

European Deep Tech – Opportunities and Discoveries

An investment perspective

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A | Deep Tech innovations offer solutions to profound societal challenges

What is Deep Tech and why should you be interested in it?

Deep Tech represents novel scientific/engineering breakthroughs ...

... or advanced technology used to address novel customer needs

These innovations offer solutions to profound societal challenges



Advancement of AI



Quantum advances and decreased cost of compute



Next-generation sequencing breakthroughs



Freedom and security



Social and economic challenges



Climate crisis and energy supply

Key characteristics

A

Tailwind:

Strong purpose, often tackling humanity's major problems (e.g., climate change)

B

Internationalization:

Often global scope necessary for globally distributed niche markets

C

R&D intensity/risks:

Different venture life cycles, including higher R&D intensity in early phases and higher technical risks compared to traditional ventures

D

Founding team:

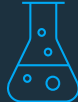
Often include technical profiles with roots in academia or corporate R&D, and ideally combining tech and business talent

E

Funding:

Often higher up-front investment requirements from large, often specialized investors

Deep Tech can be classified into 8 investment themes – all with recent technological breakthroughs

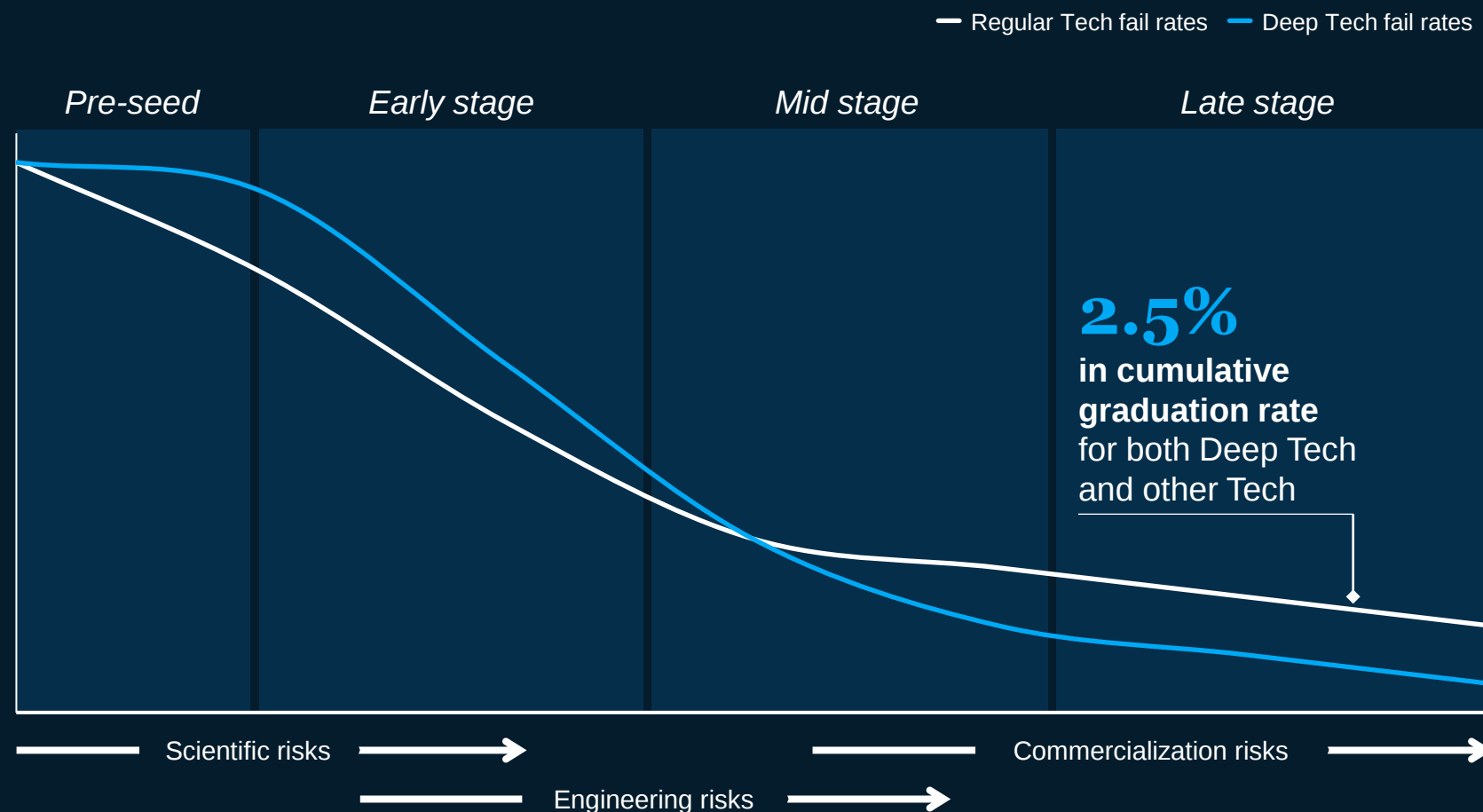
							
Novel AI	Future of compute	Novel energy	Space tech	Robotics	Biotech, Foodtech, and Agtech	Defense tech	Advanced materials and nano-technology
Autonomous systems, explainable AI, privacy-enhancing tech, semantic AI	Superconductors, quantum technologies, ambient computing, brain-computer interface, AR/VR	Green hydrogen, nuclear fusion, geothermal, next-gen solar, waste heat recovery	Launch, earth observation, in-space manufacturing, nanosatellites, space mining	Humanoid robots, nanorobotics	Synthetic biology, lab-grown food, AI-enabled drug discovery, fertilizers	Cybersecurity, drones	Green concrete, graphene, nanomaterial
Estimated share of European VC investment in emerging Deep Tech in 2023, %							
20-30%	15-20%	15-20%	10-20%	10-20%	5-10%	n/a Overlaps with other themes	1-5%

B | 4 misconceptions about Deep Tech

1

Deep Tech
start-ups
have **higher
risks** than
traditional
tech start-ups

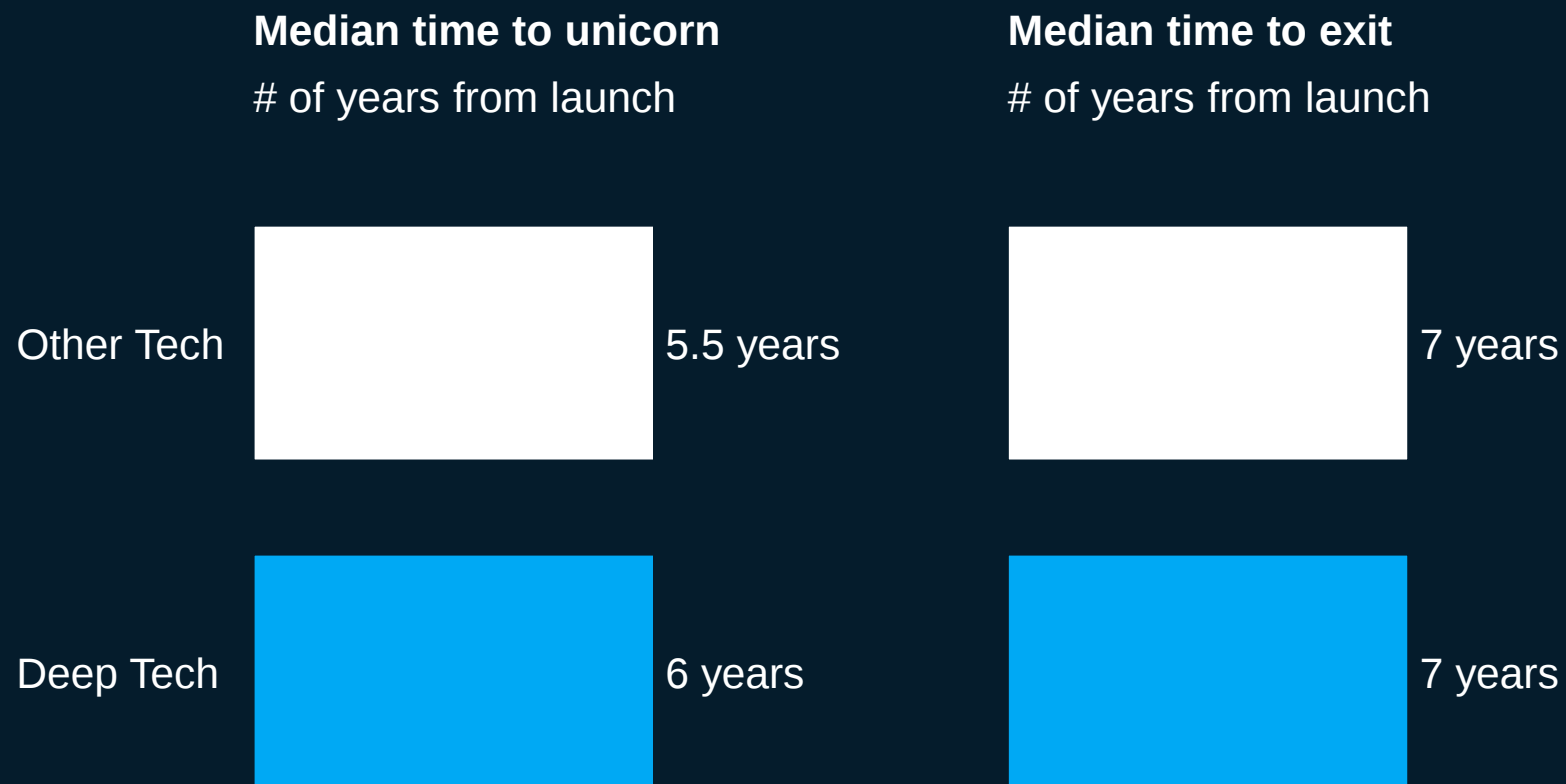
Deep Tech is **gradually de-risked over time**
resulting in similar failure and graduation
rate as other tech startups



2

Deep Tech
life cycles are
slower and
have longer
exit timelines

Start-ups' time to unicorn and time to exit is **on par** with other tech



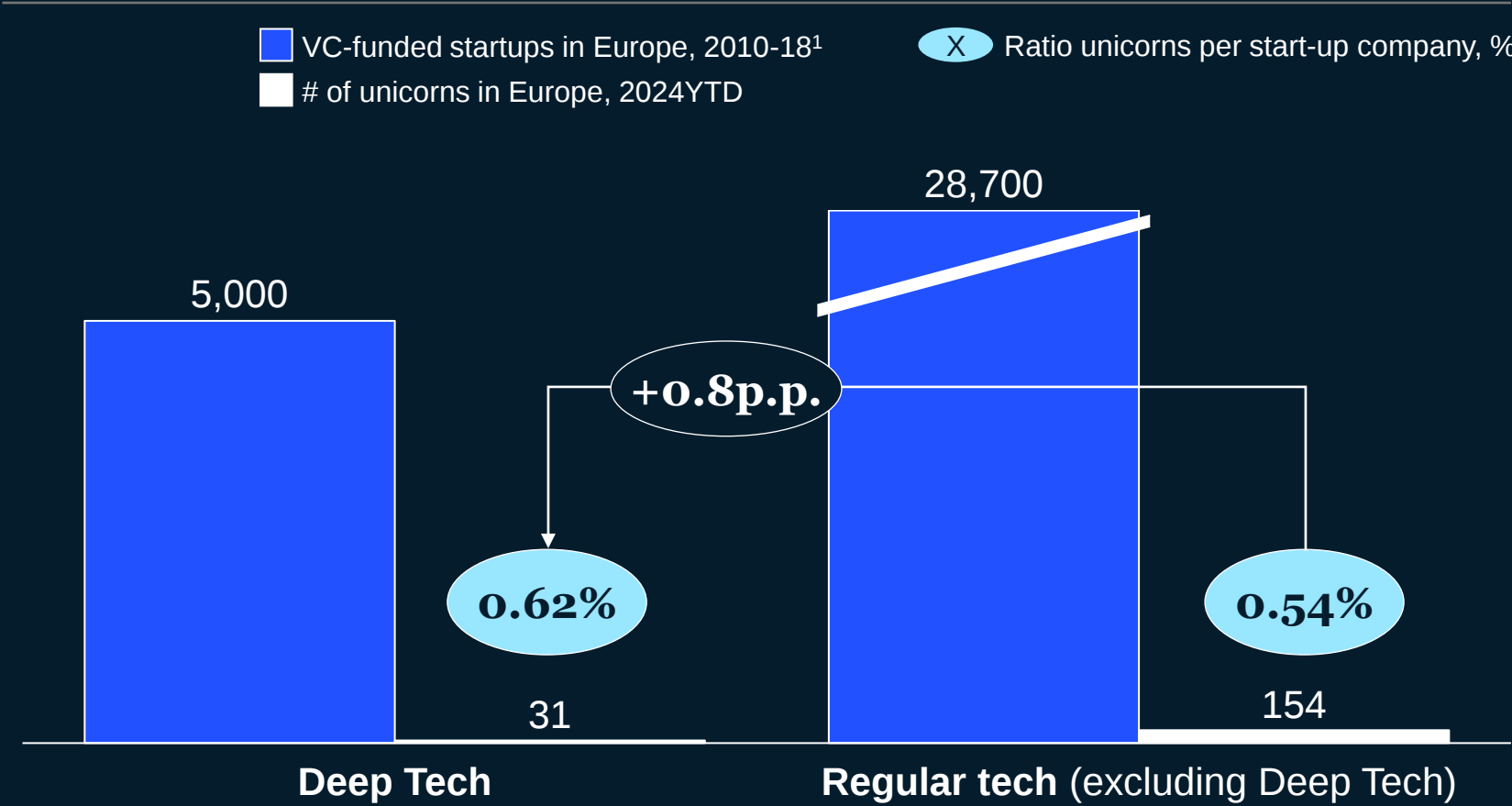
3

Deep Tech start-ups cannot scale to the same degree as other tech start-ups

Source: Dealroom.co, Sifted, "The European Deep Tech Report 2023" by Lakestar, Walden Catalyst, and Dealroom.co, press search

Deep Tech start-ups more likely to scale to unicorn

European VC-funded ventures and unicorns, #

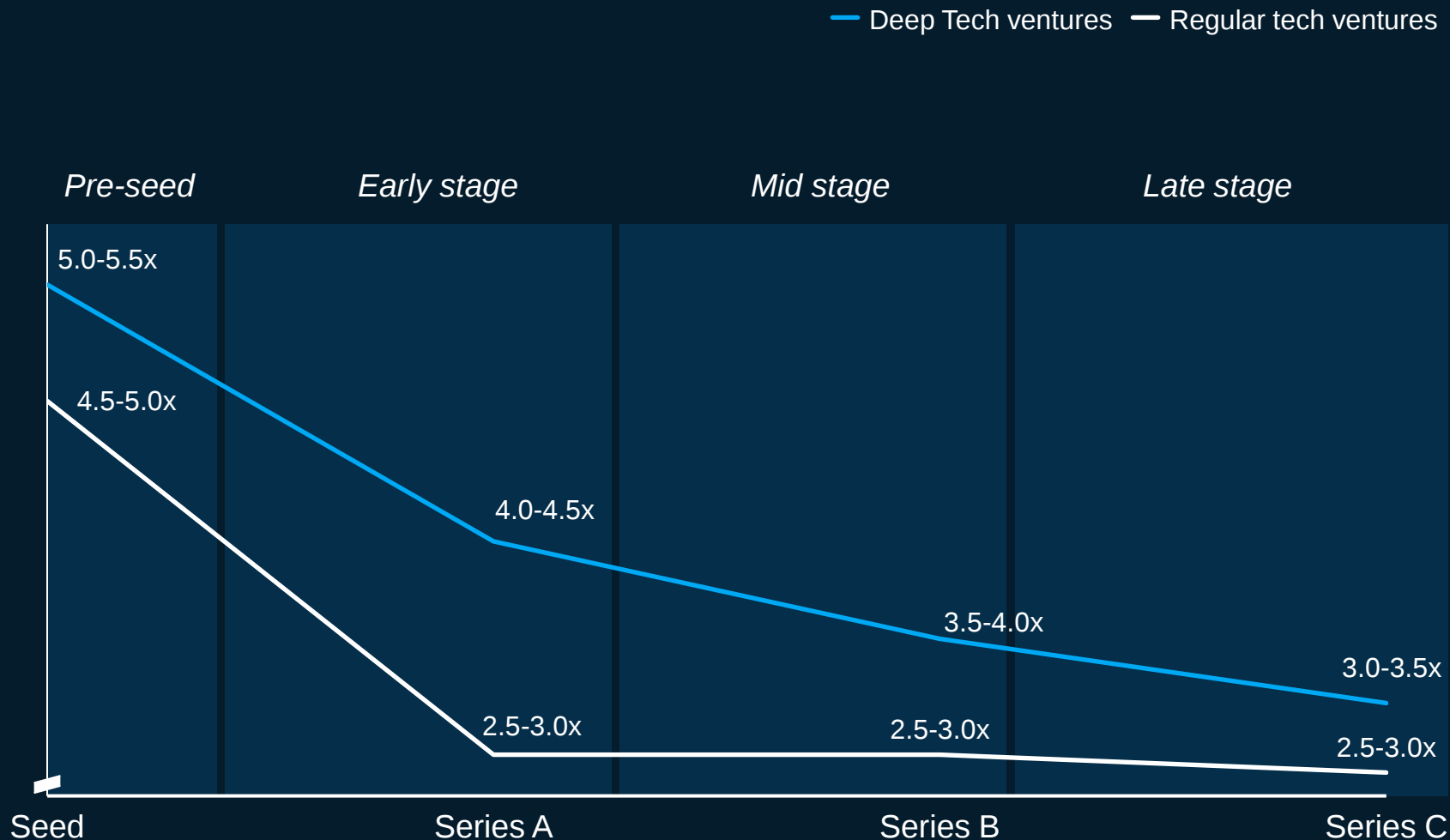


1. Founded in 2010 or later

4

**Deep Tech
start-ups
have lower
capital
efficiency
than other
tech start-ups**

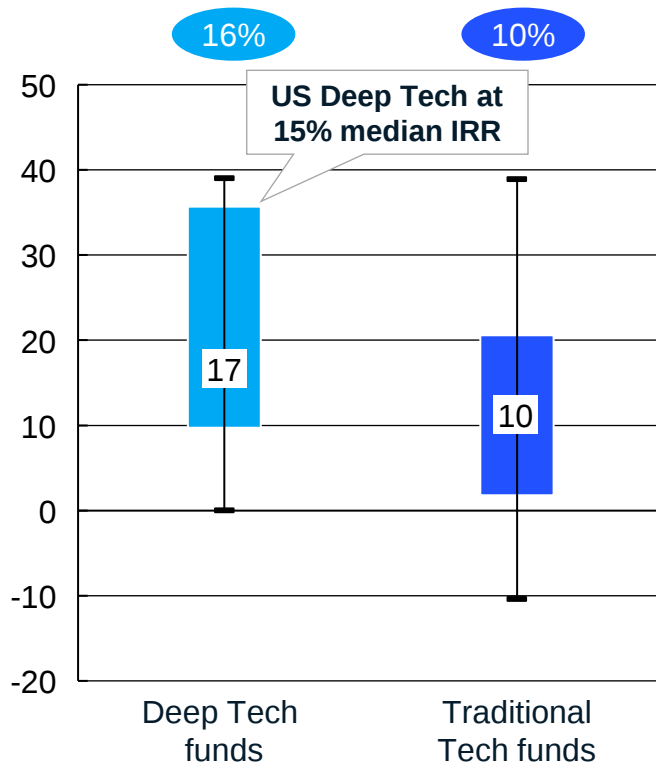
Deep Tech has greater capital efficiency



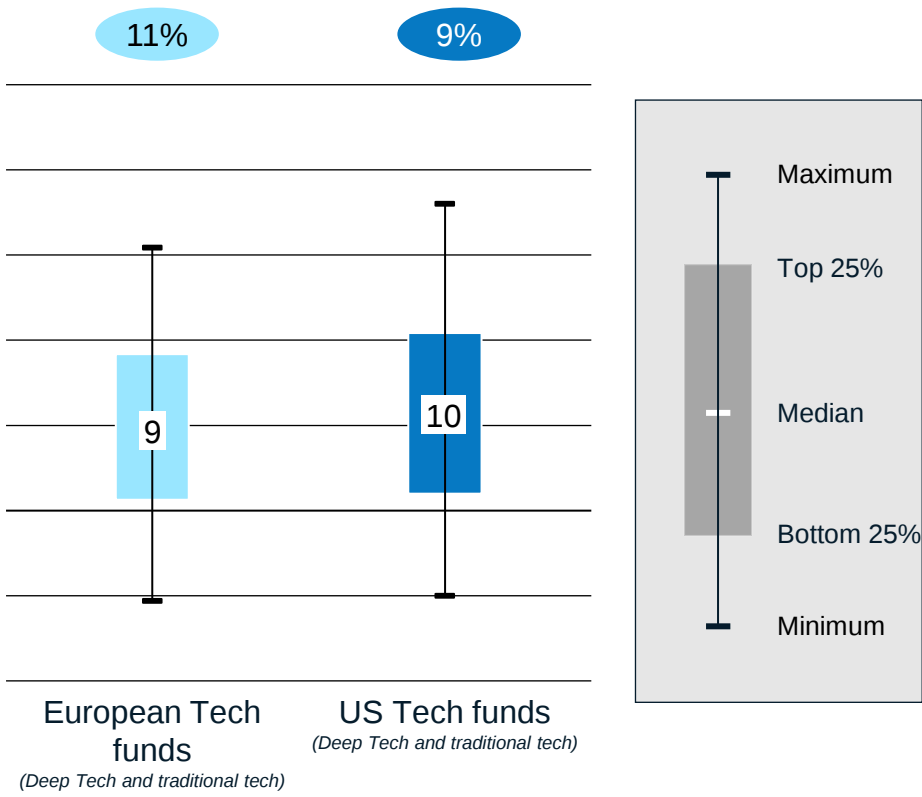
**C | First numbers suggest that
European Deep Tech will likely
generate outsize returns**

VC funds investing in Deep Tech deliver an average net IRR above traditional tech funds

Net IRR for traditional and Deep Tech-focused funds¹, %



Net IRR for European and US technology funds¹, %



% Average net IRR, weighted²

Clear trend with Deep Tech-focused funds having outperformed traditional tech funds since 2003 (16% weighted net IRR vs. 10%)

While Europe has not seen many Deep Tech-focused funds closing and reporting IRR, the expected performance should be in line with US-based benchmarks historically, driven by A) similarly attractive regional characteristics for Deep Tech, and B) similar net IRR performance for the broader tech funds

1. Based on 115 Deep Tech-focused funds and 1,572 traditional funds in Europe and North America, with vintage/inception year between 2003 and 2020
2. Calculated by weighting each fund's Net IRR with its final fund closing size, i.e., large funds have more impact on the weighted IRR than small funds

D | European Deep Tech is at an inflection point

European Deep Tech is increasingly gaining relevance, both regionally and globally

Deep Tech has shown remarkable resilience in the overall VC tech downturn during the last 24 months

+9%

European Deep Tech
share of global Deep
Tech funding

+18%

European Deep Tech
share of European
Tech funding

-3%

Europe Deep Tech VC
funding

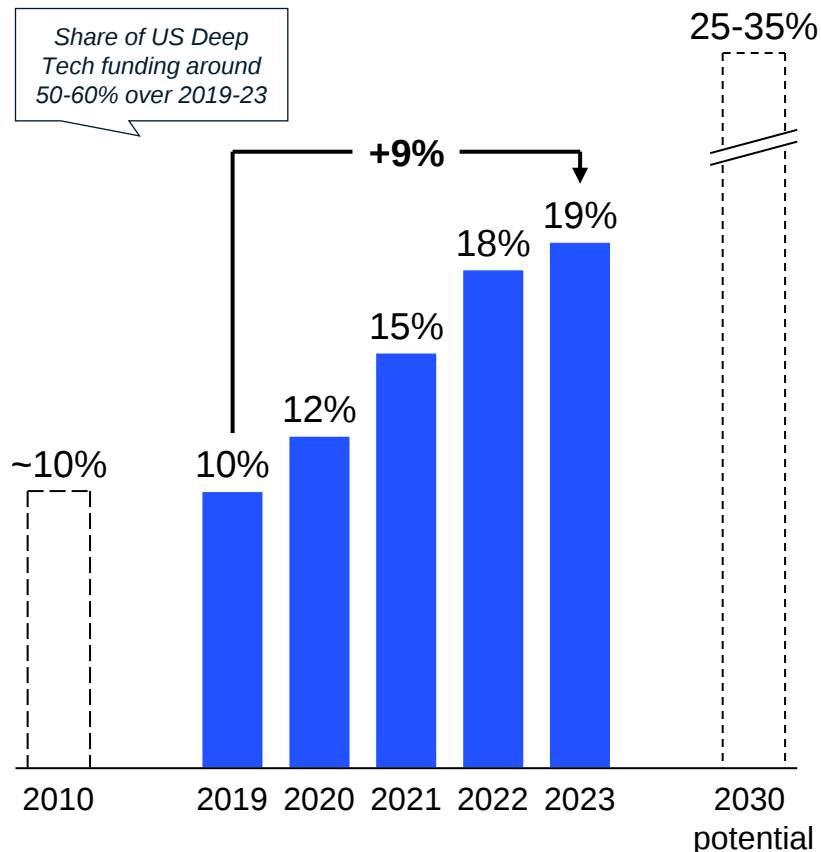
-45%

US Deep Tech VC
funding

Europe is increasingly gaining global relevance in Deep Tech

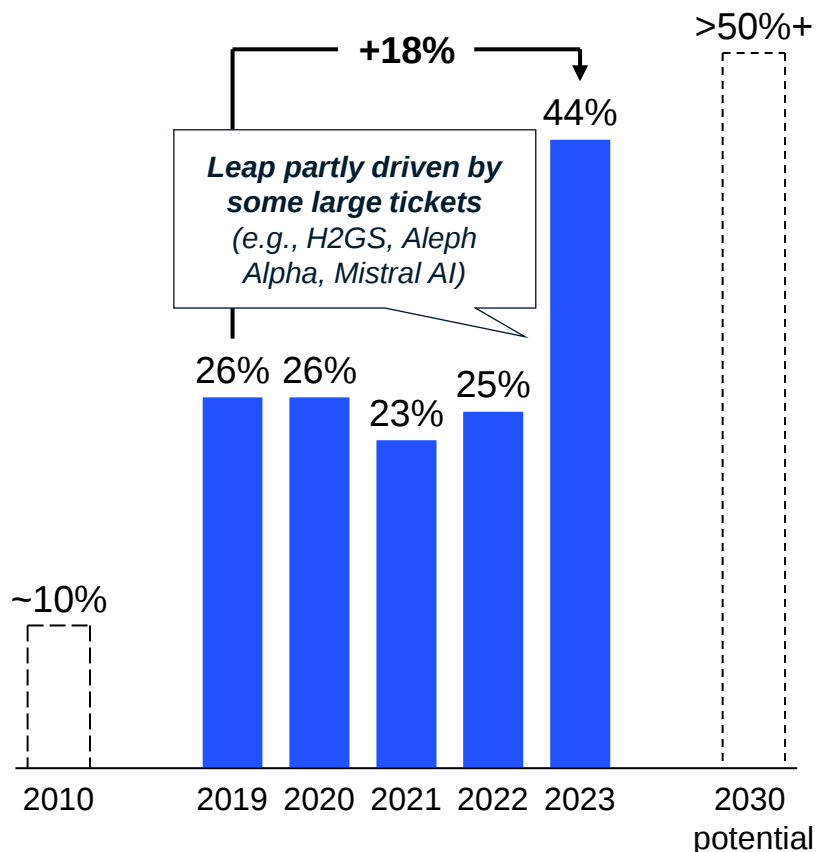
Global perspective

European share of global Deep Tech funding, %



Regional perspective

European share of European tech funding, %



European Deep Tech is increasingly gaining relevance, both globally and regionally

Globally: European share of global Deep Tech funding has grown from ~10% in 2019 to 19% in 2023, and is set to increase further

Regionally: Deep Tech funding is becoming a larger part of overall European VC tech funding, having grown from ~10% of regular tech funding in 2010 to 44% in 2023

E | European investors have a significant opportunity they could further capitalize on

European investors are falling short in scaling and exiting European Deep Tech ...

~40%

Of growth capital (Series C+) is from non-European investors

~60%

Of top acquirers are non-European corporates

~0.2X

Growth investments per capita

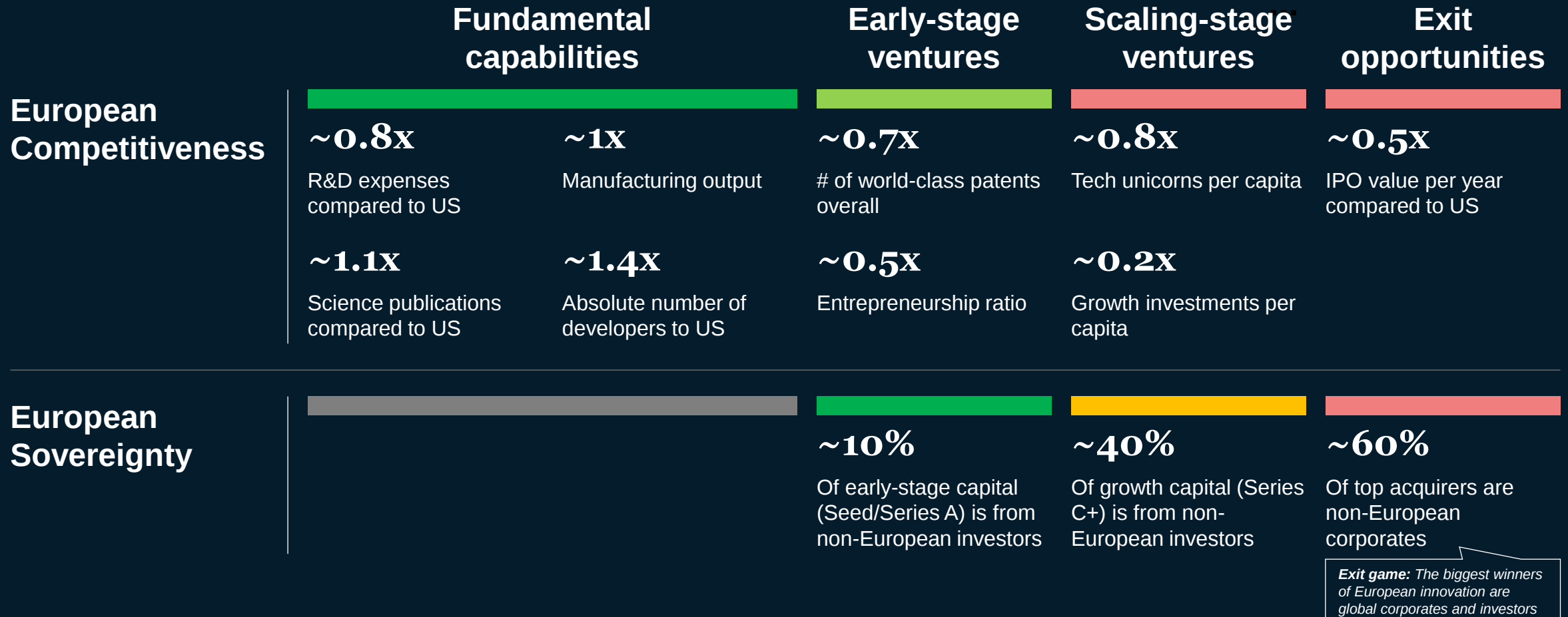
~0.5X

IPO value per year compared to US

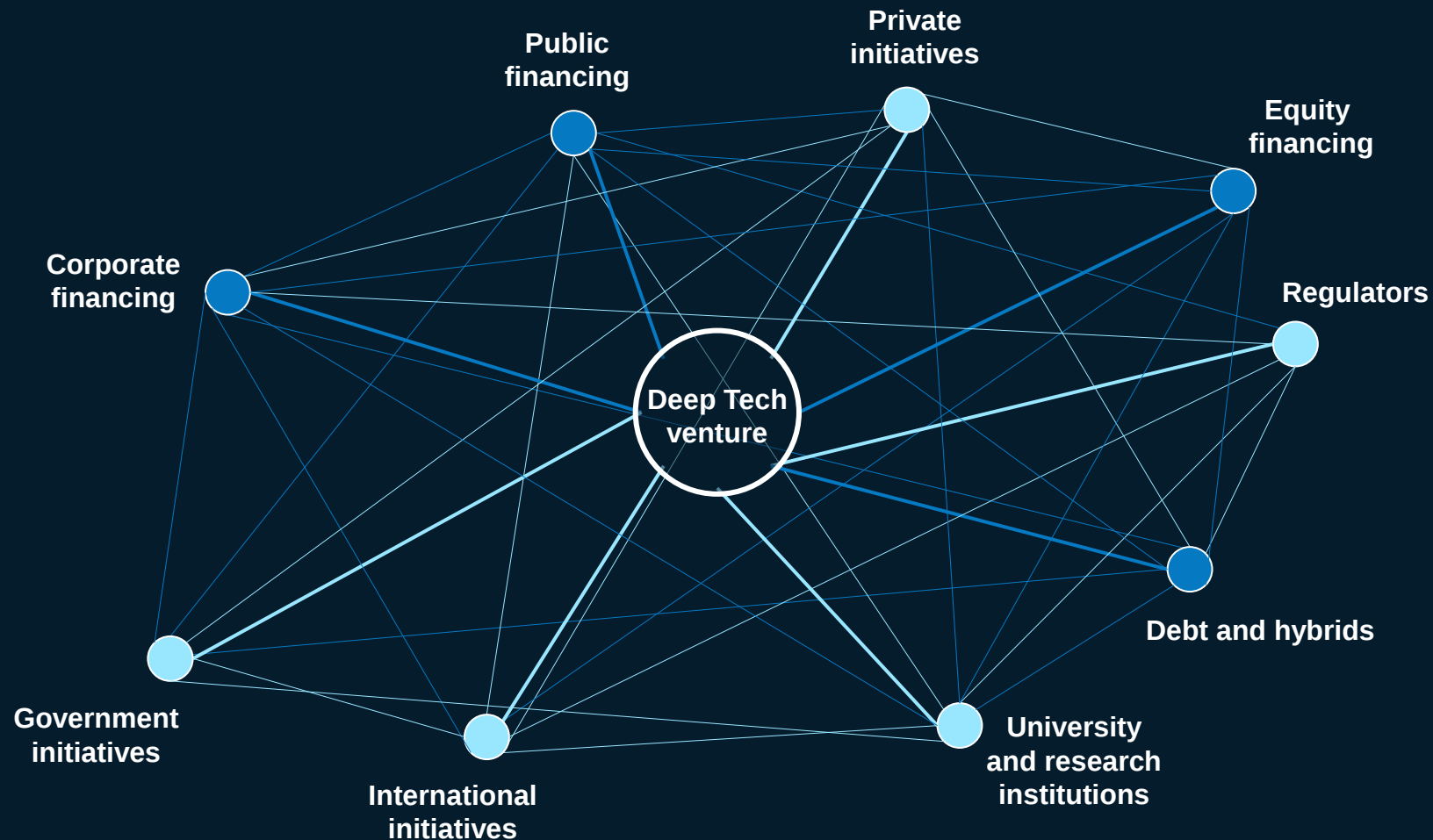
... despite excellent regional fundamental capabilities

Figures refer to the delta vs. US

Commercialization phase: By investing in early-stage ventures that have promising technologies but lack the resources to commercialize them, VCs can help bridge the funding gap and bring innovations to the market



European Deel Tech need a collective effort from all actors in the ecosystem



Note: Some stakeholders can be both enablers and funders (e.g., research institutions, government)

Meet the authors and get in touch.



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