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CREANDUM

European tech ascendancy

Unlocking a continent's innovation potential

July 2023



Backing European tech in its 20-year rise and beyond.

“

Over the past two decades, Europe's tech scene has undergone a seismic shift, moving from an outsider to a global challenger. At Creandum, we have witnessed and supported the transformation firsthand and firmly believe that Europe is now poised to take the lead in the next wave of entrepreneurship.

During our 20 years of backing visionary entrepreneurs with global ambitions, the European startup scene has evolved massively. Global, European born, leaders have emerged such as Spotify, Klarna, Adyen, UiPath and Revolut.

We started in the Nordics and over time expanded our presence in the rest of Europe with hubs now in Stockholm, Berlin, London and a US presence in San Francisco.

We look forward to the next 20 years of tech in Europe which we believe will be shaped by continuous innovation, both in existing verticals such as FinTech, SaaS, Climate etc, but also in new and unknown areas yet to be defined.

Europe now possesses all the essential ingredients for this continued revolution: a wealth of talent, a maturing ecosystem and entrepreneurial role models for the coming generations. By harnessing these strengths, Europe can lead the world in new innovation in all sectors. At Creandum, our belief is that any industry can be disrupted by the right entrepreneur.

We have seen first hand how software has been a catalyst for disruption, accelerating the pace of innovation across various sectors. However, in the end it is the individual entrepreneur who will determine the success or failure of a venture.

Success can now come from anywhere and we are ready.”

Staffan Helgesson
General Partner
at **Creandum**



CREANDUM

Leading pan-European early-stage venture capital firm.

Founded in 2003, Creandum is a leading pan-European early-stage venture capital firm.

The fund's portfolio of 120+ companies includes some of Europe's most successful tech companies across a wide range of industries, including Spotify, Klarna, Depop, Kry, Trade Republic, Pleo, and Vivino. Today, every sixth company is a unicorn. Creandum's advisory teams are based in Stockholm, Berlin, London and San Francisco.

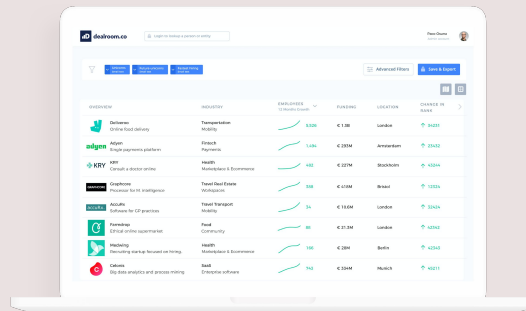
To learn more visit creandum.com.



Global startup & venture capital intelligence platform.

Dealroom.co is the foremost data provider on startup, early-stage and growth company ecosystems in Europe and around the globe.

Founded in Amsterdam in 2013, we now work with many of the world's most prominent investors, entrepreneurs and government organizations to provide transparency, analysis and insights on venture capital activity.



Key Takeaways

Europe has grown from a footnote on the tech scene in the early 2000's to a global tech challenger.

Europe now attracts 20% of global VC funding, up from ~5% two decades ago. At seed stage, it even attracts a third of all global seed funding.

The European tech ecosystem has grown massively in the last decade to \$2.5T in combined value. Europe now has global challengers and leaders in all new tech segments.

Europe's expertise and strength in Fintech, SaaS and Health continue to be ripe for disruption. New sectors such as Climate are also emerging.

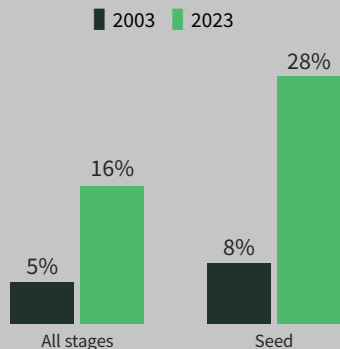
Fintech, Health and Enterprise Software have dominated VC funding in Europe in the last 20 years (c. 40% of all VC investing between 2003-2023).

Europe's development means it is central in the emergence of new sectors, including in Climate Tech and all supercharged by AI.

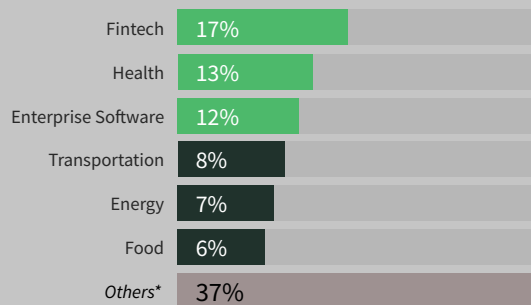
With its university excellence and increasing diversification in unicorns, Europe is well placed to be at the centre of innovation in years to come.

Europe has all the elements to be a leader in the next 20 years of tech: an experienced VC scene, seasoned entrepreneurs formed in unicorn factories such as Spotify and Klarna, and a strong engineering and scientific talent pool. Half of the world's top science clusters are in Europe and Europe is investing as much as China and the rest of the world combined in new technologies.

Europe's share of global VC funding



Share of venture capital funding by industry (2003-2023)



Key pillars for Europe success in the next 20 years of tech



Half of the world's top science clusters



Attracting nearly 20% of total funding and nearly 30% of seed stage one



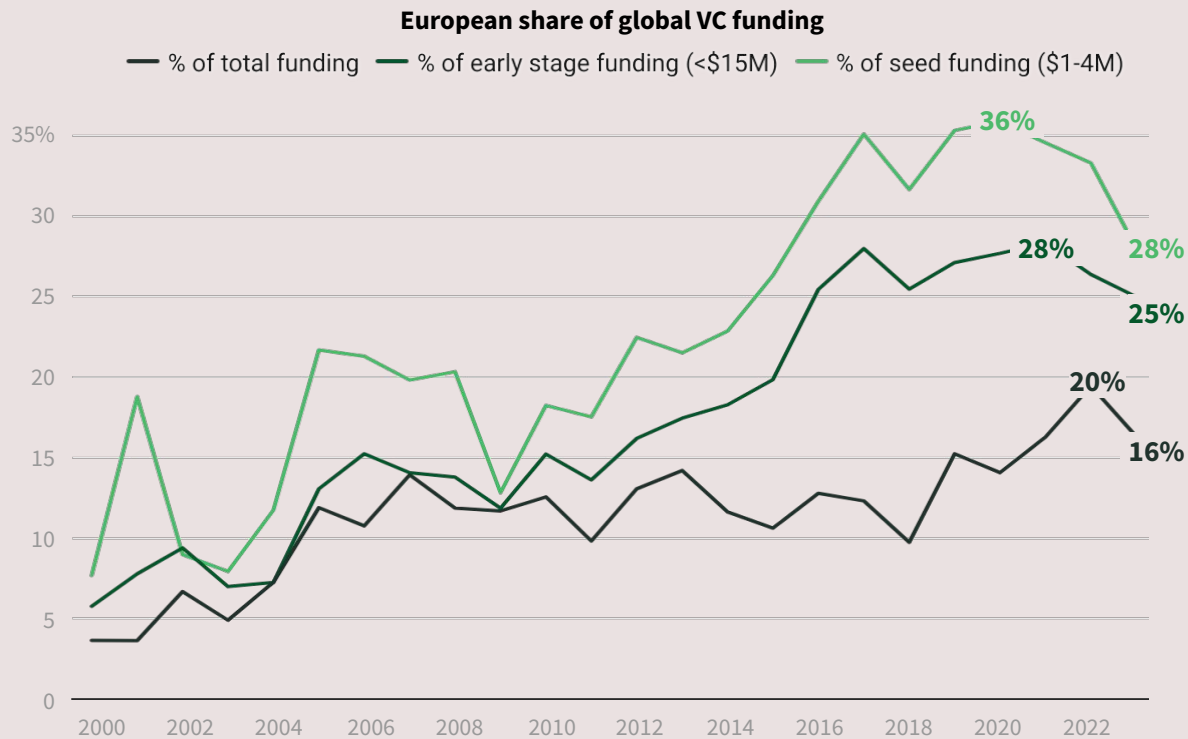
Startup Mafias creating new generation of seasoned founders.

1.

The past 20 years of tech

Europe arrives

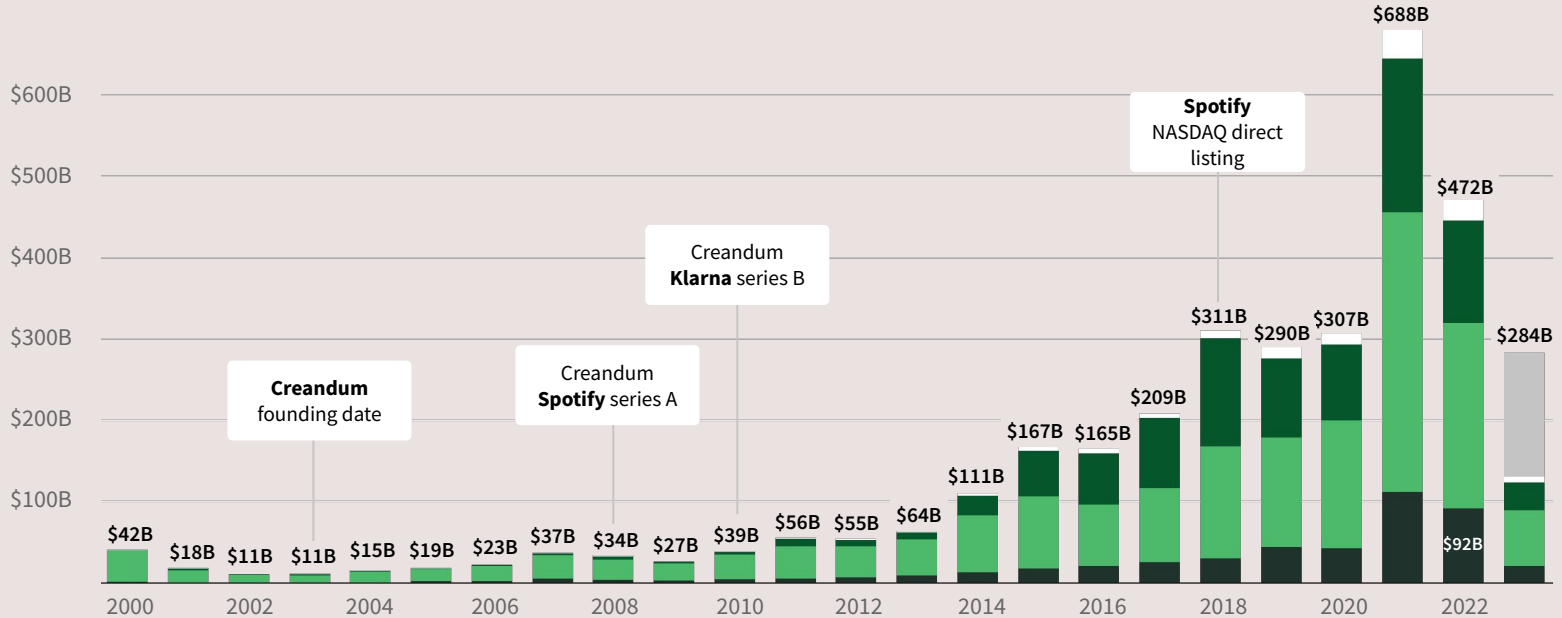
Europe has arrived on the global stage. Europe's share of global venture capital increased from ~5% two decades ago to 20% in 2022. At the early stage, Europe now raises a third of global Seed funding.



The 100x continent. European venture capital investment has ramped up from less than \$1B a year 20 years ago, to \$92B in 2022.

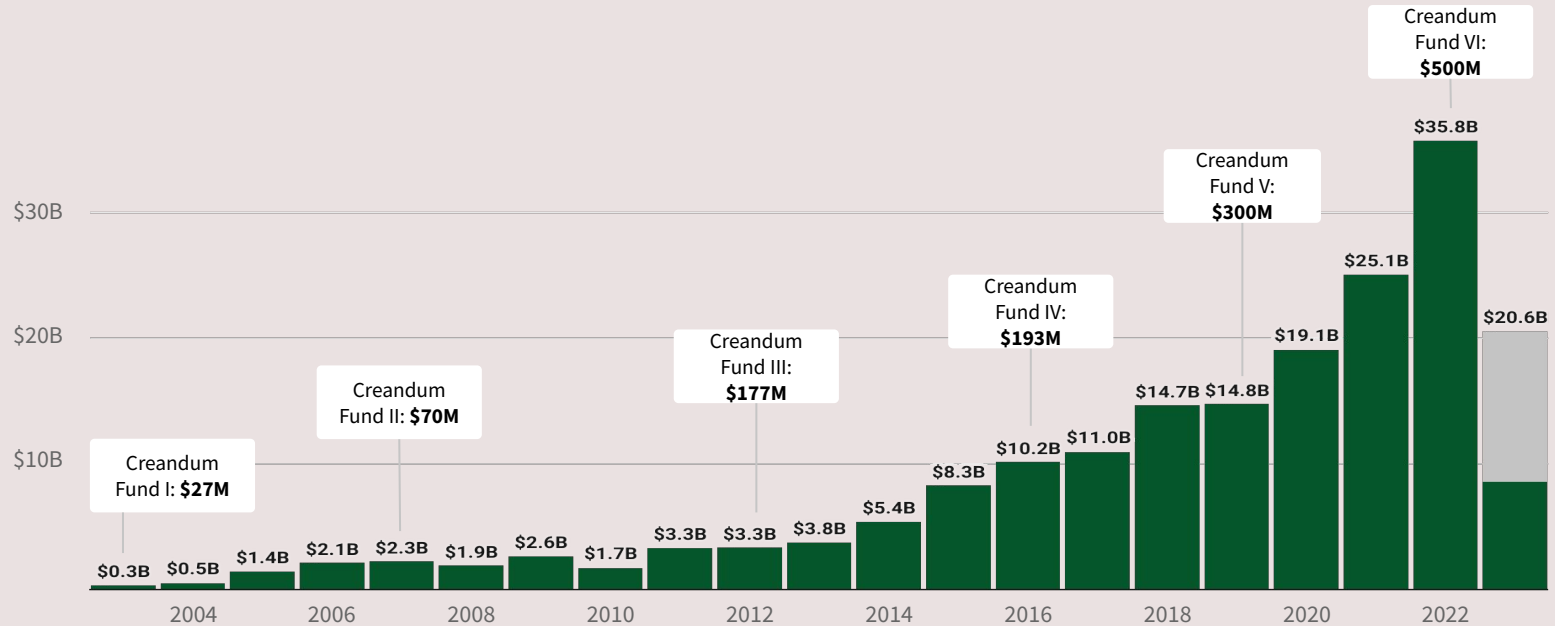
Global VC funding by region

■ Europe ■ US ■ Asia ■ RoW ■ Projected



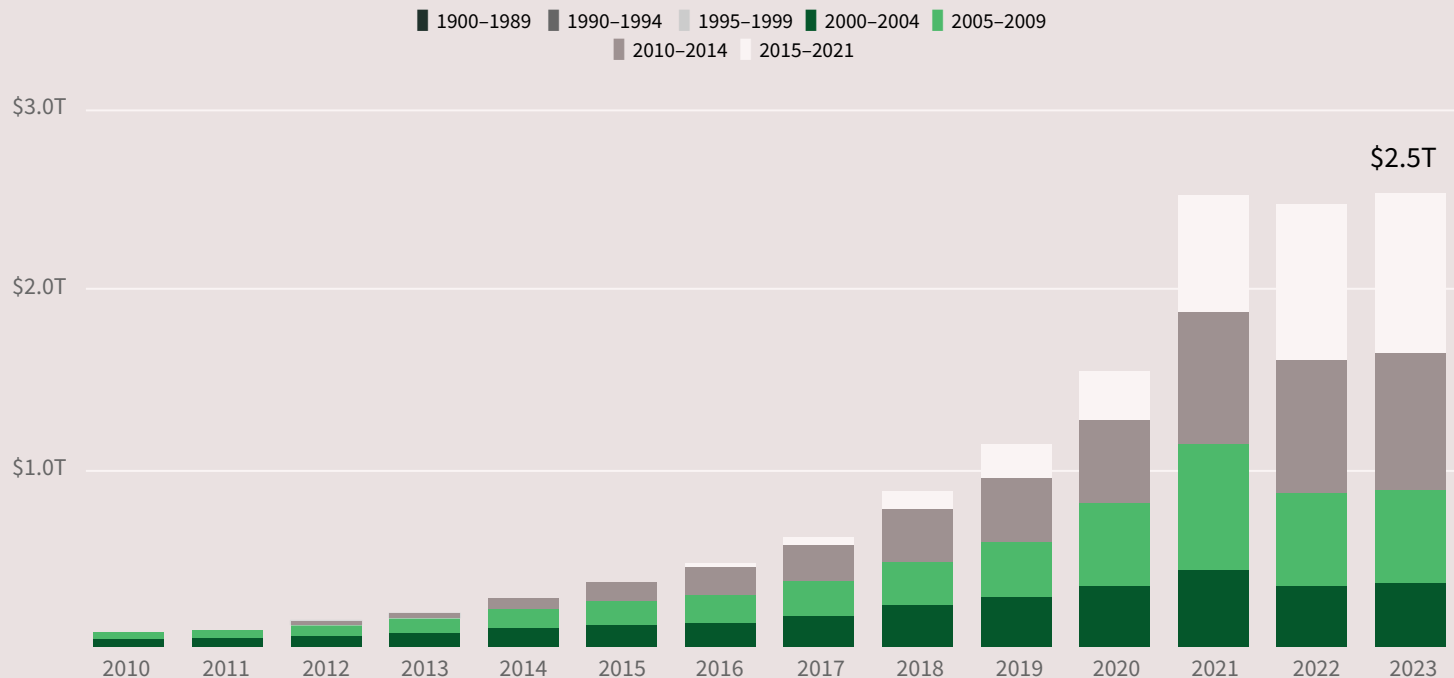
The amount of capital raised by VCs in Europe has also increased 100x in the last 20 years, with the growth in opportunities and European track record.

VC funds raised by European investors



The European tech ecosystem has grown massively in the last decade, now worth a collective \$2.5T. Value creation is accelerating with the youngest startup cohorts worth the most.

Combined enterprise value of VC-backed European tech companies founded since 2000

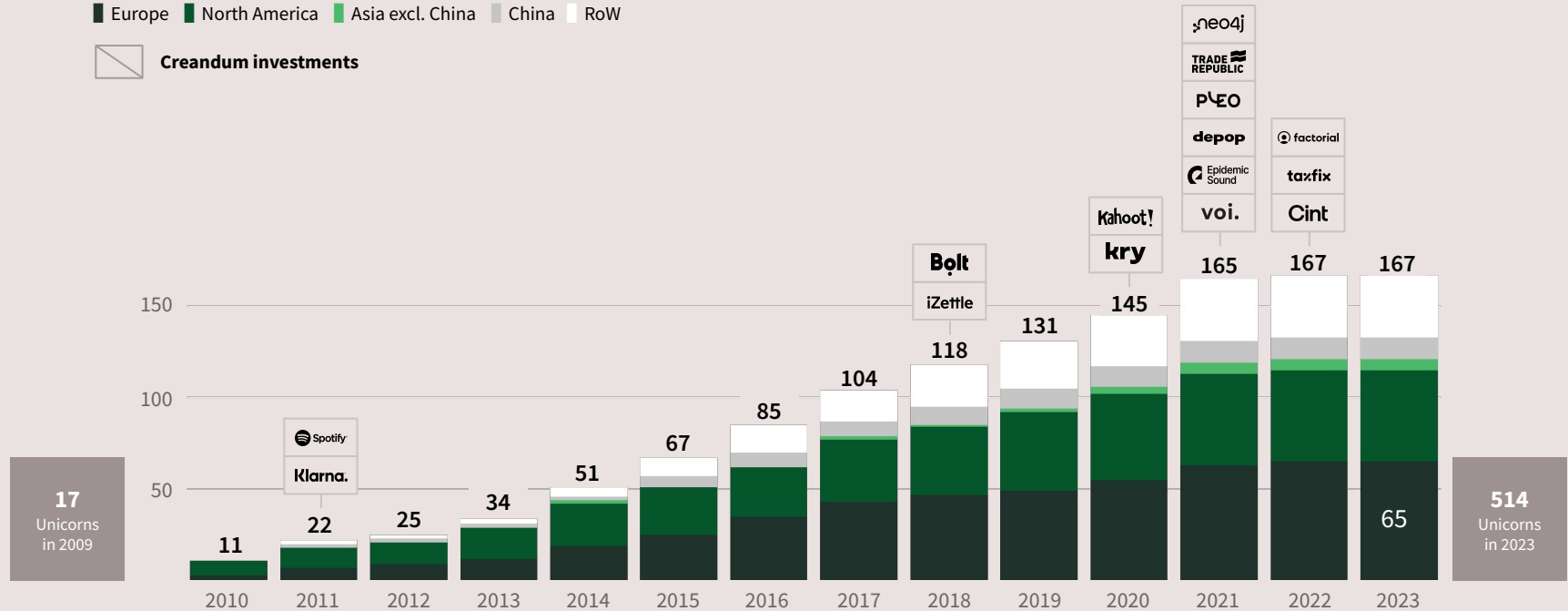


Europe now has 65 cities home to at least one unicorn, up from just three cities in 2010.

Number of cities with at least one unicorn

■ Europe
 ■ North America
 ■ Asia excl. China
 ■ China
 ■ RoW

Creandum investments



Europe now has 514 unicorns, spread out across 65 cities and 25 countries, the highest density of unicorn tech hubs of any region in the world.

514
Unicorns in Europe
(HQ + Founded)

4.6x
growth since
2016

By City

Tallinn	6
Madrid	9
Dublin	13
Zurich	12
Copenhagen	14
Munich	15
Amsterdam	20
Stockholm	31
Berlin	35
Paris	44
London	105
54+ Unicorn cities across 25 countries in Europe.	210

By Country

Estonia	6
Poland	9
Ireland	13
Denmark	12
Spain	14
Switzerland	15
Netherlands	20
Sweden	31
France	44
Germany	105
United Kingdom	210
Rest of Europe	210

Creandum investments

Bolt

PLEO

factorial

elastic

Spotify **iZettle** **Klarna.**

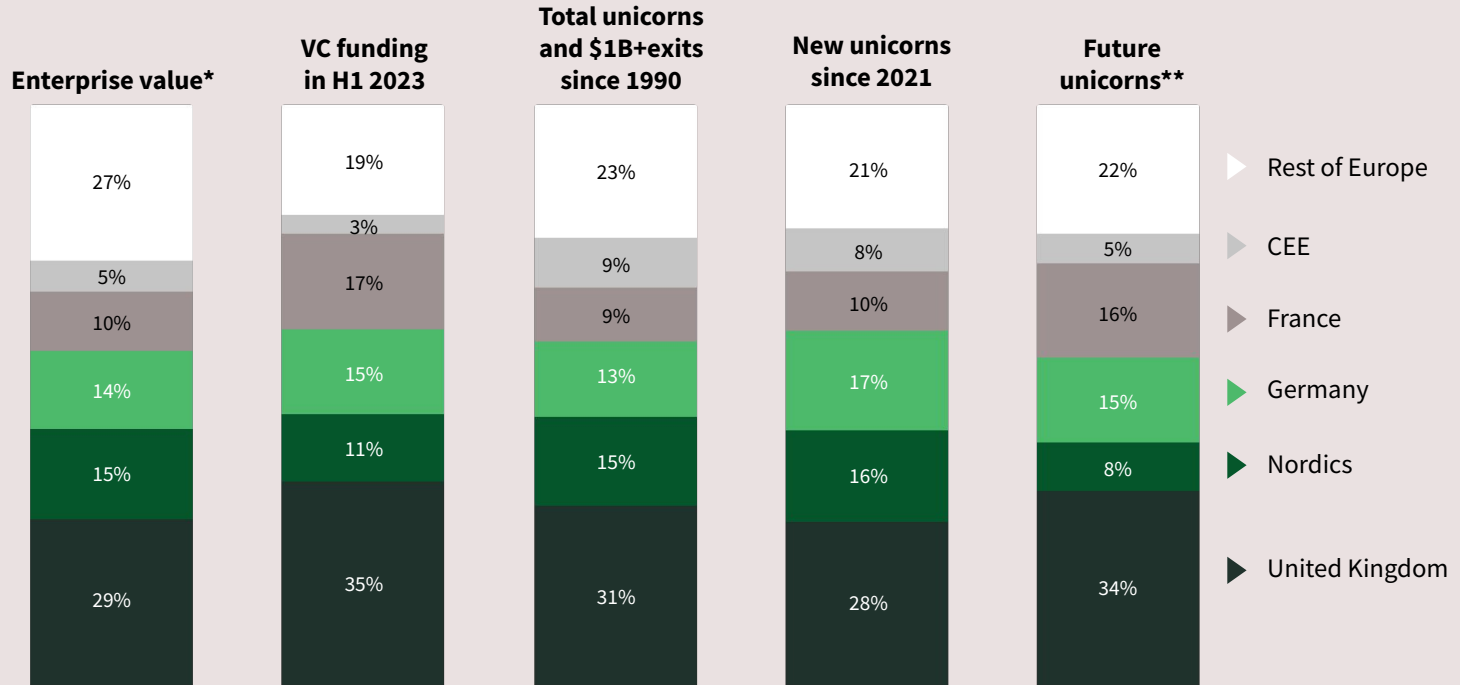
Epidemic Sound **voi.** **Cint** **neoj** **kry**

TRADE REPUBLIC **taxfix**

depop

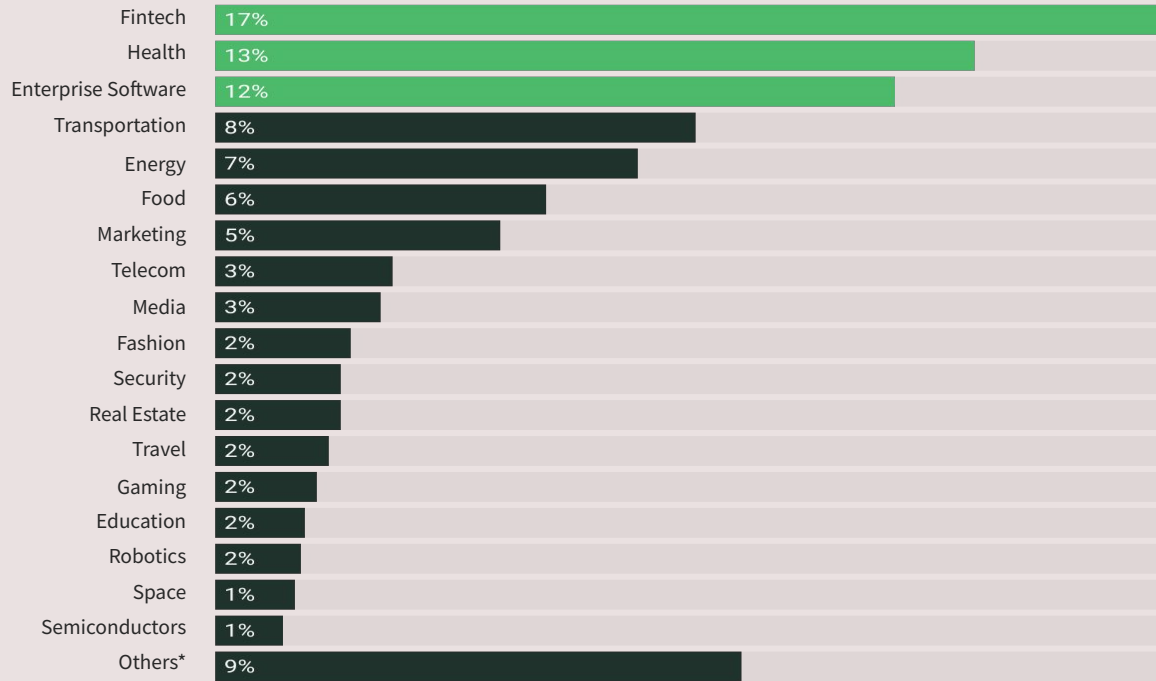
Kahoot!

The last decade has proven that great tech companies can come from anywhere, with the European startup ecosystem now increasingly distributed.



Fintech, Health and Enterprise Software have been the three dominant sectors for VC funding in Europe in the last 20 years.

Share of venture capital funding by industry (2003-2023)



Creandum's Impact on Europe.

Creandum in a snapshot

\$15B Raised by portfolio companies	40k People employed by portfolio companies across 16 countries	>120 Investments across 16 countries
50+ exits	\$1.7B Funds raised across all vehicles over the past 20 years	20 Unicorns in portfolio. 16 founded in Europe
14+ "Futurecorns" in portfolio (private companies valued \$250-850M)	1 in 6 Companies in the portfolio are Unicorns	

“ *The European opportunity is more compelling than ever before.* ”

With Europe catching up in its share of global VC investment, the amount raised by funds increasing by 100x, it is little surprise that unicorns are emerging from all across Europe.

We began in the Nordics in 2003, and in 2023 the funds' have now invested in over 15 countries from our hubs in Stockholm, Berlin, London and San Francisco.

Being a generalist fund means we place greater emphasis on the entrepreneurs we think will win and will keep this openness at our core in the future.

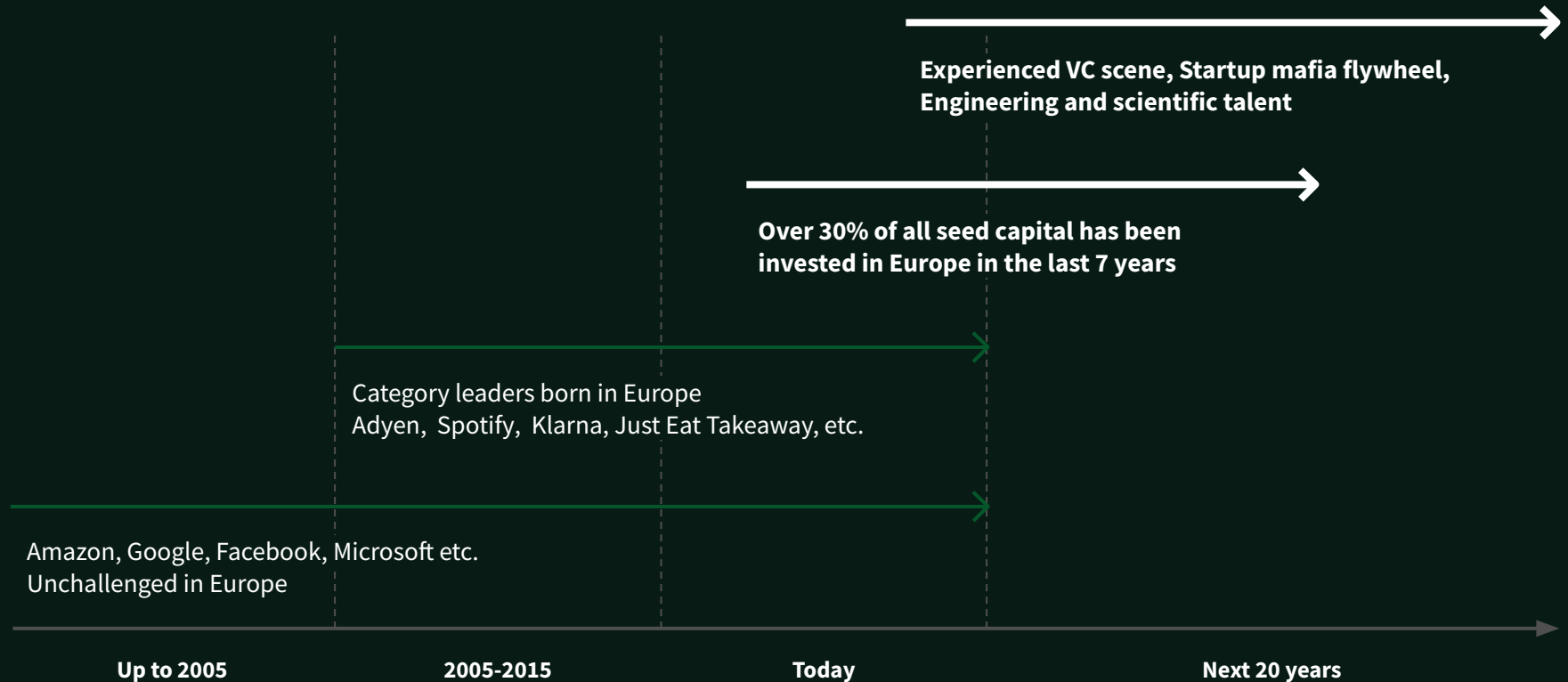
Johan Brenner
General Partner **Creandum**



2.

The next 20 years of tech Europe: global challenger

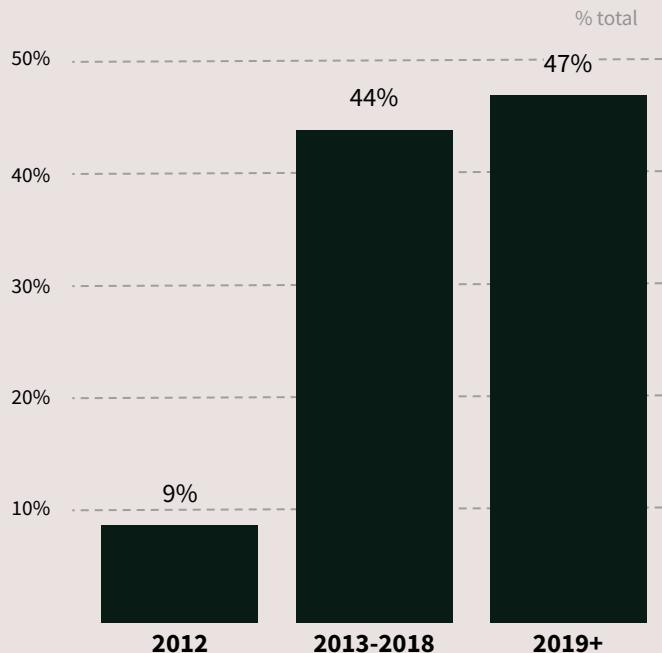
Europe is increasingly affirming its role in tech with every new startup generation.



The startup mafia flywheel is now in full effect in Europe. Entrepreneurship is compounding as successful startups spawn new generations of founder talent.

The flywheel effect is accelerating

% of total startups founded by unicorn staff alumni, distributed by year unicorn hit \$1B mark



Source: Accel and Dealroom, 2022

Number of 2nd generation startups*

32 Spotify	32 Delivery Hero	31 CRITEO	31 Klarna.	30 zalando
26 Revolut	24 N26	24 BlaBlaCar	24 deliveroo	22 Skype
22 wise	21 Glovo ^o	19 King	15 monzo	15 JUST EAT
14 babylon	13 Skyscanner	12 wefox	12 sumup ^o	12 celonis

Source: Accel and Dealroom, 2023

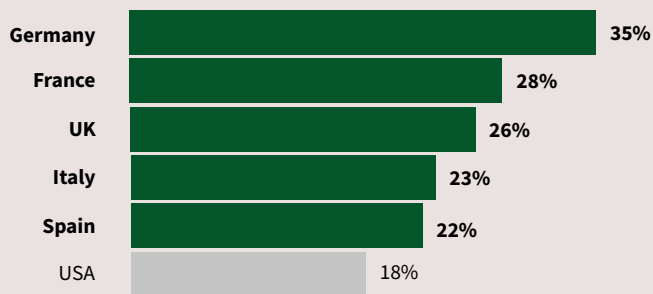
Europe has the tech talent and research leadership required to play a key role in innovation for the next 20 years.

Europe has 40% more developers than the US*



European students are more into science**

(portion of graduates in Science, Technology, Engineering, and Mathematics)



Europe excels in Computer Science ranking (THE 2022)

1. Oxford	11. Imperial College London
2. Stanford	12. UCLA
3. MIT	13. Tsinghua (Beijing)
4. ETH Zurich	14. Caltech
4. Cambridge	15. TU Munich
6. CMU	16. Singapore Nanyang
7. Harvard	17. University of Washington
8. Berkeley	18. Cornell
8. National University of Singapore	19. Peking university
10. Princeton	20. École polytechnique fédérale de Lausanne

... and also does well in Engineering ranking (THE 2022)

1. Harvard	11. University of California
2. Stanford	12. Peking university
3. Berkeley	13. Imperial College London
4. MIT	14. Georgia Tech
5. Cambridge	15. Singapore Nanyang
6. Oxford	16. Yale
7. Princeton	17. Tsinghua (Beijing)
8. Caltech	18. Carnegie Mellon University
9. ETH Zurich	19. École polytechnique fédérale de Lausanne
10. National University of Singapore	20. University of Michigan-Ann Arbor



Science clusters

Density & innovation lens

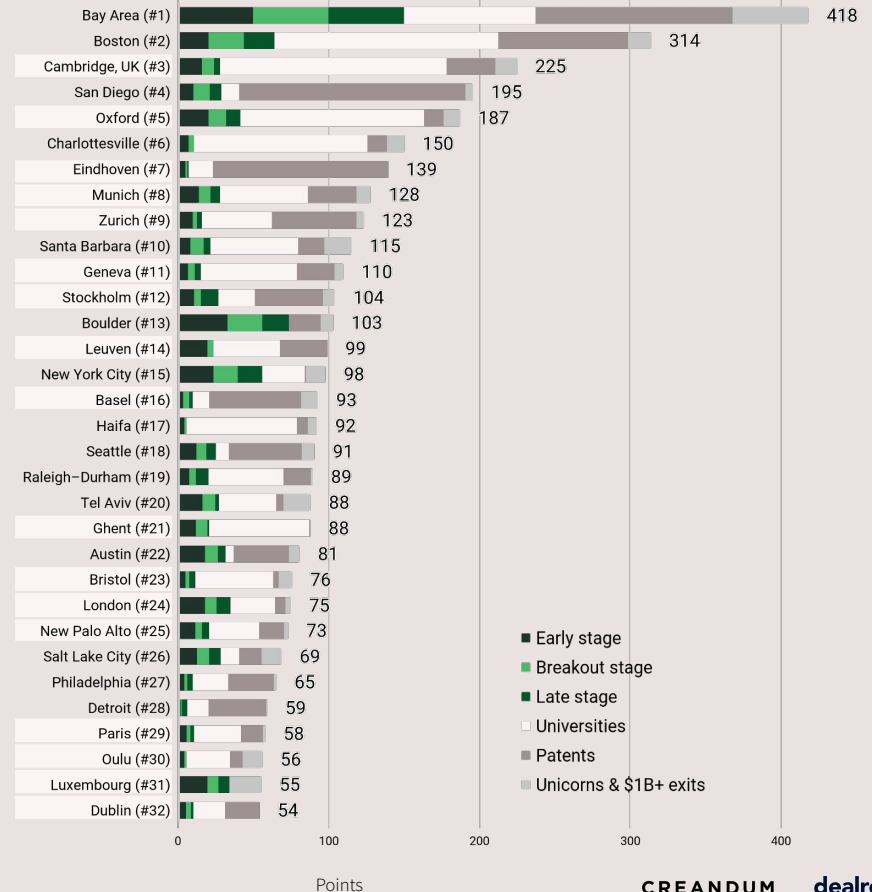
More than half of the world's top science clusters are in Europe.

Science Clusters are evaluated on a per-capita basis, mainly on academic/research footprint and startup value creation.

Parameters used include university ranking, patent creation, deep tech funding from early to late stage and number of deep tech unicorns.

The result is a mix of big generalist and small specialist science hubs.

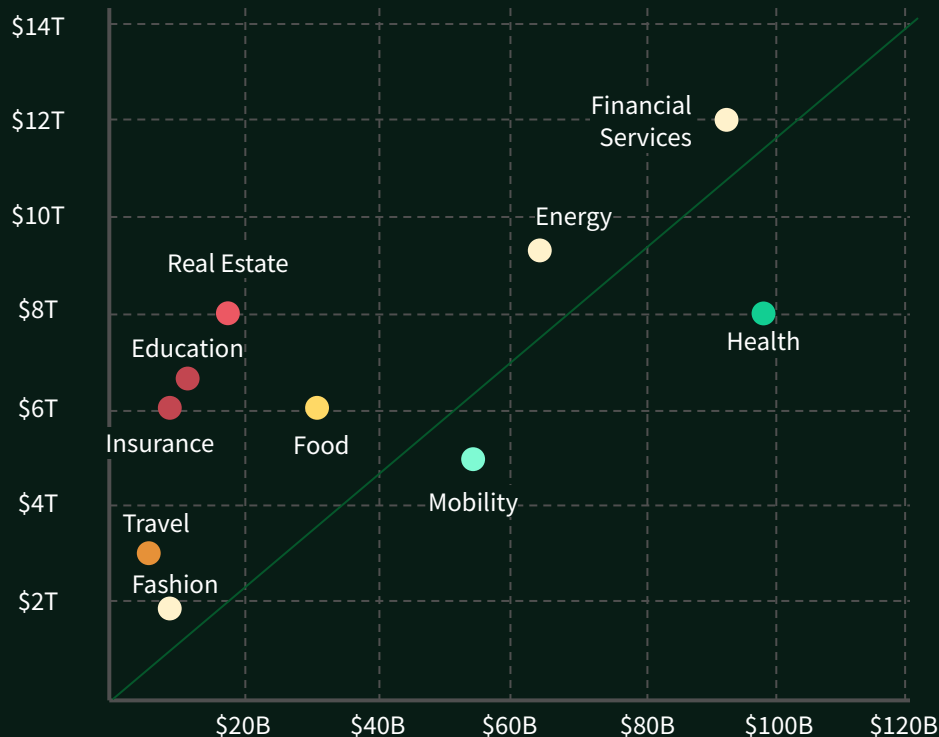
Science clusters are well positioned to lead in the emergence of new technologies.



Huge potential remains for the transformation of many largely undisrupted, “traditional” industries.

Some industries such as Real Estate, Education and Insurance as well as Consumer segments such as Food, Travel and Fashion have seen very little VC funding compared to their large market size.

Global Market Size vs. Industry VC Investment (2022-2023)



Despite the vast levels of funding going into FinTech, Enterprise Software and Health, significant opportunities still exist for tech disruption in these areas.

Fintech

Unicorn in portfolio



Recent investments



Enterprise software

Unicorn in portfolio

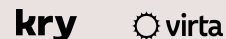


Recent investments



Health

Unicorn in portfolio



Recent investments



“ *There’s no stopping innovation - FinTech, SaaS and Health have been Europe’s most popular sectors for investment, but all remain under-invested.* ”

New investment opportunities in FinTech, SaaS and Health continue to appear. Additionally, new sectors are emerging as innovation spreads across Europe. The mass adoption of AI tools such as ChatGPT and LLMs mean that the speed of innovation is only going to accelerate.

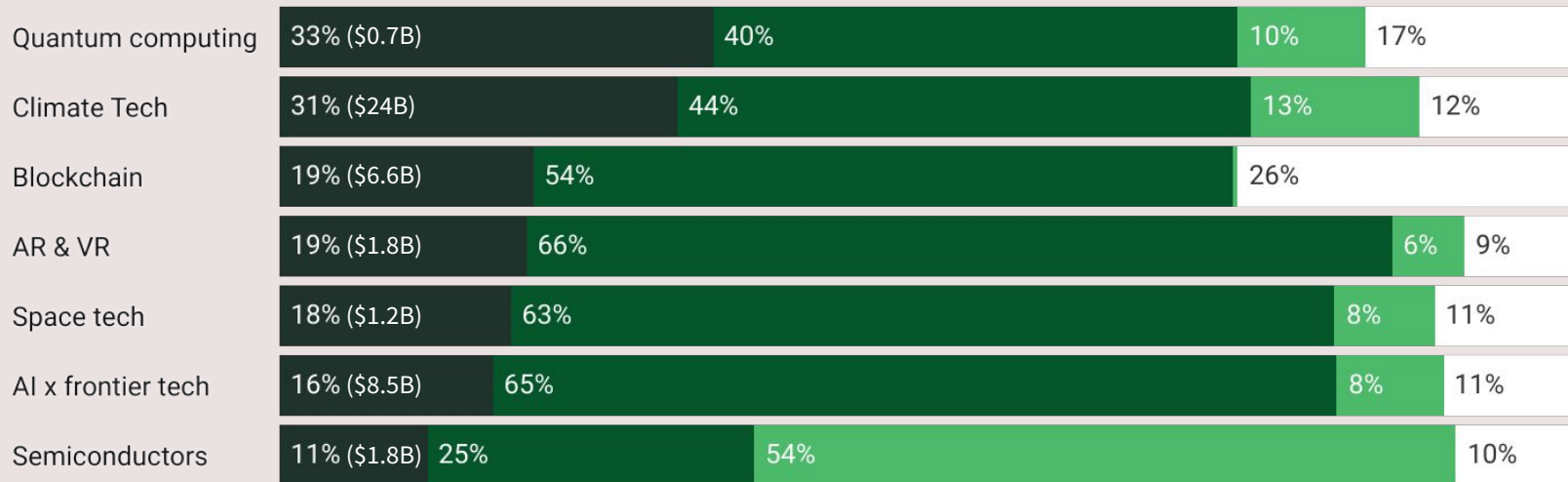
Johan Brenner
General Partner **Creandum**



New sectors have emerged in the last year including Climate Tech and Quantum Computing, where Europe makes up ~1/3 global funding.

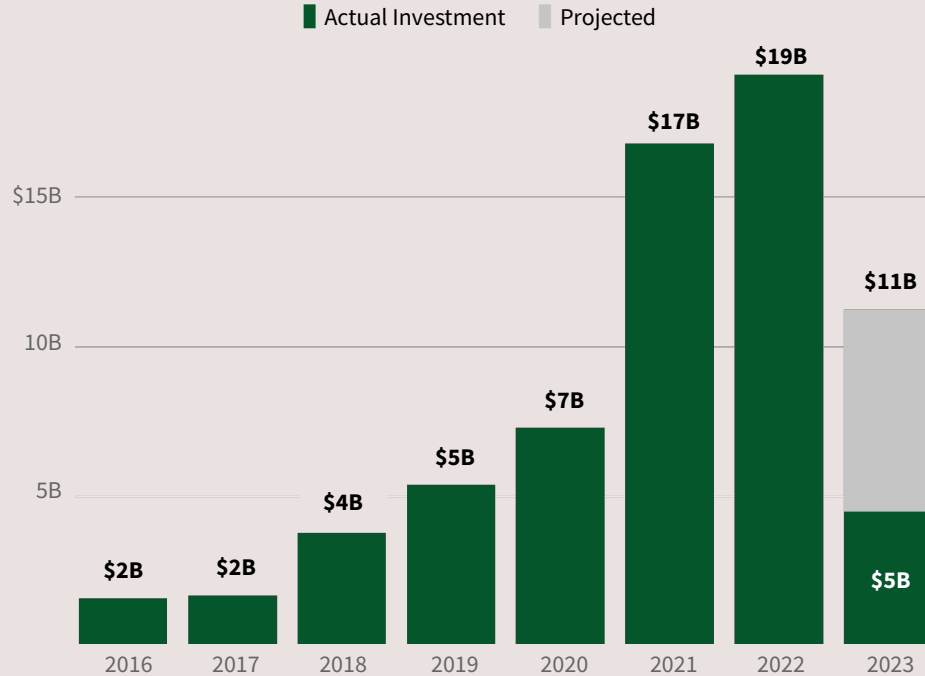
Global share of funding across segments (2022-2023YTD)

■ Europe ■ US ■ China ■ RoW

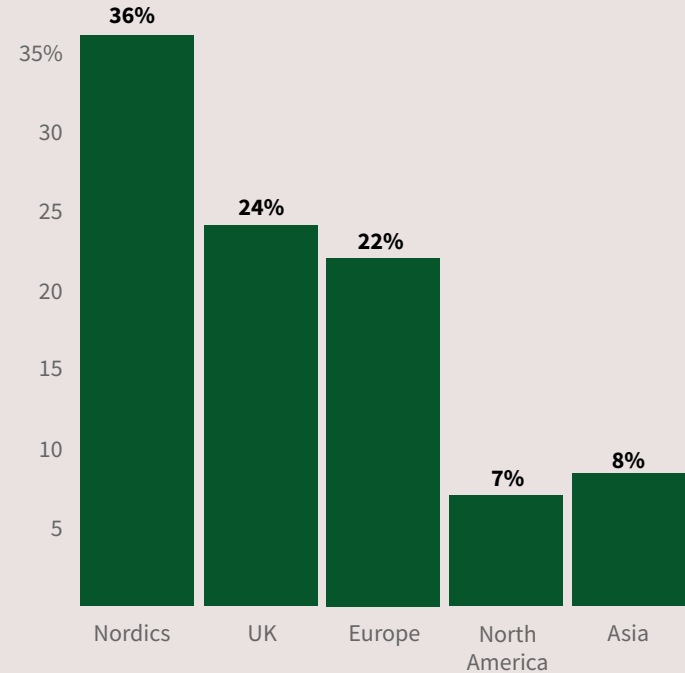


VC funding in Climate Tech continues to grow, with Europe at the centre.

European Climate Tech VC funding

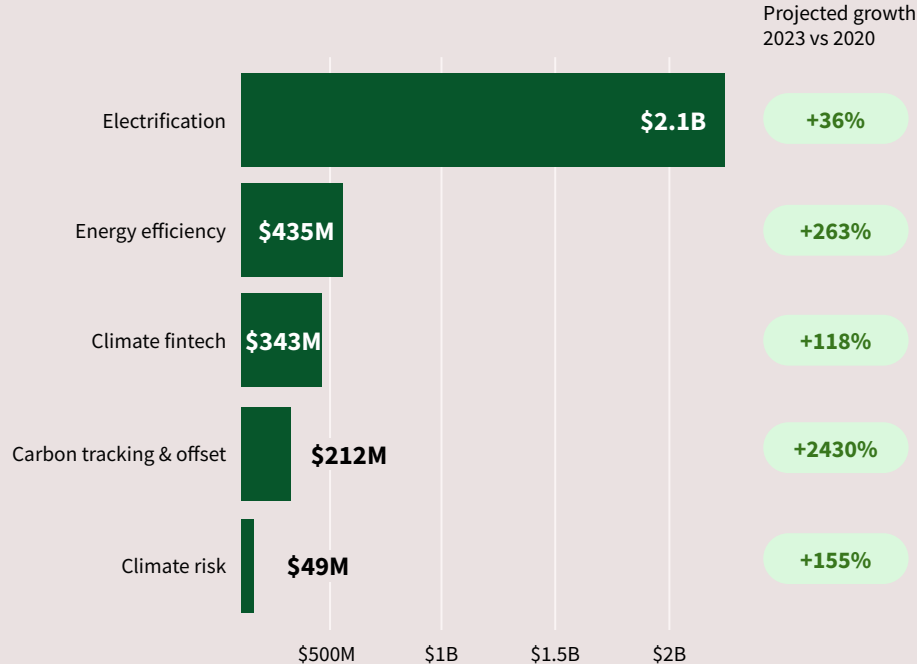


Share of VC funding going to Climate Tech by region (2023YTD)



Electrification accounts for half of Climate Tech investment in Europe.

European VC funding and projected growth in selected climate tech areas (2023YTD)



“*Decarbonising the power sector and making the world more electric is key to addressing the climate crisis.*”

It is encouraging to see the continued growth in investment in climate tech across Europe, and the Nordics being a hub for investment in 2023. At Creandum, the funds have invested in a range of climate solutions - electrification, energy, sustainable supply chains - and this will be a priority for us going forward.

Sabina Wizander
Partner **Creandum**



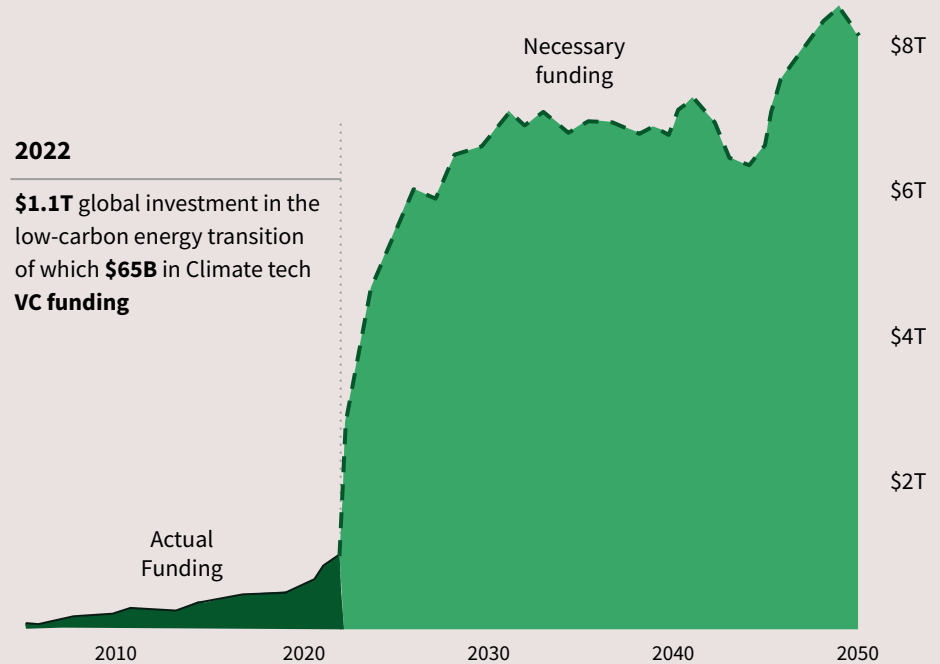
The transition to net zero is an investment opportunity which amounts to 20% GDP.

A massive increase in climate funding is needed from today's **\$1.1T** to over **\$5T** in the coming years.

VC funding in Climate tech stands today at just a fraction of that with **\$65B in 2022**, but can act as a tech and business model enabler for further investment.

This is poised to transform the whole economy. Industries accounting for **20% of global GDP** will be particularly reshaped such as steel, cement, automotive & other transportation, oil & gas and the energy sector, among others**.

Climate funding gap: Real vs needed investment in climate tech*



2022

\$1.1T global investment in the low-carbon energy transition of which **\$65B** in Climate tech VC funding

The mass adoption of AI will accelerate innovation and uncover more clusters.

In the last period, AI has picked up an incredible head of steam, driven by the advancement of generative AI and large language models.






These new developments begin **a new and faster than ever cycle of software innovation**, both by integrating new AI features into existing products and creating new AI-first ones. We see this happening both in new markets and “mature” areas.

The velocity of this new tech cycle shows once again that innovation is unpredictable and speed and openness is required.

<h2>10x</h2> <p>Growth in GenAI VC funding in Europe Projected 2023 vs 2020</p>	<h2>25%</h2> <p>European unicorns in 2023 in Generative AI (DeepL, Synthesia)</p>	<h2>€105M</h2> <p>Largest seed round ever in Europe in GenAI despite broader market downturn (Mistral AI)</p>
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Examples of AI impact across sectors

Enterprise software

Developer tools <i>Significant GenAI uptake</i>  	Process automation <i>Significant GenAI uptake</i>   
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Fintech

AML and KYC   	Financial advice <i>Significant GenAI uptake</i>   
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The next big opportunity is likely to emerge in an unexpected area.

“ When the funds' first invested in Spotify in July 2008, we could hardly have imagined music streaming was a segment capable of such a great outcome.

Spotify has paved the way for European founders to think big and achieve the same kinds of outcomes which previously people thought only realistic in Silicon Valley.

Spotify has been the training ground for many entrepreneurs. With 32 businesses launched by former employees, it is the tech company with the most 2nd generation startups in Europe”

Fredrik Cassel
General Partner at **Creandum**



July 2008 First investment (co-led Series A)	April 2018 Public listing at \$29.5B valuation	97x Return
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The time for Europe is now.



Talent

Higher % of STEM graduates than US, top universities in Computer Science and Engineering.
Half of the world's top science clusters.
More developers than the US.



Experienced startups & VC scene

Flywheel effect now in full effect with startup Mafias such as Spotify and Klarna.
Investors in Europe with up to 20 years of experience.



Funding

Attracting nearly 20% of total funding and nearly 30% of seed stage one, from just around 5% two decades ago.
Amount raised by VCs in Europe has increased 100x in same period.



Sectors

So much untapped potential in fintech, enterprise software and health.
Emerging trends such as Climate Tech opens up new massive markets not penetrated by tech today.
A new and faster than ever cycle of software innovation is being supercharged by AI.

“ When we started Creandum in 2003, we had little idea that the European venture ecosystem would develop as much as it has in the last 20 years. With the data gathered around the diversification of investment and unicorns across Europe, the wave of computer-science talent, the pervading opportunities in well-known sectors as well as exciting new opportunities emerging, we expect Europe to continue to dominate going forward.

Staffan Helgesson
General Partner
at Creandum



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.

What is a startup?

What is a unicorn?

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

What is a Unicorn?

Dealroom taxonomy

Startups in Dealroom have many layers of classification. The key ones are: industry & sub-industry (health, fintech, etc), business models (SaaS, marketplaces, manufacturing), client focus (B2B, B2C), and technologies (Deep tech, blockchain, etc), tags (climate tech, quantum computing, etc).

For more info please see our [Dictionary & Taxonomy](#).

Dealroom defines climate tech as a broad set of sectors that tackle the challenge of decarbonizing the global economy. This is implemented as a tag across many sectors. Frontier Tech is in this report defined as the union of Deep Tech, blockchain, VR/AR and Climate Tech.

Geographic methodology

Startups are assigned to the location of their current HQ.

In case a startup moves its HQ location the change is applied in Dealroom, while the first HQ is regarded as founding location.

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. For more info please visit dealroom.co or contact support@dealroom.co.

Venture capital and funding rounds

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.



CREANDUM