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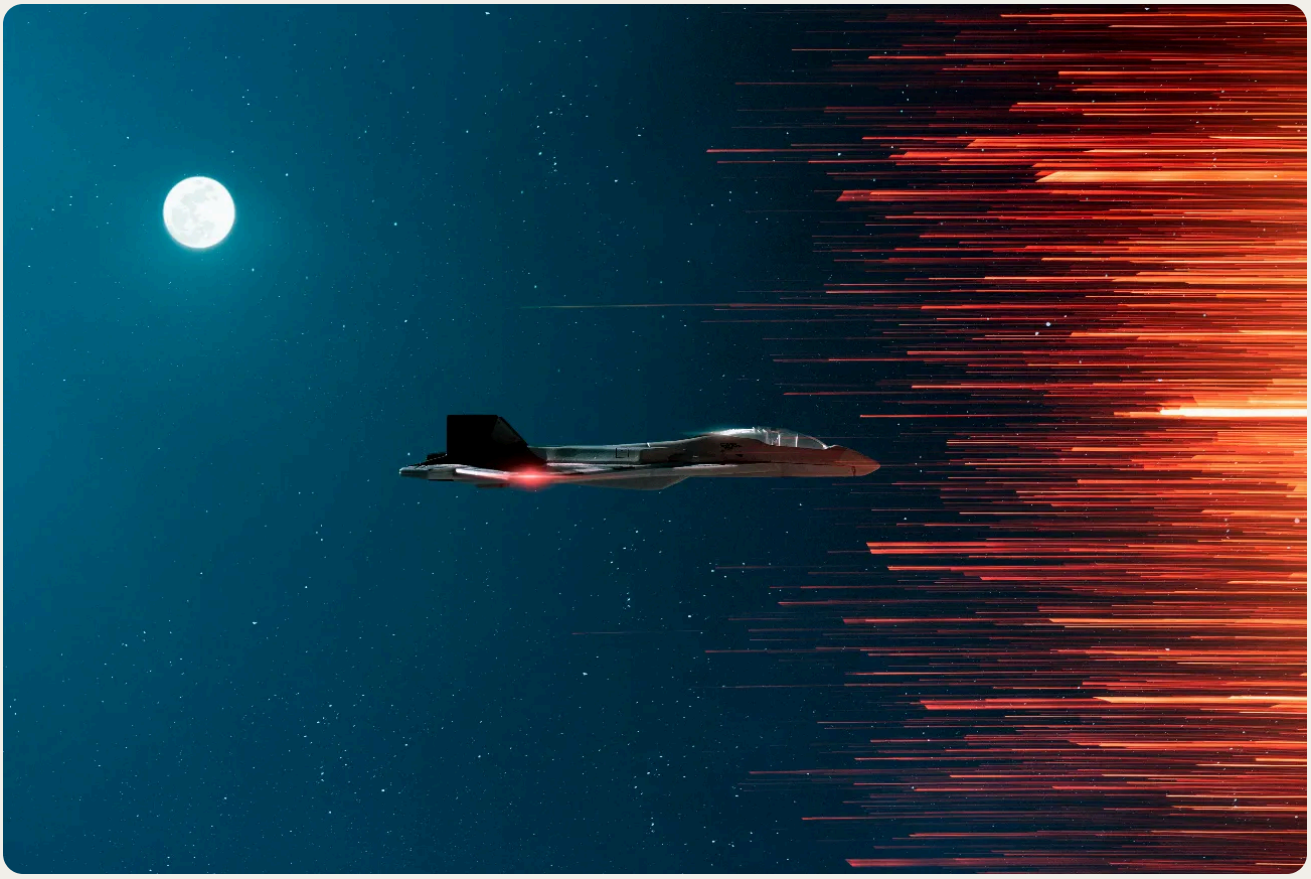

Beyond Innovation: The Business of Scaling Deep Tech

Industry Report: Size, Dynamics, Segmentation, and Outlook

July 2026

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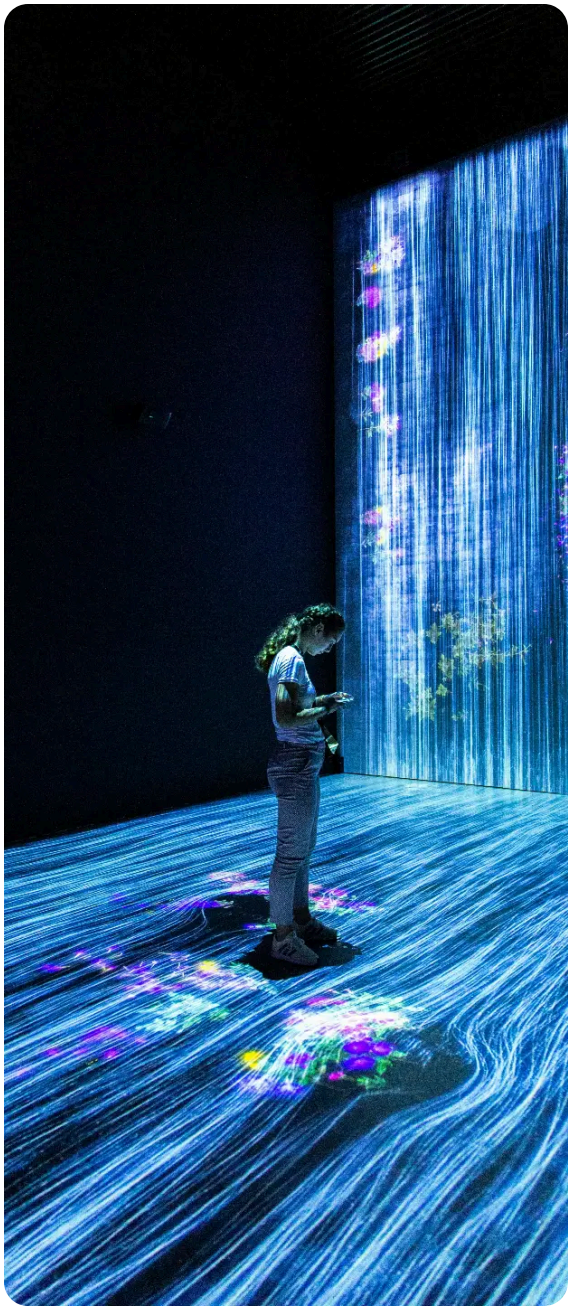
CONTENTS

Table of Contents

01 — EXECUTIVE SUMMARY

Executive Summary

Deep Tech — artificial intelligence, biotechnology, advanced materials, clean energy, and quantum computing — sits at the center of global capital allocation, but the market resists a single clean definition or size. Depending on methodology, credible research houses value the Deep Tech product market anywhere from roughly $2.3 billion to $13.9 billion by the early 2030s, while government trackers measuring total annual capital invested into Deep Tech startups put the figure at roughly $75 billion in a single year (2023).



What is not in dispute is the direction: global R&D spending reached an estimated $3.8 trillion in 2024, and clean-energy technologies now draw nearly twice the capital of fossil fuels within a $3.4 trillion global energy-investment total. This report synthesizes official multilateral data, a regional development-bank benchmark for Latin America and the Caribbean, founder-level research spanning 13,600 global Deep Tech startups, and three independent commercial market studies to answer four questions: how big is this market and how is it defined; what is driving and restraining its growth; how is capital, technology, and talent distributed across regions and sub-sectors; and where is it heading.

Nine findings anchor the analysis that follows:

1. **Commercialization, not discovery, is the market's binding constraint.** Building a Deep Tech prototype typically costs $200,000 to $1 million and takes about two years; reaching a $1 billion valuation takes Deep Tech unicorns an average of $115 million in capital and 5.2 years, and more than 90% of ventures fail somewhere in this funding-driven "valley of death."

2. **Capital compounds at a predictable, if slow, pace.** European Deep Tech venture investment grew roughly 18-fold in the decade to 2022; a comparably early-stage ecosystem in Latin America and the Caribbean is tracking a trajectory that could deliver 20-fold growth over the decade to 2032.
3. **Regional leadership is bifurcated:** Europe leads on startup count (45% of the global total) but trails sharply on capital captured per company, while North America captures the majority of global funding from a smaller company base.
4. **A single financing stage** — the Series A-to-B conversion — explains most of the regional performance gap observed across this report, more than aggregate funding levels or seed-stage activity.
5. **Technology sub-segments behave very differently:** AI-related ventures dominate by volume, quantum computing is the smallest but most capital-intensive vertical, and Europe's one clear category lead sits in Novel Energy & Energy Storage.
6. **Government policy is now a first-order driver** of market formation, not a peripheral subsidy — sovereign co-investment programs, national R&D strategies, and bilateral technology alliances span every region covered in this report.
7. **AI's economic contribution should be planned as a range**, not a point estimate: credible sources place its cumulative GDP impact anywhere from 1.5% (conservative) to 7% (optimistic) over a decade.
8. **Asia-Pacific is the fastest-growing region** by most measures, with China's entry into the top 10 of a leading global innovation ranking in 2025 — a first — and India's Deep Tech investment base expanding under a deliberate government strategy.
9. **The macroeconomic backdrop** — global growth near 3.1–3.2% and public debt near 95% of GDP — raises the strategic value of technologies that durably lower the cost of energy, food, transportation, and services, reinforcing rather than undermining the underlying investment case.

Study Scope

2.1 Study Objectives

This report is designed to give executives, investors, policymakers, and researchers a single, sourced reference point for the structure, drivers, and trajectory of the global Deep Tech market. Its objectives are to: (i) define what "Deep Tech" covers and reconcile why credible sources size the market so differently; (ii) identify the structural drivers, restraints, opportunities, and challenges shaping capital and talent flows into the sector; (iii) map current investment patterns, including the policy and regulatory environment that increasingly shapes them; (iv) segment the market by technology, application, end-user, and region; and (v) set out an evidence-based outlook, distinguishing what is well-supported from what remains genuinely uncertain.

2.2 Market Definition and Scope

There is no single, universally accepted definition of "Deep Tech." For the purposes of this report, Deep Tech refers to ventures and technologies grounded in substantive scientific or engineering breakthroughs — as opposed to primarily business-model or software-interface innovation — that typically require multi-year R&D, specialized technical talent, and significant capital before commercialization. One widely used government-published framework distinguishes four "levels" of value addition: tech substitute (incremental upgrades), system upgradation, system transformation, and system-of-systems transformation (a complete overhaul of an existing system) — a useful lens for judging how disruptive a given Deep Tech innovation is likely to be, used selectively throughout Section 5.

This report's scope covers five technology domains (artificial intelligence and novel computing, biotechnology and medtech, advanced materials and semiconductors, energy and clean-tech, and quantum technology, among adjacent categories such as space and robotics), five application domains, five end-user categories, and five geographic regions, drawing on data spanning approximately 2012 through mid-2026 with forward-looking estimates to the early-to-mid 2030s. As Section 3.5 details, market-size estimates cited across sources in this report are not directly comparable to one another without accounting for what each one measures — a limitation this report treats as a finding in its own right rather than a footnote.

Market Dynamics

3.1 Market Overview

Global R&D expenditure reached an estimated $3.8 trillion in 2024, and global energy investment — a substantial share of which is now Deep Tech-driven — is on track to reach $3.4 trillion in 2026, with clean-energy technologies drawing nearly twice the capital of fossil fuels for the first time. Independent commercial research corroborates the direction, if not the exact scale, of this growth: one widely cited estimate sizes the Deep Tech product market at $2.29 billion in 2025 growing to $5.31 billion by 2030 (an 18.3% CAGR), while a separate estimate places it at $2.74 billion in 2025 rising to $13.85 billion by 2034 (19.7% CAGR).

3.1.1 Market Drivers

Converging global R&D investment. China's R&D expenditure has risen from 44% of the US level in 2014 to roughly 50% in 2024 in nominal terms, and to 96% on a purchasing-power-parity basis.

Clean-energy economics crossing a tipping point. Clean energy and electrification technologies are expected to draw $2.2 trillion of the $3.4 trillion in global energy investment in 2026, reversing a relationship that held fossil fuels ahead of the electricity sector by 30% just a decade ago.

AI infrastructure buildout. Novel AI is the largest Deep Tech vertical by startup count and cumulative funding globally, pulling adjacent investment into compute, semiconductors, and data infrastructure.

Sovereign and government co-investment. National strategies — from the United States' Stargate program to the EU's AI-and-quantum funding calls, Canada's new BOREALIS agency, and India's Atal Innovation Mission — are increasingly treated by private investors as a signal of durable, non-cyclical demand.

Founder and team-formation patterns. Founder-level research finds that startups built around co-founders with shared technical competency raise more capital and exit more successfully than those anchored around a single deeply technical founder.

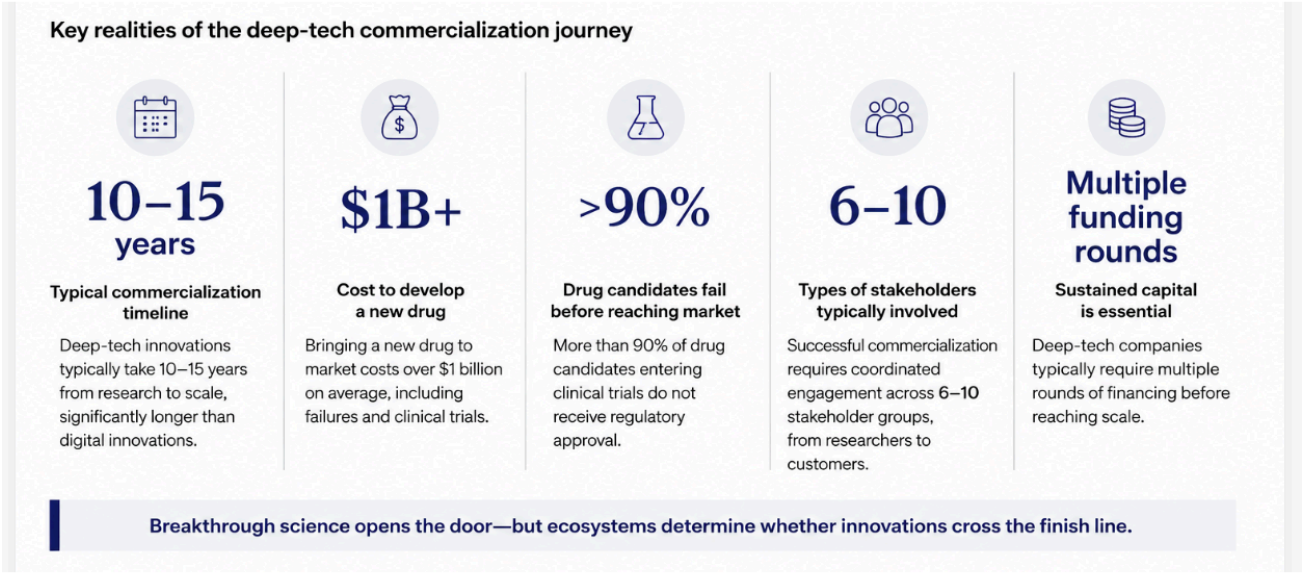


Exhibit 1. The gap between scientific discovery and large-scale impact remains one of the greatest challenges in Deep Tech.

3.1.2 Market Restraints

Deep Tech ventures typically require 7 to 15 years of R&D before commercialization, and more than 90% fail somewhere in this funding-driven "valley of death" — a pattern distinct from, and generally longer and more capital-intensive than, typical software venture timelines.

Growth-stage capital scarcity. In Europe specifically, only about 10% of companies that raise a Series A go on to raise a Series B, versus roughly 24% in North America — a gap driven by thinner investor syndicates at scale, not insufficient round sizes.

Winner-takes-most capital concentration. Across the global founder-level dataset underpinning this report, the median Deep Tech startup has raised a small fraction of what the mean startup has raised, confirming that a small number of companies capture the large majority of available capital.

3.1.3 Market Opportunities

Early-stage regional ecosystems with room to compound. Latin America and the Caribbean's Deep Tech venture funding grew from roughly $96 million (2020) to $172 million (2022), a trajectory regional analysts project could compound roughly 20-fold by 2032.

Under-served essential-needs markets. Energy, food, and transportation each represent addressable markets of roughly $12–13 trillion annually, with Deep Tech innovation positioned to cut costs by 5 to 15 times in each over the coming decade.

Category-specific comparative advantage. Europe's out-funding of North America in Novel Energy & Energy Storage illustrates the opportunity in doubling down on genuine comparative strength rather than competing everywhere at once.

3.1.4 Market Challenges

A strained macroeconomic backdrop. Global public debt stood at approximately 94.7% of GDP in 2025 and global growth is projected at just 3.1–3.2% for 2025–2026, constraining the fiscal room available for direct R&D subsidy.

University-to-startup technology transfer bottlenecks. Europe generates a smaller share of global Deep Tech patents than its share of global startups, a gap linked to slower and more bureaucratic IP-licensing processes relative to the United States.

Definitional and measurement inconsistency. The absence of a standardized definition of "Deep Tech" makes cross-source benchmarking — and therefore consistent policy target-setting — genuinely difficult.

3.2 Market Trends

Ecosystems — not isolated breakthroughs — are the primary unit of value creation. The mRNA vaccine's rapid deployment illustrates the pattern at its most visible: research institutions, financiers, regulators, manufacturers, and health systems each played a necessary but individually insufficient role, and no single participant could have delivered the outcome alone.

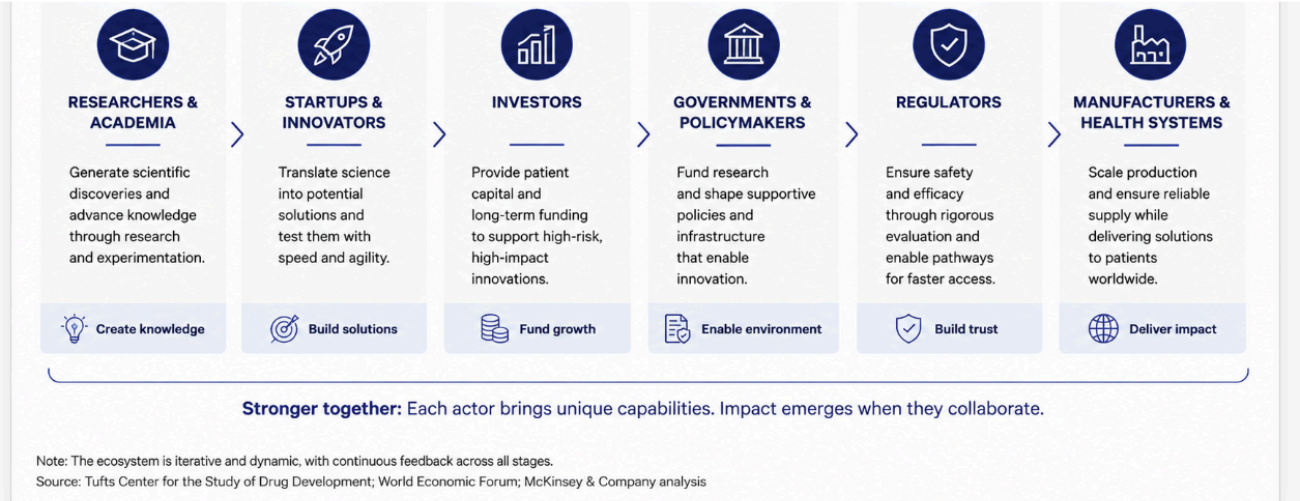


Exhibit 2. A connected ecosystem enables breakthrough science to become real-world impact.

Capital and talent are concentrating in a small number of global hubs rather than diffusing evenly across countries. Sub-industries are not interchangeable: AI-related ventures dominate by startup count, quantum computing remains small but the most capital-intensive vertical globally, and medtech/biotechnology combines high startup volume with comparatively thin average funding. Founder team composition has emerged as a statistically measurable success factor: global regression analysis covering 5,000 funding-validated startups and 11,500 matched founders finds that shared technical competency across co-founders is the strongest predictor of both capital raised and successful exits — with formal management education alone, absent hands-on operating experience, actually a negative predictor of fundraising success.

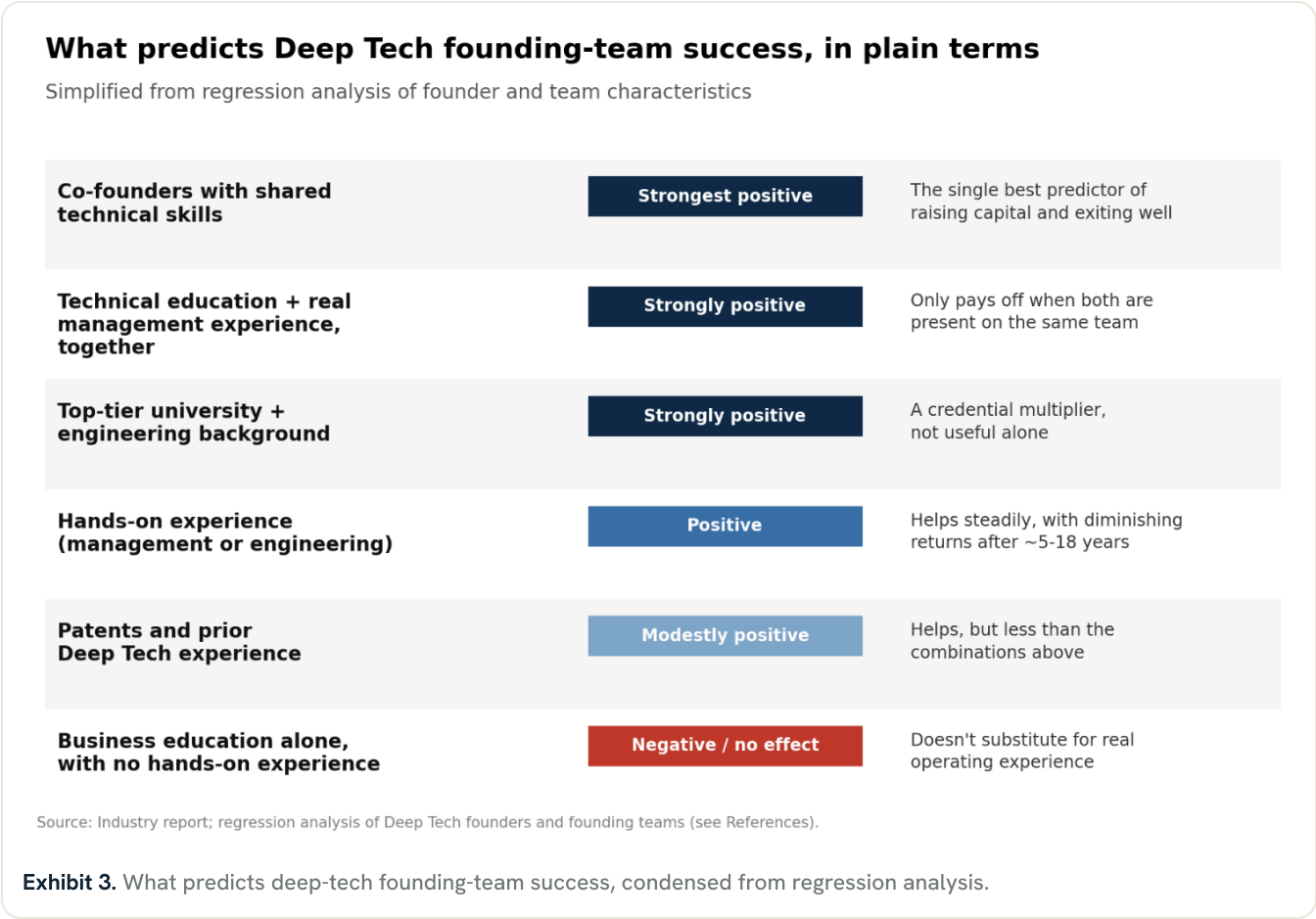


Exhibit 3. What predicts deep-tech founding-team success, condensed from regression analysis.

3.5 Investment Landscape

Different reputable research sources size the "Deep Tech market" differently by more than an order of magnitude — not because any of them are wrong, but because they measure different things. Two independent commercial estimates each size a comparatively narrow product-and-software market, while a government-published landscape study reports that global investment into Deep Tech startups reached roughly $75 billion across some 3,425 deals in calendar 2023 alone. On that

investment-flow basis, the United States, China, and France together absorbed roughly $40 billion of the 2023 total, with the US alone drawing about $45 billion across 1,385 deals and Europe a further $15 billion across 970 deals; India drew roughly $1 billion across 175 deals.

Three credible sources, three very different “market size” numbers

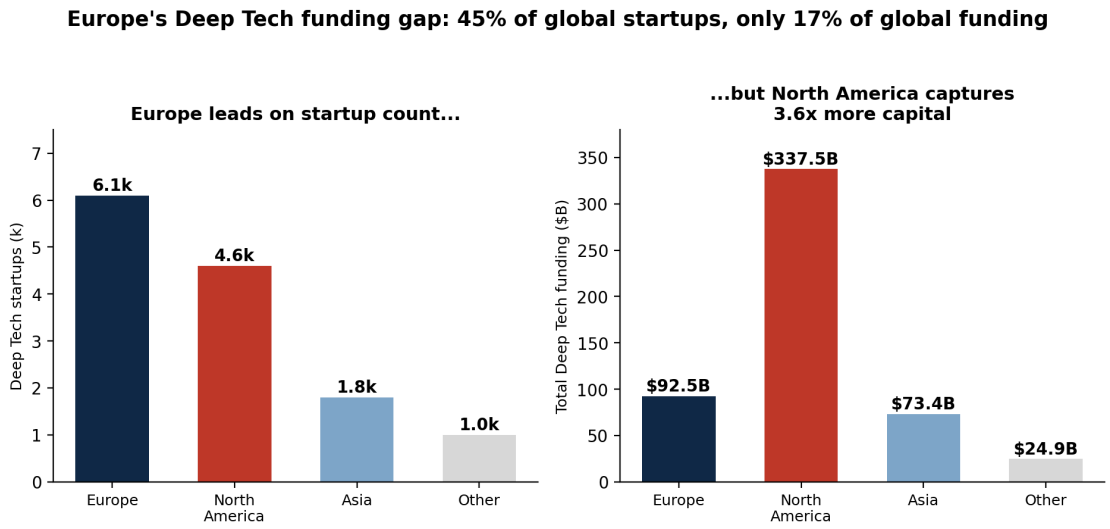
The gap is definitional, not a disagreement about the underlying trend

Source	Estimate	CAGR	What it actually measures
Industry Report A	2.29*B*(2025)→5.31B (2030)	18.3%	Narrow product/software market, VC-fundable firms
Industry Report B	2.74*B*(2025)→13.85B (2034)	19.7%	Similar narrow product-market definition, longer horizon
Government Report	~$75B in 2023 alone (annual investment flows)	n/a	All capital deployed into Deep Tech startups globally, not a product-market estimate

Source: Industry Report A; Industry Report B; Government Report (see References).

Exhibit 4. Deep Tech "market size" estimates vary by more than 10x depending on whether the metric captures product-market revenue or total capital invested.

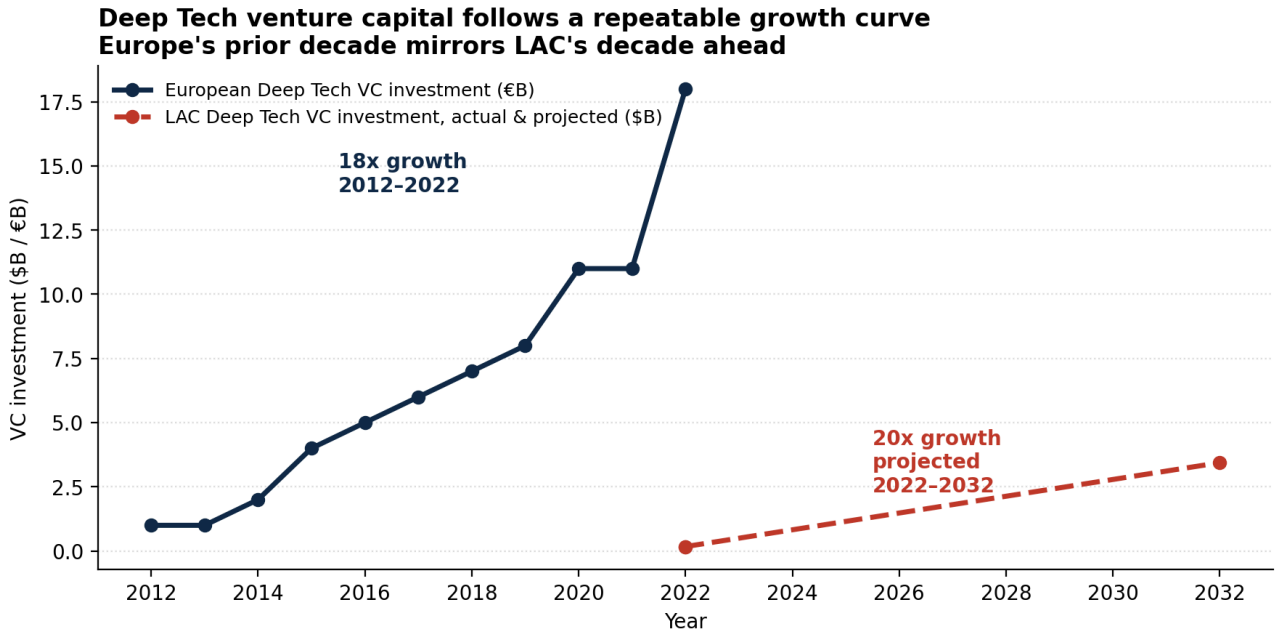
At the regional-funding level, the founder-level dataset underlying much of this report shows Europe hosting the largest number of Deep Tech startups globally (45% of the total) while capturing a share of global funding several multiples smaller — a capital-allocation gap rather than an innovation gap.



Source: Global Deep Tech Report 2026 (TUM / ARQIS / Bayern Kapital / D11Z. Ventures / HTGF / Onsight Ventures / DTCF), based on Dealroom, PitchBook, Crunchbase, LinkedIn data, startups founded 2015-2024.

Exhibit 5. Europe out-produces North America on Deep Tech startup count but trails sharply on funding captured per company.

Longitudinally, Deep Tech venture capital has followed a repeatable compounding curve once an ecosystem reaches critical mass: European Deep Tech VC investment grew roughly 18-fold between 2012 and 2022, and Latin America and the Caribbean's smaller, more recent base is tracking a comparable trajectory that could compound roughly 20-fold by 2032.



Source: DealRoom; LAVCA; IDB Lab, Deep Tech: The New Wave (2023); McKinsey analysis

Exhibit 6. Deep Tech venture capital tends to follow a repeatable compounding curve once an ecosystem reaches critical mass.

Policy and Regulatory Landscape

Government policy has moved from a peripheral subsidy to a first-order driver of Deep Tech market formation, visible across every region covered in this report.

R&D budget trends. Cross-country data show government R&D budget growth turning negative in real terms across the nine countries reporting 2025 figures so far (a decline of over 5%, including a 7.9% drop in the United States), even as defence R&D continues to rise (+11.5% in the EU27, +17.9% in Japan) — a reallocation, rather than a retreat, in public science funding.

Sovereign and national strategic programs. The United States' Stargate initiative, the European Union's AI-and-quantum funding calls, Canada's newly created BOREALIS agency, and sovereign Deep Tech funds emerging in the UK and Singapore all signal a shift toward direct state participation in Deep Tech capital formation. China's "Made in China 2025" strategy, launched in 2015, remains the longest-running example of this model and underpins China's current 34–77% global market share across solar PV, EVs, batteries, industrial robots, and space launches despite holding roughly 19% of the world's population.

India's bilateral and multilateral technology diplomacy. India has pursued Deep Tech capacity-building through a series of international partnerships — the US-India AI Initiative (USIAI), the UK-India Tech Alliance, and the India-Russia Joint Technology Assessment and Accelerated Commercialization Programme — alongside domestic programs such as the Atal Innovation Mission and the Clean Energy Research Initiative, and academic-industry partnerships spanning IIT Madras, IISc Bangalore, and BITS Pilani.

Innovation-policy outcomes are measurable and shifting. A global innovation ranking now in its 18th edition, covering 139 economies across 78 indicators, shows Switzerland retaining the top spot for a 15th consecutive year, followed by Sweden and the United States, while China enters the global top 10 for the first time (10th), driven by leadership in patent filings, 2nd place in R&D expenditure, and the largest number of top-100 innovation clusters worldwide (24, versus 22 for the United States).

WIPO Global Innovation Index 2025 — Top 10 economies

China enters the top 10 for the first time; leads globally in patent filings and knowledge & technology outputs

1	Switzerland
2	Sweden
3	United States
4	Republic of Korea
5	Singapore
6	United Kingdom
7	Finland
8	Netherlands
9	Denmark
10	China

Source: World Intellectual Property Organization (WIPO), Global Innovation Index 2025 (18th edition, published September 2025).

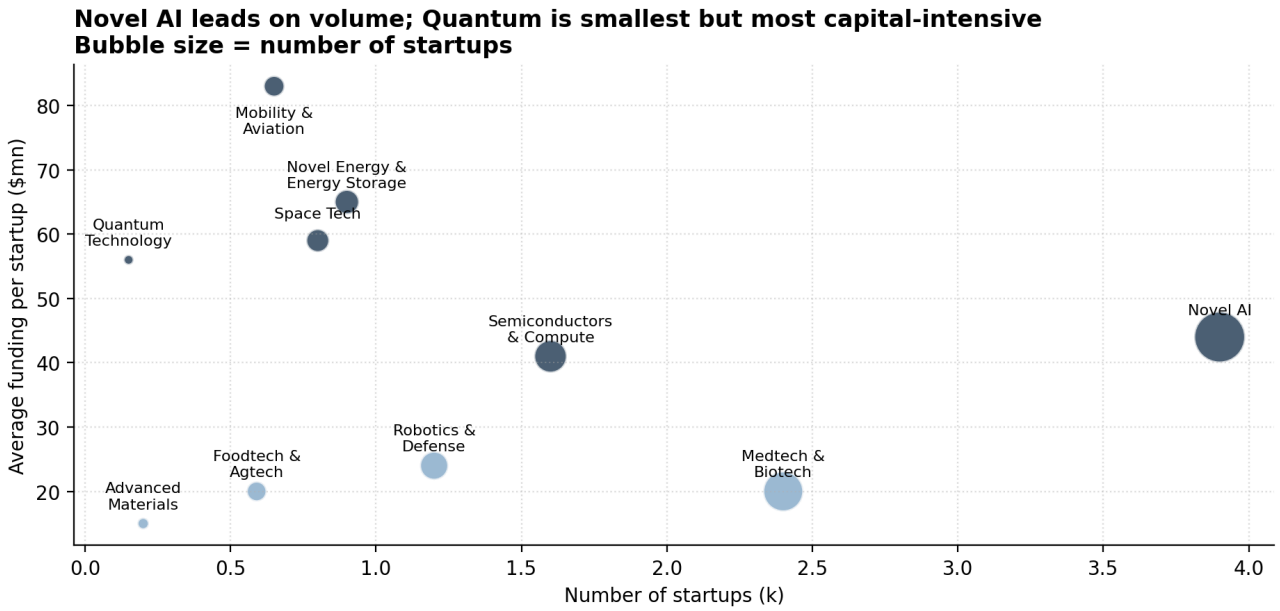
Exhibit 7. The 2025 edition of a leading global innovation ranking reflects two decades of accumulated national Deep Tech and innovation policy, with China's top-10 entry the most significant recent shift.

Regulatory friction remains most visible at the university-to-startup interface: Europe generates a smaller share of global Deep Tech patents than its share of global startups, a gap linked to slower, more bureaucratic technology-transfer and licensing processes relative to the United States — arguably the single most tractable, policy-addressable restraint identified anywhere in this report.

Market Segmentation

5.1 By Technology

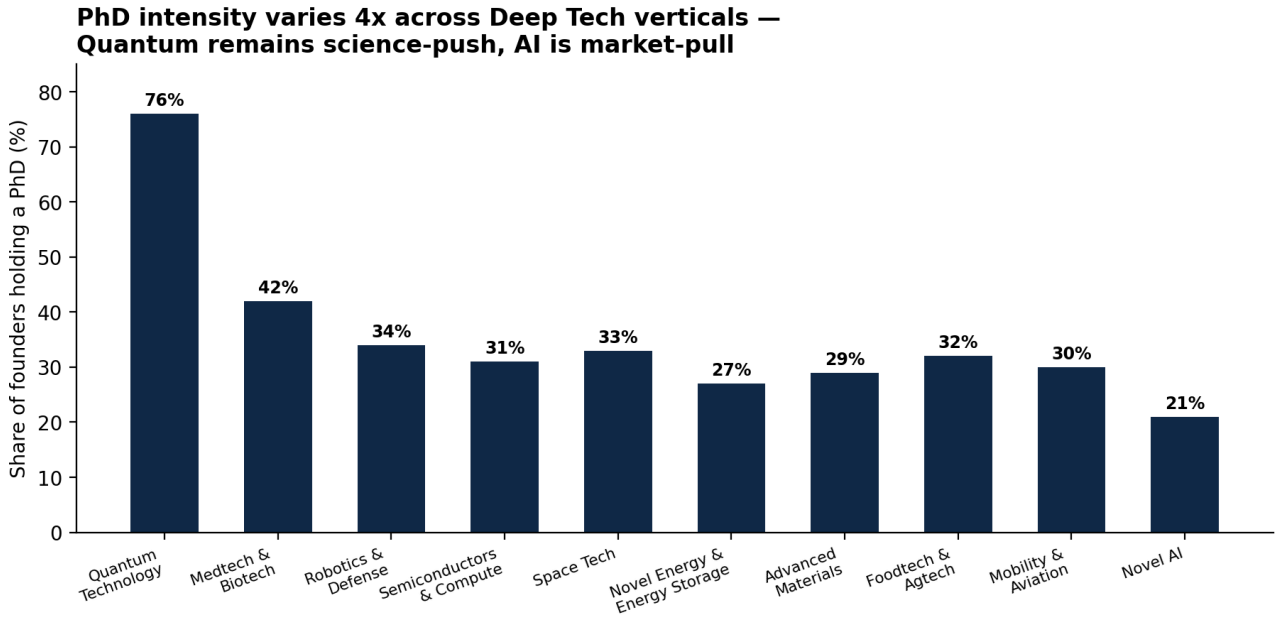
Grouping Deep Tech startups by underlying technology reveals sharply different capital-intensity and maturity profiles. AI-related ventures are the largest segment by startup count and cumulative funding globally. Quantum Technology sits at the opposite extreme: the fewest startups of any segment, but the highest average funding per company. Medtech and biotechnology combine high startup volume with comparatively thin average funding per company. Europe's one clear segment-level lead globally sits in Novel Energy & Energy Storage, where it modestly out-funds North America.



Source: Global Deep Tech Report 2026, based on Dealroom/PitchBook data; sub-industries derived via NLP clustering of startup taglines and descriptions.

Exhibit 8. Novel AI leads on volume; Quantum Technology is the smallest but most capital-intensive technology segment, reflecting its distance from commercialization.

Founder education mirrors each segment's distance from market: PhD intensity among founders is roughly four times higher in Quantum Technology than in Novel AI, confirming that quantum remains a science-push field while AI has the lowest technical barrier to entry of any Deep Tech technology segment.



Source: Global Deep Tech Report 2026, based on 11,500 founder LinkedIn profiles matched to Deep Tech startups.

Exhibit 9. PhD intensity varies roughly 4x across Deep Tech technology segments — investors and accelerators should calibrate commercialization-timeline expectations by segment.

5.2 By Application

Healthcare and life sciences (drug development, medical devices, diagnostics) represent the most regulation-intensive application domain, typically requiring 7-to-15-year commercialization timelines. Energy and industrial applications (renewables, storage, grid technology) are the most capital-intensive in absolute terms but benefit from faster deployment cycles once a technology is proven. Agriculture and food systems applications remain comparatively under-capitalized relative to their addressable market. Mobility, aerospace, and defense applications combine long government-procurement cycles with some of the highest average funding per company, while computing and information-technology applications show the fastest capital velocity but also the most concentrated ownership of value.

The four-level Deep Tech classification introduced in Section 2.2 offers a useful cross-cutting lens: most currently funded Deep Tech ventures sit at the system-upgradation or system-transformation level, with true system-of-systems transformation remaining rare and disproportionately concentrated in the energy and computing application domains.

5.3 By End-user

Enterprise and industrial corporates are the largest commercial end-user group, typically engaging through corporate venture arms, licensing agreements, or direct procurement. Government and public-sector bodies function as both regulators and direct customers, particularly in defense, space, and energy applications. Research institutions and universities remain the primary source of Deep Tech intellectual property. Financial sponsors — venture capital, growth equity, and increasingly sovereign and pension funds — are an essential enabler of every other end-user's ability to access the technology. Consumer and retail end-users remain the smallest direct segment for Deep Tech specifically.

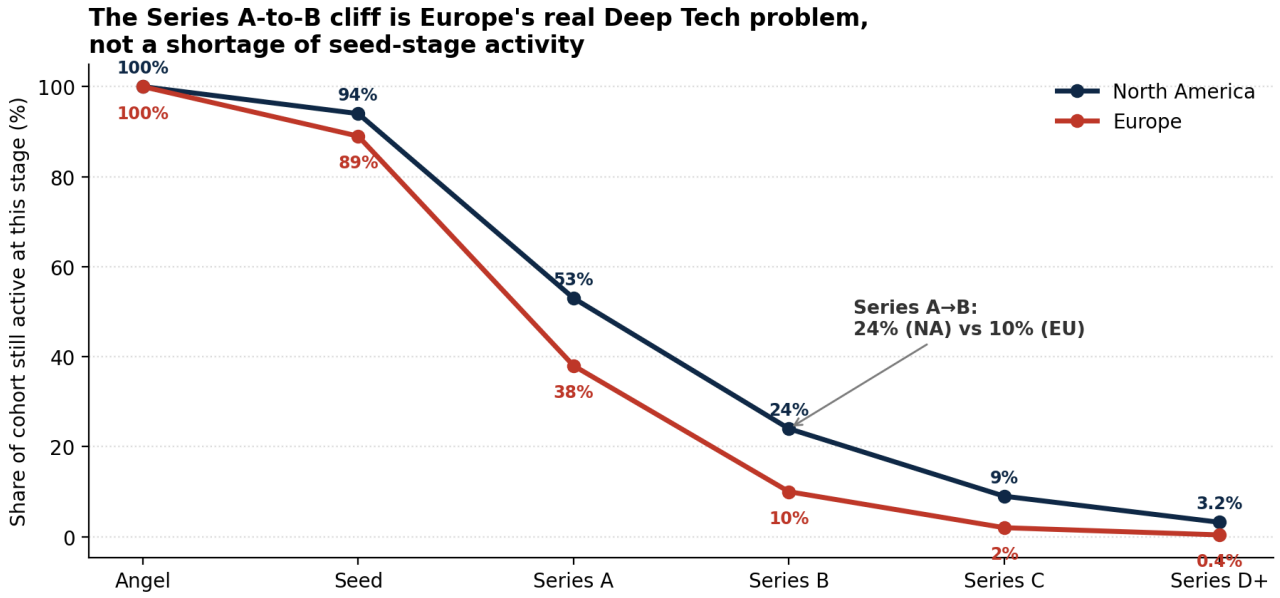
5.4 By Region

5.4.1 North America

North America captures the largest share of global Deep Tech funding from a smaller startup base than Europe's, concentrated overwhelmingly in a handful of hub cities — San Francisco and Palo Alto together account for a large share of global Deep Tech capital raised. Independent commercial market research places North America's share of the global Deep Tech product market at roughly a third, the largest of any single region. The region's structural advantages include deep growth-stage investor syndicates, university-to-startup technology transfer pipelines, and a dense founder-alumni network anchored by institutions such as MIT and Stanford.

5.4.2 Europe

Europe hosts the largest number of Deep Tech startups of any region in the world — 45% of the global total — yet captures a share of global funding several multiples smaller. Its early-stage infrastructure is comparatively strong. The gap emerges specifically at the Series A-to-B conversion stage, where European companies succeed at roughly half the rate of North American peers.



Source: Global Deep Tech Report 2026, based on Dealroom/PitchBook data; conversion rate = share of the initial cohort reaching each subsequent stage.

Exhibit 10. The Series A-to-B conversion rate, not seed-stage weakness, is Europe's defining regional constraint.

That single choke point compounds into a persistent scaling-speed and exit gap: European Deep Tech companies grow headcount and valuation markedly more slowly than North American peers after founding, and use M&A as an exit route roughly half as often, with IPOs remaining rare.

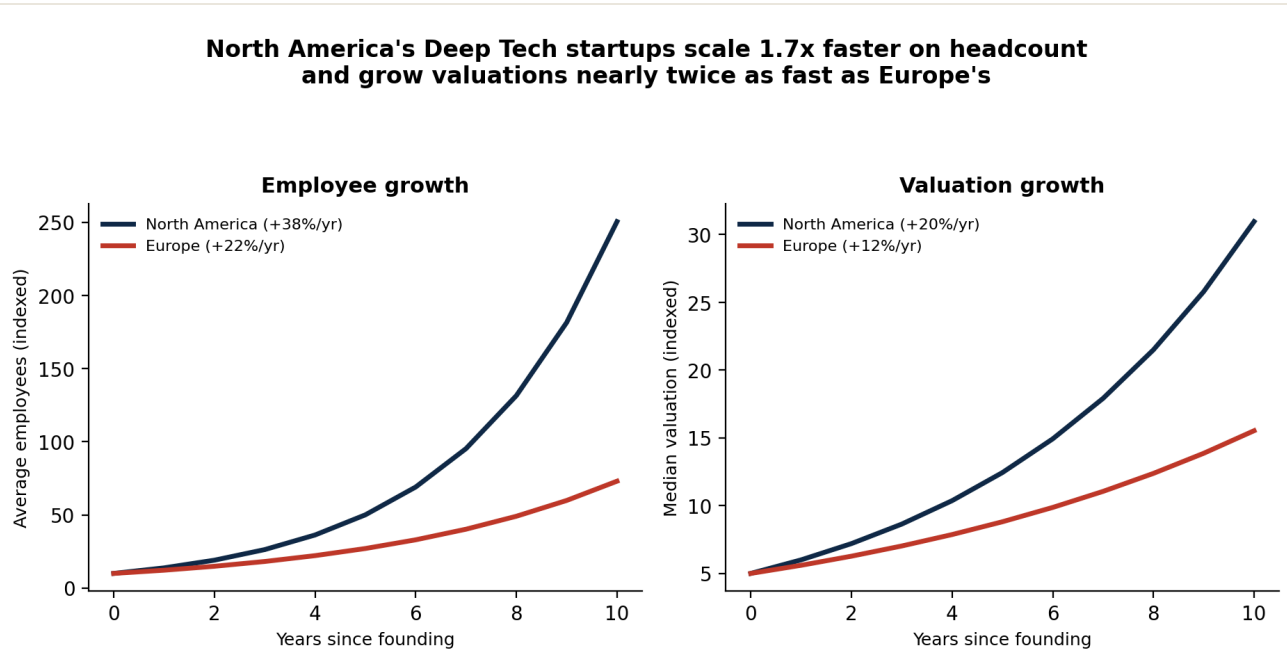
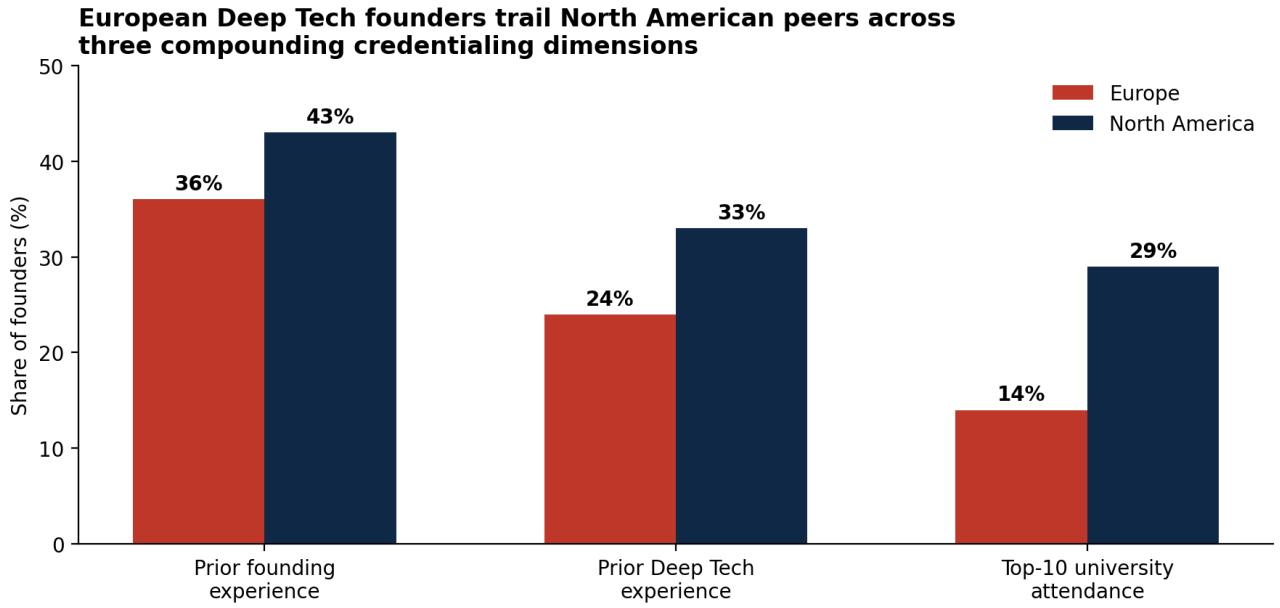


Exhibit 11. North American Deep Tech startups scale headcount and valuation substantially faster than European peers after founding.

The founder-level data also shows Europe trailing North America on prior founding experience, prior Deep Tech-specific experience, and top-tier university attendance — three compounding credentialing gaps, though not a shortage of underlying talent: Europe produces more postgraduate Deep Tech founders in aggregate than any other region and leads specifically in Novel Energy, Quantum, and Medtech founder credentials.



Source: Global Deep Tech Report 2026, based on 11,500 founder LinkedIn profiles matched to Deep Tech startups founded 2015-2024.

Exhibit 12. European Deep Tech founders trail North American peers on three compounding credentialing dimensions linked to venture success.

5.4.3 Asia-Pacific

Asia-Pacific is the fastest-growing Deep Tech region by most measures used in this report, led overwhelmingly by China. China commands an estimated 34% to 77% global market share across industries central to the Deep Tech transition — space launches, solar PV, EVs, industrial robots, and battery production — and its 2025 entry into the global innovation ranking's top 10 confirms that position is now reflected in innovation-output rankings, not just manufacturing share. India represents a smaller but deliberately expanding base within the region: roughly $1 billion in Deep Tech investment across 175 deals in 2023, growing under an explicit government strategy combining direct funding, bilateral technology alliances, and a shift toward longer-gestation, more genuinely novel ventures.

5.4.4 Latin America

Latin America and the Caribbean (LAC) offers the clearest real-time illustration of an early-stage Deep Tech ecosystem compounding. As of a 2023 regional development-finance benchmarking study, LAC was home to 340 Deep Tech startups with institutional funding, which together had raised approximately $2.2 billion in venture capital and generated an estimated $8 billion in combined ecosystem value, supported by 65 active local and international funds and accelerators.

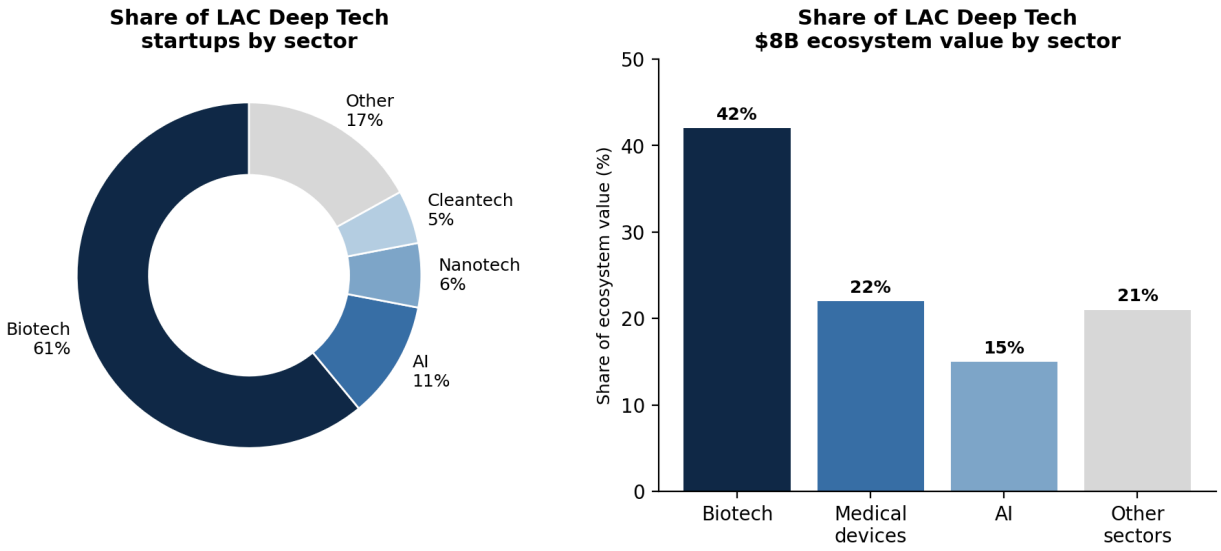
Latin America's Deep Tech ecosystem, by the numbers

340	$8B	$2.2B	65	24
Deep Tech startups with institutional funding	Ecosystem value created to date	Cumulative capital raised by these startups	Funds & accelerators actively investing	Companies valued above $50M

Source: IDB Lab, Deep Tech: The New Wave (2023); Surfing Tsunamis analysis

Exhibit 13. Latin America's institutionally funded Deep Tech ecosystem, as benchmarked in 2023.

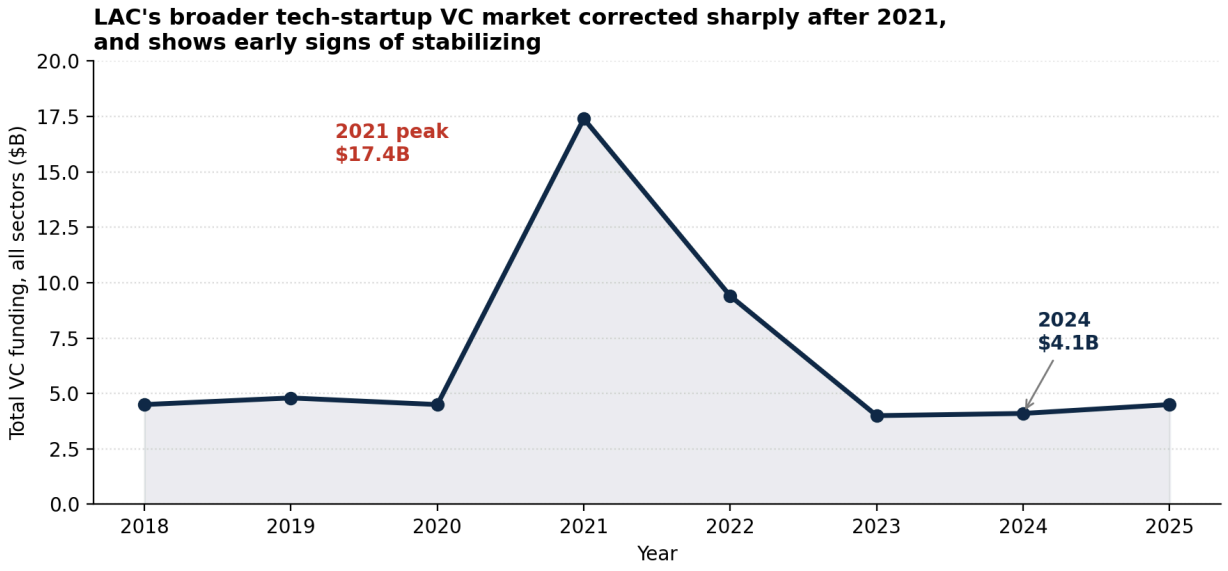
Three structural factors distinguish the region: a substantial STEM talent pool relative to current Deep Tech employment (roughly 865,000 people in STEM R&D versus fewer than 5,000 currently at Deep Tech startups) combined with a 5-to-10x labor-cost advantage versus the United States; early return proof points such as Bioceres, whose first-round investors have seen roughly a 1,600x return since 2001; and sector concentration around genuine comparative strength, with biotech accounting for 61% of institutionally funded startups and 42% of ecosystem value.



Source: IDB Lab, Deep Tech: The New Wave (2023); Surfing Tsunamis analysis; McKinsey analysis

Exhibit 14. Biotech and AI concentrate the majority of LAC Deep Tech activity and value, though the ecosystem is diversifying into nanotechnology, cleantech, and spacetech.

It is important to distinguish this Deep Tech-specific baseline from more recent figures covering the broader LAC technology-startup market, which is dominated by fintech rather than Deep Tech specifically. Total LAC venture capital across all sectors peaked at roughly $17.4 billion in 2021, corrected through the 2022–2023 "VC winter," and stabilized at approximately $4.1 billion in both 2024 and 2025.



Note: reflects venture capital across all LAC technology sectors (not Deep Tech alone), shown for macro context. 2025 figure is a partial-year extrapolation. Source: Cuantico VP, Latin America Venture Capital Report 2025; LAVCA, 2025 Latin American Startup Ecosystem Insights; The StartupVC (2026); McKinsey analysis.

Exhibit 15. The broader LAC tech-VC market corrected after its 2021 peak and is showing early signs of stabilizing — useful context, though this reflects all sectors, not Deep Tech alone.

5.4.5 Middle East and Africa

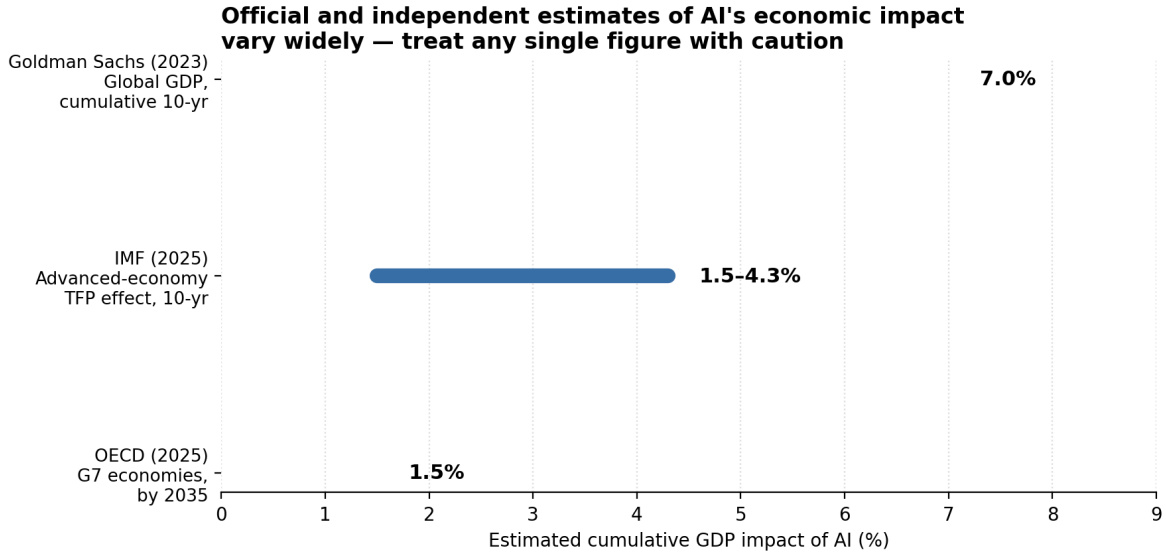
The Middle East and Africa region has the thinnest publicly available Deep Tech-specific dataset of any region covered in this report, but two developments merit attention. In the Gulf, the United Arab Emirates has built Deep Tech into a deliberate economic-diversification pillar since 2020, anchored by its Advanced Technology Research Council (ATRC) and affiliated entities — the Technology Innovation Institute, ASPIRE, and VentureOne — spanning space exploration, quantum technology, and directed-energy research, reinforced by bilateral programs with India covering AI, cybersecurity, and space. Beyond the Gulf, most of Sub-Saharan Africa's technology investment remains concentrated in fintech and digital infrastructure rather than Deep Tech specifically, suggesting the region's Deep Tech ecosystem, where it exists, remains at an earlier formative stage than any other covered in this report.

06 — FUTURE OUTLOOK

Future Outlook

Three forward-looking data points anchor this report's outlook, each drawn from official or peer-reviewed sources and each presented as a range rather than a single forecast.

First, on artificial intelligence specifically — the single most-discussed Deep Tech category — credible estimates of cumulative GDP impact span roughly a 5x range. One conservative, G7-focused macroeconomic model finds AI could raise productivity and GDP by roughly 1.5% cumulatively by 2035; a separate working-paper analysis implies a wider 1.5–4.3% range over a decade for well-prepared advanced economies; and a more optimistic estimate from investment-bank research suggests generative AI could eventually raise global GDP by about 7% over a decade, equivalent to nearly $7 trillion in additional annual output.



Source: OECD, Macroeconomic Productivity Gains from AI in G7 Economies (2025); IMF Working Paper, Artificial Intelligence and Productivity in Europe / The Global Impact of AI (2025); Goldman Sachs Global Investment Research, cited in IMF/OECD literature reviews (2023). McKinsey analysis.

Exhibit 16. Credible estimates of AI's cumulative GDP impact span roughly a 5x range — plan scenarios, not point forecasts.

Second, on essential-needs markets: energy, food, and transportation are each worth roughly $12–13 trillion annually, and Deep Tech innovation is projected to cut costs in each by 5 to 15 times over the coming decade — a scale of opportunity that already shows up in realized capital allocation, with clean-energy investment having reached $2.2 trillion a year, nearly double fossil-fuel spending.

Third, on regional trajectories: both of the two independent commercial market-size estimates in this report imply continued high-teens-to-20% annual growth in the Deep Tech product market through the early-to-mid 2030s, while Latin America and the Caribbean's Deep Tech venture funding

is separately projected to grow as much as 20-fold over the decade to 2032. None of these trajectories are guaranteed — ecosystems need time to mature, growth-stage capital gaps such as Europe's Series A-to-B cliff need deliberate intervention to close, and government R&D budgets are already showing signs of strain in several major economies — but the underlying direction across every data source in this report points the same way.

Organizations that build durable partnerships with research institutions, investors, industry collaborators, policymakers, and talent networks will navigate this uncertainty faster, commercialize sooner, and compound value longer than those operating alone.

> *The future belongs to ecosystem builders – organizations that mobilize resources and orchestrate collaboration at scale, not only those who invent.*

07 — APPENDIX

Methodology and Key Data Sources

This report combines four categories of evidence, each handled according to its own reliability profile: (1) a 2023 sector-specific baseline for Latin America's Deep Tech ecosystem; (2) current 2025–2026 macroeconomic data from official multilateral sources; (3) a 2026 founder-level, multi-source dataset covering 13,600 startups and 11,500 founders globally, from which this report draws synthesized insights rather than reproducing the underlying tables; and (4) independent commercial market-sizing research and a government-published landscape study. Where commercial or industry data is used, it is explicitly labeled as an estimate rather than an official government figure. All monetary figures are nominal USD unless otherwise noted; percentages describing "cumulative GDP impact" refer to the level of GDP at the end of the stated period relative to a no-AI or no-technology counterfactual, not annual growth-rate additions.

ORGANIZATION	PUBLICATION	YEAR	USED FOR
OECD	Main Science and Technology Indicators (MSTI)	Mar 2026	Global R&D expenditure, US/EU/China trends
IEA	World Energy Investment 2026	Jun 2026	Clean energy vs. fossil fuel investment
IMF	World Economic Outlook, Fiscal Monitor, Global Debt Monitor	2025–26	Global growth, public debt-to-GDP
IMF (Working Papers)	AI and Productivity in Europe; The Global Impact of AI: Mind the Gap	2025	AI productivity / GDP impact estimates
OECD	Macroeconomic Productivity Gains from AI in G7 Economies	2025	Conservative AI GDP impact benchmark
WIPO	Global Innovation Index 2025 (18th ed.)	Sept 2025	Country innovation rankings, clusters
World Bank	World Development Indicators	2024–25	Manufacturing and R&D benchmarking
IDB Lab	Deep Tech: The New Wave	2023	LAC Deep Tech ecosystem baseline data
Company X (founder-level research consortium)	Global Deep Tech Report 2026	2026	Founder-level insights: startup/founder patterns, regional gaps
Tufts CSDD	Cost to Develop and Win Marketing Approval for a New Drug	2022	Drug development cost/timeline benchmarks
WHO	COVID-19 Vaccine Introduction and Deployment	2024	mRNA vaccine deployment case study
LAVCA / Cuantico VP	2025 Latin American Startup Ecosystem Insights; LAC VC Report 2025	2025–26	Broader LAC tech-VC market update (context)
Mordor Intelligence	Deep Tech Market Size & Share Report	2025	Narrow product-market sizing / segmentation
Fortune Business Insights	Deep Tech Market Report	2026	Alternative product-market sizing; regional cross-check
STPI, Govt. of India	Exploring the DeepTech Landscape	2024	Global annual investment-flow benchmark; India context

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