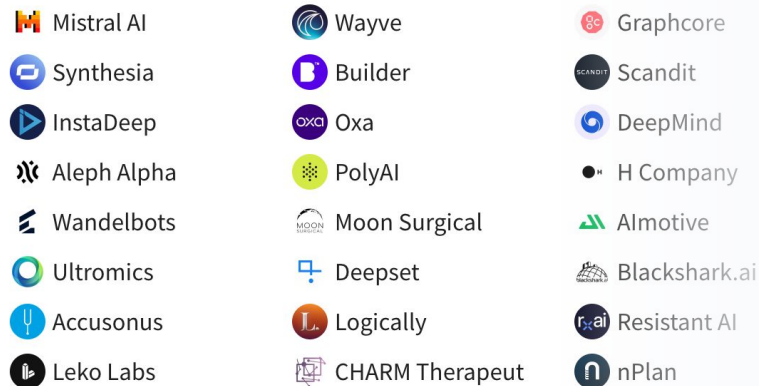
To become truly global champions, European AI startups often need US investments but even more access to distribution and computing power — **increasing the domination of US-based Big Tech players.**

The Magnificent 7* participated in a record 15 deals in European AI startups last year, and now back many of the most notable European AI companies. The two main “sovereign” European GenAI model makers **Mistral and Aleph Alpha are both backed by US Big Tech** for instance.

Particular debate was sparked when French GenAI model maker **Mistral secured a distribution deal with Microsoft**, alongside a \$15M investment. This move can be seen as a necessary step for the company’s global expansion, but also as strengthening Big Tech dominance.

Europe’s ambition of tech sovereignty looks not attainable today if it wants to build regional, and global, champions in AI which can go head to head with their US counterparts.

80+ European AI startups backed or acquired by M7 (US Big Tech) » [view online](#)



- 1 AI is taking over
- 2 Europe on the global AI scene
- 3 Sector deep dive

AI is now permeating every industry.

A number of successful VC-backed companies can be found across each AI sub-category.

Big successes

Model Makers

MISTRAL AI
GenAI foundational models

ALEPH ALPHA
GenAI foundational models

Google DeepMind
AI Research

DeepL
Translation models

AI tech stack (inc. MLOps, chips)

everseen
End-to-end visual AI training platform

SIPEARL
Micro-processors for AI inference

Weaviate
Vector database

ZAMA
Fully homomorphic encryption

Robotics & autonomous driving

WAYVE
Autonomous driving

AGILE ROBOTS
Intelligent industrial robots

IX
Humanoid robots

QUANTUM SYSTEMS
UAVs

AI x health

Exscientia
AI drug discovery

NANOPORE
Genomics sequencing

causaly
AI solutions for life sciences R&D

mindmaze
Digital neurotherapeutics

AI x SaaS*

Builder.ai*
AI software development platform

SCANDIT
Smart data capture software

SEEDTAG
Contextual advertising

Photoroom
AI photo editing tool

AI x fintech

quantexa
Fraud management and AML

Tractable
AI claim automation for insurance

CLEO
AI financial assistant

onfido
an Ernst & Young Company
AI identity verification

AI x (cyber)security and defence

Helix AI
Defence AI

DARKTRACE
AI-powered cybersecurity

Acronis
Endpoint protection

HOXHUNT
Personalized phishing simulations

AI x others (e.g. food, energy)

gousto
Personalized meal kits

TWICE
Battery analytics software

GridBeyond*
AI grid management for flexible assets

AUGMENTA
Precision crop spraying

Rising stars

Holistic AI
Multi-agents with memory

NYONIC
Industry-focused foundational models

UnlikelyAI
Explainable AI

Orbital Materials
Foundation models for materials design

Enterprise platform for GenAI tuning

AXELERA
AI-acceleration hardware

aindo
Synthetic data platform

LAKERA
AI security

MONUMENTAL
Construction automation

RESHAPE
Lab automation

ANYVERSE
Physics-based synthetic data for robotics and AV

mimic
Collaborative robot with humanoid hands

MOON SURGICAL
Surgical robotics

Chemify
AI drug discovery

deepc
AI x radiology

oso
AI-sound monitoring for caregivers

cosmose AI
AI-Powered Shopping

AutogenAI
AI-powered bid creation

Gladia
Audio Intelligence API

ZIBRA AI
AI-generated assets for virtual worlds

Climate risk intelligence
resistant.ai
AI fraud detection

COUTMIN
Automated accounting for hospitality

prestatech
AI-powered credit intelligence platform

BforeAI
Predictive attack intelligence

AUTOMATA
Autonomous Surveillance System

ARX
Autonomous ground robot for defence

osavul
AI-powered security against information threats

BASECAMP RESEARCH
Biodiversity mapping

overstory
Vegetation intelligence

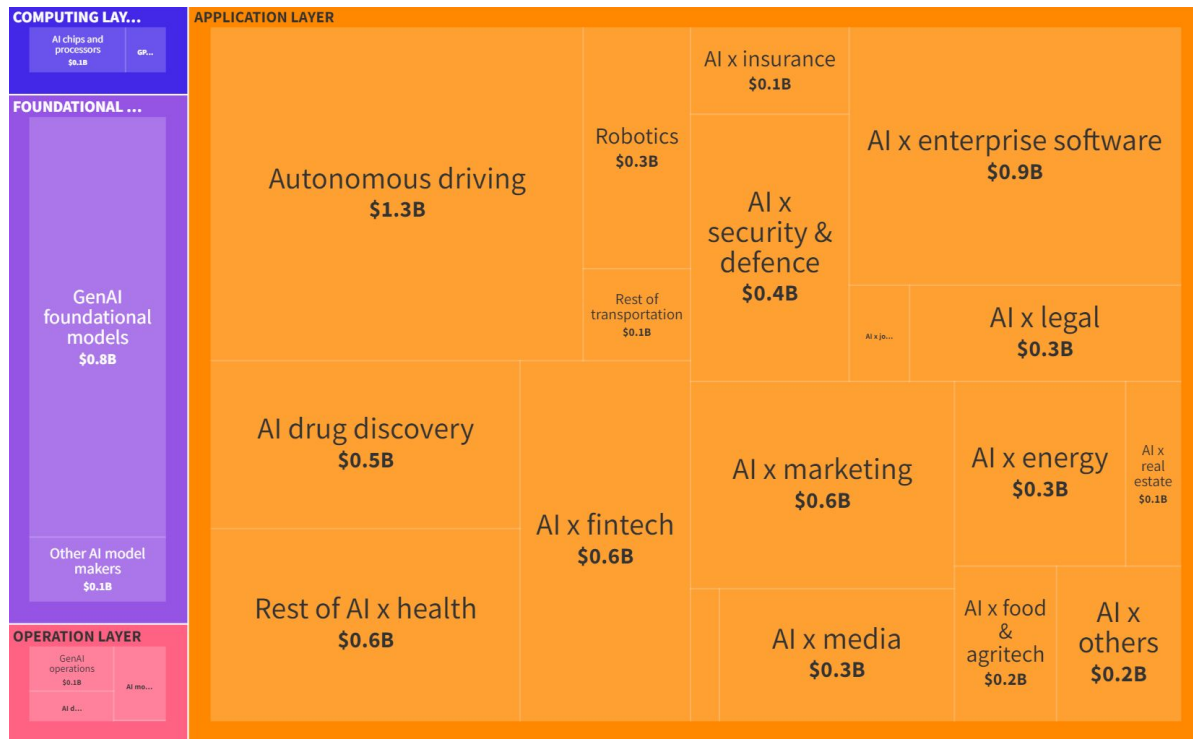
ARKION
Energy grid infrastructure inspection

greyparrot
AI waste management

The vast majority of AI funding is going to applications.

Mainly autonomous driving, health, and enterprise software.

AI VC funding in Europe by segment (2023-2024) » [View live](#)



Autonomous driving, GenAI foundational models, and AI x enterprise software are the leading segments in 2024 so far.

In the past years, AI x health, marketing, fintech and security & defence had attracted considerable funding.

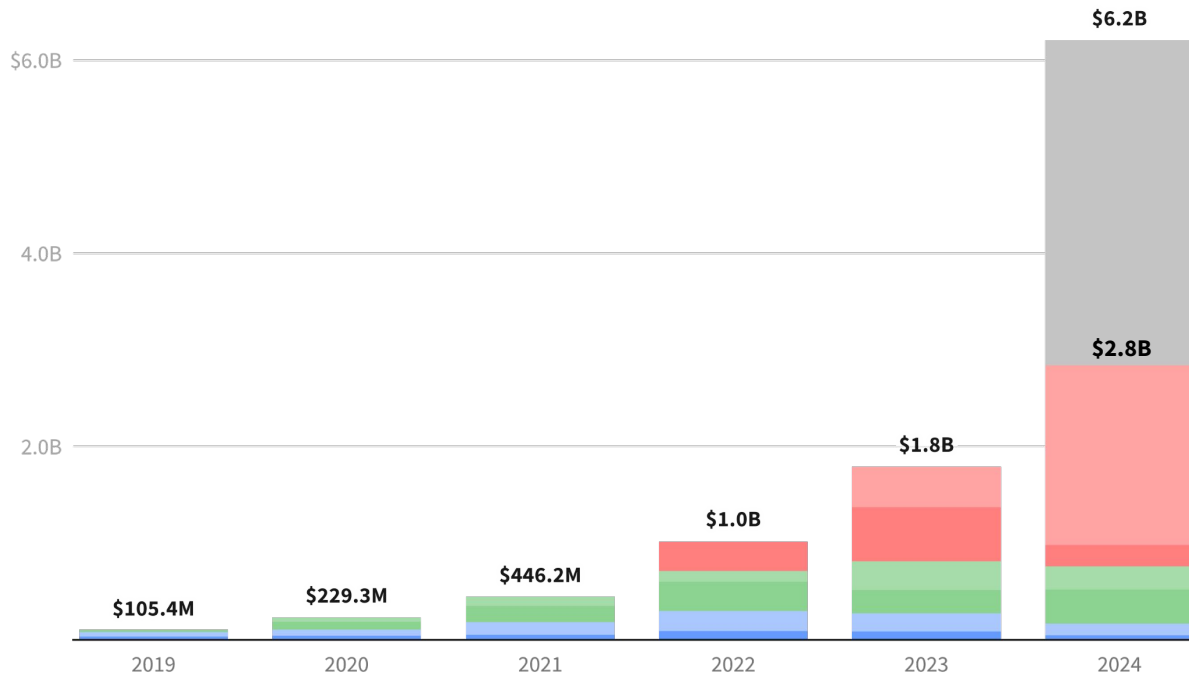
AI VC funding in Europe by segment

AI Category	2018	2019	2020	2021	2022	2023	▼ 2024
Autonomous driving	\$277.5M	\$252.9M	\$256.7M	\$525.1M	\$961.0M	\$343.6M	\$1.2B
GenAI foundational models	\$3.3M	\$1.4M	\$0.0	\$31.5M	\$123.9M	\$851.2M	\$760.2M
AI x enterprise software	\$525.2M	\$782.4M	\$541.6M	\$2.0B	\$1.8B	\$1.3B	\$637.6M
AI x fintech	\$505.4M	\$490.4M	\$698.8M	\$1.2B	\$875.0M	\$548.9M	\$405.0M
Rest of AI x health	\$385.1M	\$1.0B	\$686.2M	\$1.5B	\$974.6M	\$603.5M	\$310.9M
AI drug discovery	\$414.2M	\$362.6M	\$463.2M	\$1.4B	\$778.6M	\$527.7M	\$298.5M
AI x security & defence	\$289.2M	\$579.9M	\$434.8M	\$1.2B	\$1.1B	\$925.6M	\$246.7M
AI x energy	\$166.6M	\$208.3M	\$139.4M	\$356.1M	\$647.7M	\$690.2M	\$245.4M
AI x marketing	\$547.6M	\$464.9M	\$832.1M	\$1.2B	\$1.6B	\$355.2M	\$233.8M
AI x legal	\$162.3M	\$258.1M	\$448.3M	\$405.9M	\$282.2M	\$222.0M	\$212.5M
Robotics	\$286.6M	\$200.1M	\$291.9M	\$854.8M	\$916.2M	\$533.4M	\$196.9M
AI x media	\$255.9M	\$356.6M	\$198.4M	\$381.4M	\$432.9M	\$371.2M	\$188.3M
AI x insurance	\$113.3M	\$241.1M	\$615.6M	\$671.4M	\$117.0M	\$146.8M	\$115.5M
AI x food & agritech	\$104.7M	\$180.0M	\$246.6M	\$229.6M	\$320.2M	\$249.1M	\$107.2M
AI x others	\$286.5M	\$202.9M	\$160.5M	\$350.5M	\$370.4M	\$191.2M	\$89.1M
AI x real estate	\$55.7M	\$180.7M	\$239.7M	\$226.8M	\$461.7M	\$219.5M	\$86.0M
GenAI operations	\$0.0	\$0.0	\$1.4M	\$31.7M	\$42.9M	\$117.5M	\$73.4M
AI model training and development	\$39.4M	\$31.4M	\$33.8M	\$115.6M	\$85.6M	\$53.0M	\$68.3M
Rest of transportation	\$94.3M	\$132.9M	\$117.3M	\$307.5M	\$316.9M	\$188.7M	\$59.1M
AI chips and processors	\$252.7M	\$38.2M	\$415.2M	\$13.2M	\$106.9M	\$199.4M	\$57.9M
GPU cloud providers	\$14.3M	\$17.1M	\$62.5M	\$166.1M	\$251.8M	\$45.5M	\$43.2M
AI data preparation and generation	\$61.3M	\$78.5M	\$106.7M	\$470.2M	\$212.1M	\$190.3M	\$35.0M
AI x gaming	\$50.4M	\$52.5M	\$32.1M	\$62.5M	\$134.2M	\$43.3M	\$19.9M
AI x jobs recruitment	\$90.9M	\$99.1M	\$44.5M	\$211.0M	\$128.3M	\$40.4M	\$18.1M
AI model deployment and monitoring	\$25.2M	\$20.3M	\$34.1M	\$39.7M	\$46.8M	\$112.2M	\$0.0

**Generative AI
funding in
Europe in 2024
has already
surpassed last
year in less than
six months.**

Europe Generative AI VC investment by stage [» view online](#)

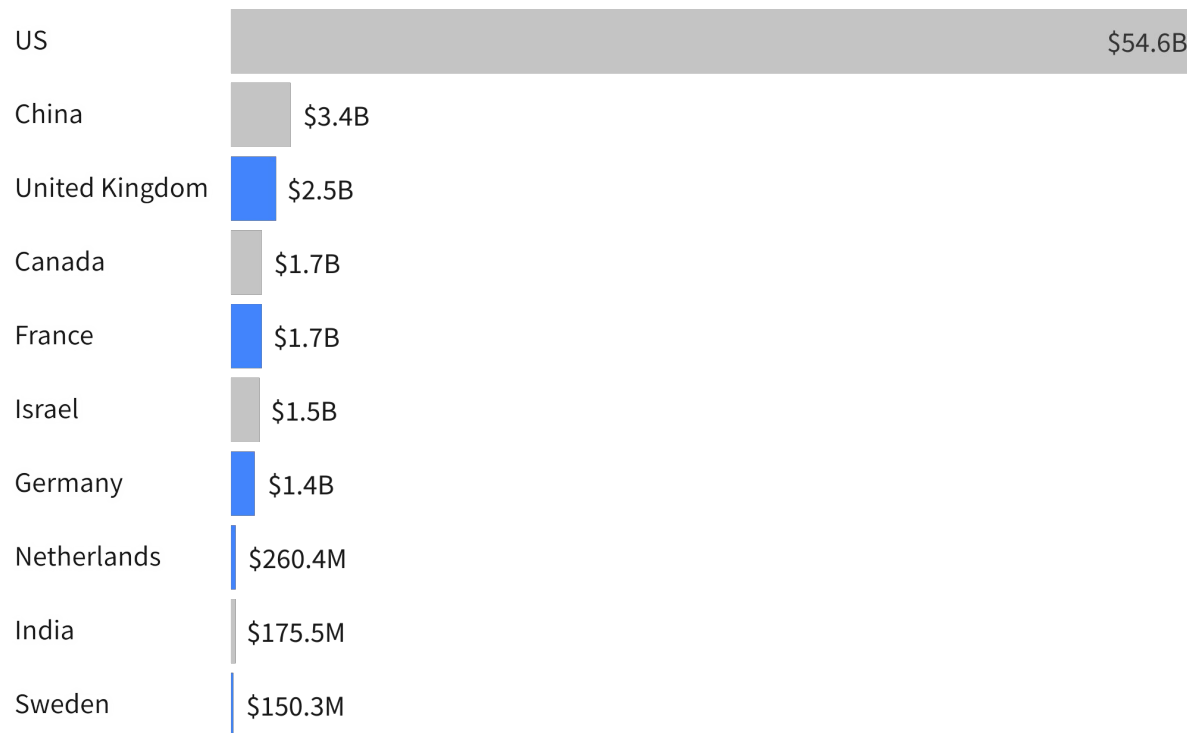
■ \$0–1m (pre-seed) ■ \$1–4m (seed) ■ \$4–15m (series A) ■ \$15–40m (series B) ■ \$40–100m (series C)
■ \$100–250m (mega rounds) ■ \$250m+ (mega+)



The US invested nearly 20x more in GenAI than any other country.

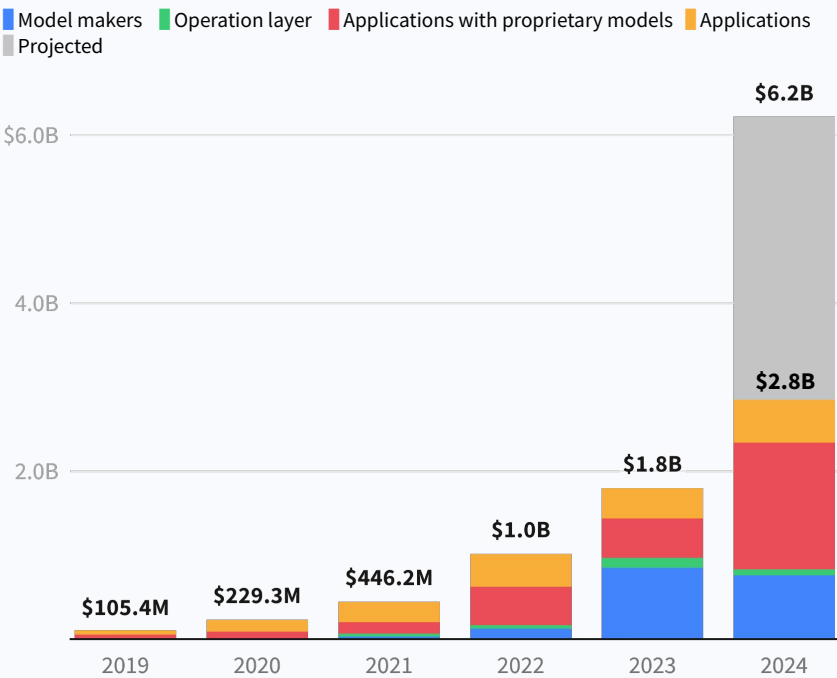
The UK is the leading country in Europe, followed by France and Germany.

Top 10 global countries by Generative AI VC funding since 2019







GenAI model makers and Applications with proprietary models are raising the bulk of the funding in Europe.

Generative AI VC funding by segment in Europe



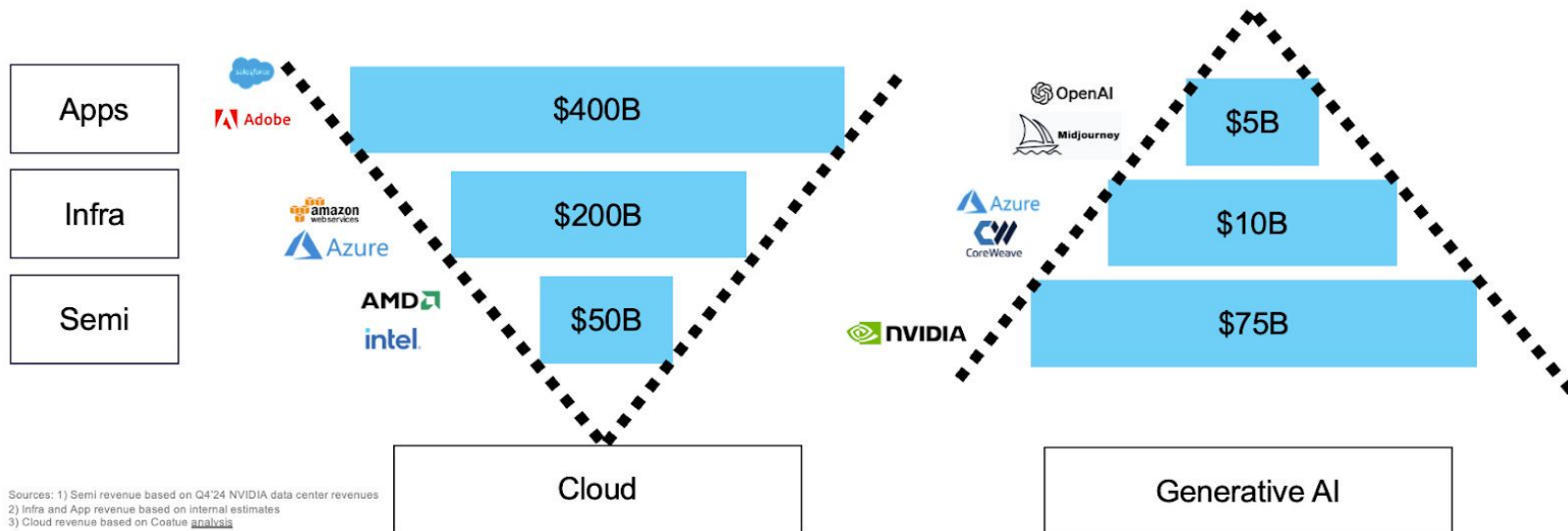
Selected VC rounds in European GenAI startups in 2024

[» view online](#)

Company	Amount	Round	Business
 WAYVE	\$1.1B	Series C	Autonomous driving*
 MISTRAL AI	€468M	Series B	Foundational models
 H	\$200M	Seed and Convertible	Multi-agents models
 parloa	€61.7M	Series B	GenAI for enterprise customer support
 BIOPTIMUS	\$35M	Seed	AI foundation model for biology
 Robin AI	£20.6M	Series B	GenAI for legal tasks
 Adaptive ML	€18.3M	Seed	Enterprise platform for GenAI tuning

So far, the compute layer makes ~90% of all Gen AI profits, and it's dominated by established players.

Estimated annual revenues by stack



Sources: 1) Semi revenue based on Q4'24 NVIDIA data center revenues
2) Infra and App revenue based on internal estimates
3) Cloud revenue based on Costue [analysis](#)

 @apoorv03

ALTIMETER

AI is increasingly being adopted in gaming, from powering intelligent in-game behaviour to accelerating the creation of realistic large-scale virtual worlds.

AI is increasingly being used in gaming, with substantial adoption across various aspects of game development and gameplay.

A significant **87% of game studios are already using AI** in some forms, and nearly all (99%) plan to use it in the future with the market for AI in video games projected to grow from \$992 million in 2022 to \$7.1 billion by 2032, at a compound annual growth rate (CAGR) of 23.3%.

Key applications include:

In-Game Intelligence: AI is used to enhance the behavior of non-player characters (NPCs) and enemy tactics, making games more challenging and realistic, as well as potentially making dialogues more realistic.

Game Development: AI aids in asset generation, procedural content creation, and animation, significantly speeding up the development process. AI can also be used to create vast, dynamic worlds that enhance replayability and player engagement.

Player assistance: AI is already finding significant adoption in coaching to improve players performances. AI for policing such as anti-cheating or harassment detection is also starting up.

“

With significant advancements in AI, we're thrilled to see more use-cases around high-quality 3D asset creation - one of the most challenging tasks for AI to solve.

AI technologies are progressively covering more aspects of the content creation chain - from 2D concept art and 3D modelling to textures and materials, enhancing efficiency and overall quality.

AI-driven tools are facilitating the creation of realistic and immersive environments, which was previously an extremely time-consuming process. By streamlining these tasks, AI is reducing the overall development time and costs, making high-quality game production more accessible to studios of all sizes. This democratization of game development tools means that even smaller studios can now produce AAA-quality content, fostering greater creativity and innovation across the industry.

This revolution promises to bring the cost of game development down, allowing for more experimentation and diversity in game design.”

Alex Petrenko
CEO & Co-founder
ZibraAI



European AI x gaming startups

[Explore the landscape »](#)

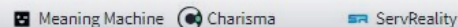
In-Game Intelligence - Behaviour

Combined funding \$ 79M



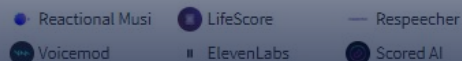
In-Game Intelligence - Dialogue

Combined funding \$ 60K



Game Development - Sound

Combined funding \$ 130M



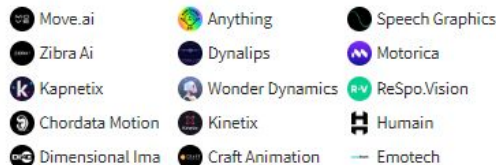
Game Development - Visual Assets

Combined funding \$ 99M



Game Development - Animation

Combined funding \$ 68M



Player Assistance - Coaching

Combined funding \$ 4.1M



Player Assistance - Policing

Combined funding \$ 1M

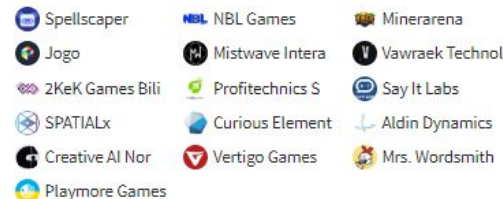


iGaming

Combined funding \$ 1M

Generative AI games

Combined funding \$ 19M



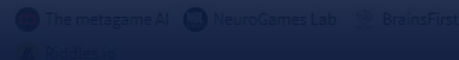
Serious Games

Combined funding \$ 7.6M



Gaming HR tech

Combined funding \$ 1.8M



Synthetic data might be a way to tackle both the data shortage and privacy concerns and become a new data engine for AI.

Synthetic data overview

Synthetic data can be **structured** (such as tabular data, often numerical) or **unstructured** (e.g. text, images, audio), and **programmable/referenced** (maintaining the original data statistical properties) or **unreferenced** (e.g. GenAI output). So far, **most market adoption has focused on structured data for highly regulated industries** such as healthcare, financial services, telecoms, and government, with a focus on data privacy and compliance requirements. However, market evolution could grow into more applications in unstructured fields like computer vision and NLP.

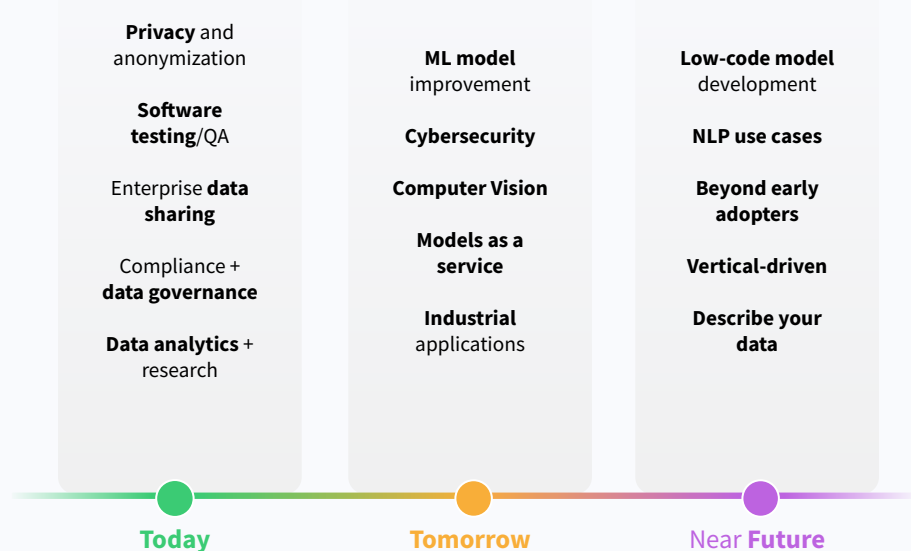
The impending data shortage for LLMs

If current large models scaling trajectory continues, some researchers claim a 90% chance to **run out of high-quality language and image data by 2028**, unless something is done to bridge this gap.

At the same time, social-media platforms, news publishers and others have been curbing access to their data for AI training over concerns about fair compensation. Feeding a model with text generated by AI is often considered the computer science version of inbreeding. This can result in a model producing nonsense, which some researchers refer to as "**model collapse**."

Still, Anthropic claims it used "data we generate internally" to inform its latest versions of its Claude models. OpenAI is also reportedly exploring synthetic data generation.

Exemplificative overview of synthetic data use cases and market evolution*



Preserving data privacy and security in AI training is becoming increasingly important.

As the need for high-quality data increases for AI and especially for **sensitive applications from healthcare to finance**, cryptographic advancements can unlock collaboration.

Fully-homomorphic encryption (FHE) can allow the training of AI models **without exposing the raw data**. Instead, encrypted data is shared and processed, ensuring that sensitive information remains concealed throughout the training process. FHE found early adoption and market-fit in the **crypto and web3** sector thanks to the strongly felt need for decentralized, trustless, and privacy-focused systems, as well as the early-adopting attitude of the sector. FHE is now scaling to the **data and AI market** thanks to advancements in **scalability**.

Other key privacy-enhancing technologies include:

Federated Learning, which focuses on collaborative machine learning without sharing raw data, protecting data by keeping it localized and only sharing model updates. **Confidential Computing**, which leverages hardware-based security to protect data while it is being processed, ensuring data confidentiality and integrity during use.

“It’s now possible to convert an AI model into an FHE equivalent, and to both train and run inference on encrypted data. Data scientists can already start building simple confidential AI applications today, and integrate more complex models such as LLMs as hardware acceleration becomes available in the near future.”

Blockchain and AI are just the start. Our long-term goal is to make the entire internet encrypted end-to-end.”

Rand Hindi
CEO & Co-founder
Zama

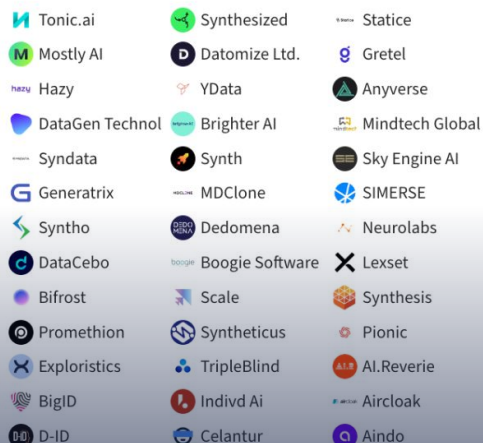


140+ Global Privacy-Enhancing Technologies startups (synthetic data, federated learning & confidential computing, homomorphic encryption)

[Explore the landscape »](#)

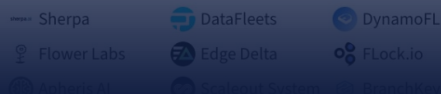
Synthetic data

Combined funding \$ 2.2B



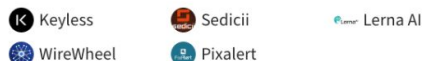
Federated learning (distributed collaboration)

Combined funding \$ 557M



Passwordless authentication

Combined funding \$ 56M



Differential privacy

Combined funding \$ 60M



Confidential computing & secure environments

Combined funding \$ 197M



Fully homomorphic encryption

Combined funding \$ 847M

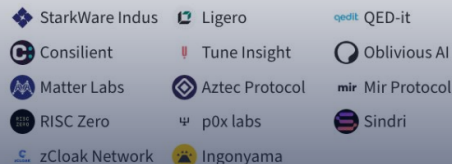
Data anonymization

Combined funding \$ 54M



Zero-knowledge proofs

Combined funding \$ 688M



Secure multi-party computation

Combined funding \$ 18M



EU AI Act: a comprehensive regulation to cover all AI use sectors and technologies (the basics).

The EU AI Act is essentially a **product safety regulation** designed to **reduce risks** for humans from the use of **AI systems**.

In this lens, it looks at **AI risk on a single application level**. This was suited for older AI models, which were very application-specific, but challenged by new large Language Models and Generative AI.

The AI Act is going to **apply to AI systems used in the EU, irrespective of where they are developed**. **Most of the responsibility** and burden is focused on the **providers (developers) of AI models**. It imposes extensive requirements on the development, deployment and use of **high-risk AI systems, as well as general-purpose AI and foundation models**.

It is expected to come into force in the summer of 2024, but most organisations will have **two years to prepare to be compliant**.

Expectation to this are unacceptable-risk AI systems to be taken off the market in the following six months, and general purpose AI models which must be compliant in one year.

The hard work for AI governance professionals begins now.

The most common penalties can be up to 3% of global annual turnover or €15M.

EU AI Act key timeline evolution



EU AI act: risk levels explained.

The EU AI Act defines four levels of risk for AI models:

Prohibited AI >> High-Risk AI >> Limited Risk AI >> Minimal Risk AI.

Most AI applications are considered minimal risk and not regulated.

Limited risk systems are subject to **transparency and user awareness obligations only**, like chatbots and the watermarking of AI media output.

Systems that are deemed to pose **unacceptable risks are prohibited**. These systems include **remote biometric identification and categorisation, facial recognition databases and social scoring** – with exceptions for medical and security reasons, which are subject to judicial authorisation and the respect of fundamental rights.

The bulk of the EU AI Act focuses on the regulation of **high-risk AI systems**.

These are **single- or limited-purpose AI systems that interact with humans in education, employment, public services, etc.** The Act contains a complex set of rules and requirements to assess whether and under what conditions high-risk systems can be used.

Generative AI Foundational models and General Purpose AI are subject to distinct requirements focused on **transparency** (e.g. technical documentation, training data summaries, copyright and IP safeguards etc).

Stricter rules are enforced for models trained with more than 10^{25} FLOPs. Today, it is estimated that only GPT-4, maybe Gemini and a couple of other models currently cross that threshold. Also, the industry is moving towards smaller, more specialized models.

National security, defense, and military applications are excluded from the Act. This applies only if the focus is exclusive and not for dual-use applications.

Risk levels of AI, according to the EU AI Act

Prohibited	Social scoring, mass surveillance, manipulation of behaviour causing harm	Unacceptable risk
Conformity assessment	Access to employment, education and public services, safety components of vehicles, law enforcement, etc...	High risk
Transparency obligation	Impersonation, Chatbots, emotion recognition, biometric categorisation, deep fake	Limited risk
No Obligat.	Remaining use cases	Minimal risk

UK AI strategy: a more flexible and sector-specific approach to AI.

UK AI strategy differs from the EU AI Act by not focusing on a comprehensive regulation to cover all use sectors and technologies (horizontal approach). According to British Prime Minister, the UK will take the risks associated with AI seriously but will not “rush to regulate” the technology and instead “**regulate based on the outcomes AI is likely to generate in particular applications.**”

The focus is on **enforcing existing laws that may be relevant to AI** development and deployment, as needed, **in areas like healthcare and law enforcement**, along with creating new rules that the government deems necessary.

The UK government announced a **pro-innovation approach to AI** in March 2023 and hosted the **international AI Safety Summit** in November 2023.

However, this stance seems to be changing as reported in April by the **Financial Times**, with UK regulators **looking to regulate large language models** such as requiring “most sophisticated” LLMs developers to share their algorithms with the government and provide evidence they have carried out safety testing.

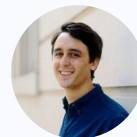
A recent **survey by Tech Nation and Founders Forum** found out that the **majority of UK tech professionals believe that AI is having a positive impact** today on the UK economy, the country as a whole, as well as on their industry and themselves personally. Positivity around AI’s future impact is even greater. Still majority (65%) of UK tech professionals **also say more AI regulation is needed.**

“France now holds a central position in the field of artificial intelligence (AI). Thanks to a strong AI culture, quality education, and dynamic research, France is a key player] among global actors.

Meanwhile, the EU has spun up a convoluted regulatory framework that was almost obsolete by the time it was enacted into law. Investors dislike the uncertainty, while entrepreneurs have to waste valuable time and resources navigating additional frictions. Resolving these challenges will be critical if these countries want to close the gap with the UK.”

Nathan Benaich

General Partner at **Air Street Capital**
Co-author of the **State of AI Report**



Methodology & definitions

What is a startup?

Companies designed to grow fast founded in the information age (since 1990). Generally, such companies are VC-investable businesses. Some become very big (e.g. \$1B+ valuation). Successful startups develop into scaleups (>50 people), grownups (>500 people) and result in big companies.

Unicorns are (former) startups that reached US\$ 1B valuation or exit at one point in time.

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.

Tech taxonomy

Artificial intelligence

In this report, AI is meant as "AI core", which includes startups that:

- 1) develop computing infrastructure focused on AI, such as AI chips and processors or specialized cloud providers for AI.
- 2) develop AI models for other companies, such as generative AI foundational models.
- 3) develop Machine Learning Operations tools (MLOps) to: prepare, annotate or generate data for AI; train and optimize/fine-tune AI models; deploy and monitor AI performances.
- 4) offer products and services which have AI as their core feature (e.g. autonomous mobility and AI drug discovery, among others).

"AI-side" startups are not counted, meant as startups that:

- 1) develop computing infrastructure or developer tools where AI is not the core focus
- 2) offer products and services which use AI but not as a key focus.

This is because nearly every startup and company uses AI in some processes and products today.

Underlying Data

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

The data on which this report builds is available via app.dealroom.co. For more info, please visit dealroom.co or contact support@dealroom.co.

Venture Capital, Investors

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

Unless otherwise mentioned, rounds labelled as (pre-)seed, series A or early VC, as well as all rounds under \$15M are considered Early. Those rounds \$15-\$40M, and all rounds labelled Series B and C are considered Breakout. Rounds labelled Series C, Late VC and/or \$40M+ are considered Late.



ROOSH