

Special Report

Venture capital deployment in emerging technology: Capital concentration, scale financing, and the next investment cycle

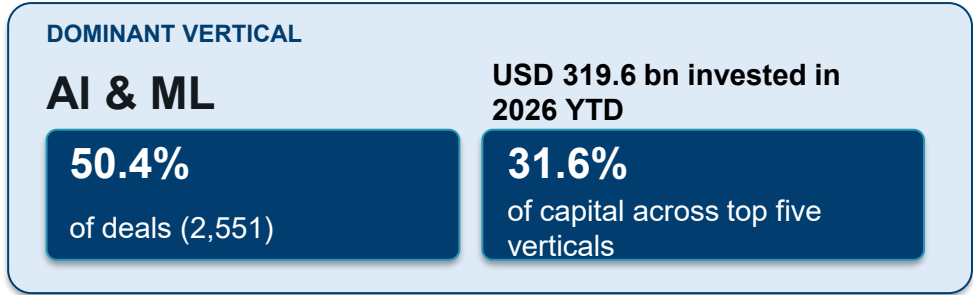
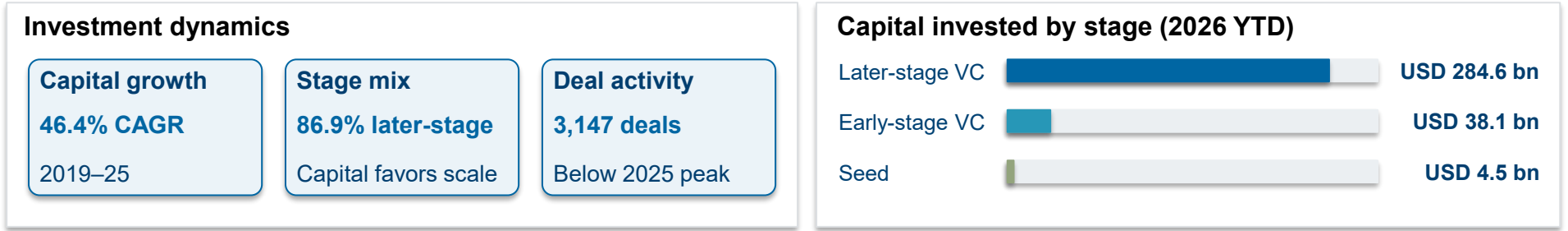
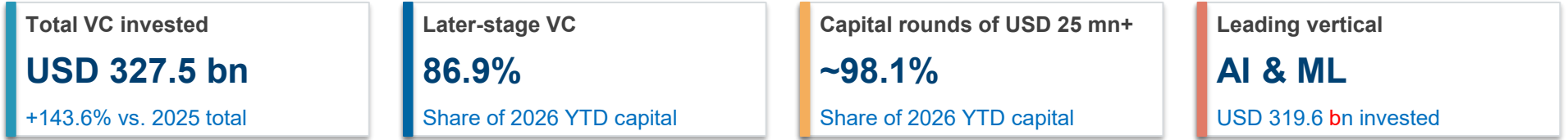
Venture capital deployment in emerging technologies has entered a new scale regime in 2026, with capital increasingly concentrated in AI-led opportunities, later-stage companies, and mega-round financings.



Venture capital deployment in emerging technologies has entered a new scale regime, with 2026 YTD investment reaching USD 327.5 bn, already around 2.4x the full 2025 total

Executive summary

Global venture capital deployment across emerging technology, 2019–26 YTD



- Key highlights**
- Capital growth is driven by larger rounds, not deal volume.
 - AI & ML leads, while SaaS and Big Data enable deployment.
 - North America captures ~88% of funding; Asia ranks second.
 - High capital intensity raises the bar for early-stage firms.

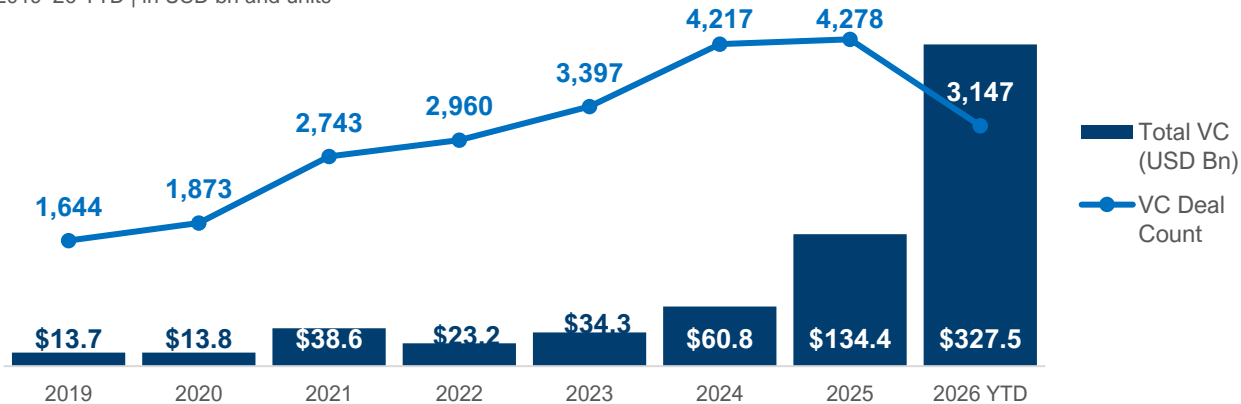
2026 Outlook: Selective scale financing • AI infrastructure and enabling layers • Commercial traction and measurable returns

This surge is powered by larger rounds rather than higher deal volumes, with capital up nearly 24x since 2019 and 87% now flowing to proven later-stage companies

VC investment & capital in emerging technologies - By stage

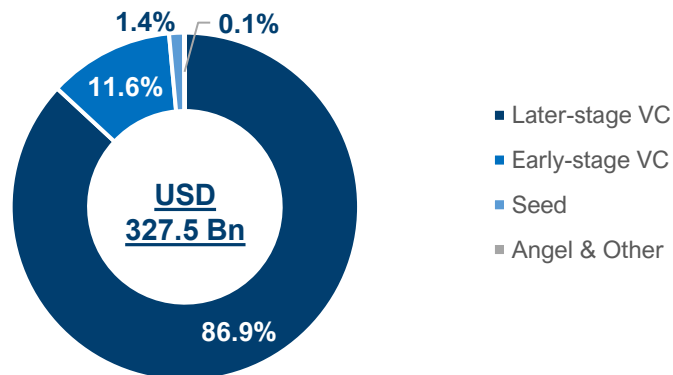
Capital invested by value and volume

2019–26 YTD | in USD bn and units



Stage mix, 2026 (Q1–Q3)

2026 YTD | in percentage



- VC investment in emerging technologies reached USD 327.5 bn in 2026 YTD, nearly 2.4x the 2025 total, while deal volumes remained below the 2024 peak.
- This divergence signals growing concentration in larger funding rounds, as AI infrastructure and compute requirements drive substantial upfront investment.
- The funding mix reinforces this trend, with later-stage VC accounting for 86.9% of capital versus 11.6% for early-stage VC. Investors appear to favor companies with proven commercial traction and scaling potential, while high AI infrastructure costs and monetization pressures may widen the funding gap between mature and early-stage ventures.
- Rising deal values alongside moderating deal counts suggest the funding surge remains narrow-based, likely driven by a few large transactions. This increases capital concentration and may leave early-stage companies more dependent on selective investors and differentiated funding propositions.

Sources: PitchBook, Aranca Analysis

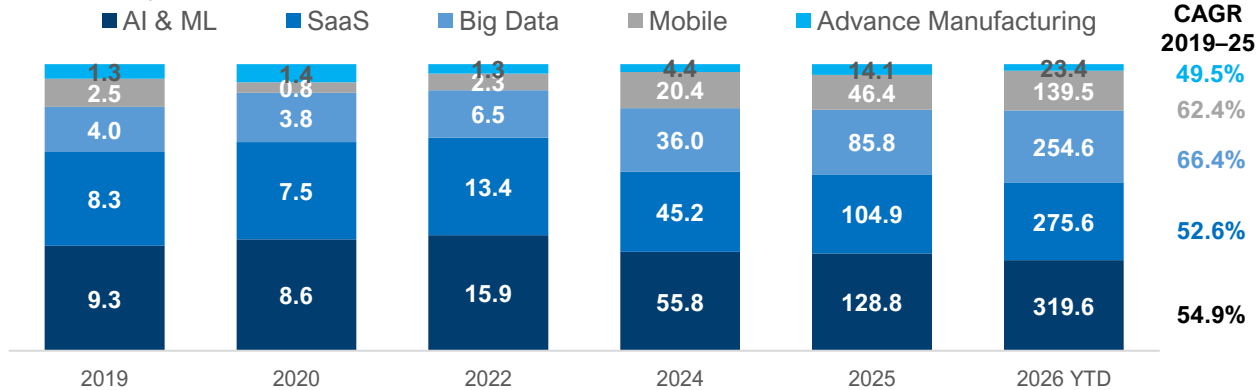
NOTE: 2026 YTD = 1 Jan–30 Sep 2026

In terms of verticals, the shift is overwhelmingly an AI story, with AI & ML leading funding, while SaaS and Big Data form the software and data layers that make AI usable across the stack

VC investment in emerging technologies - By top five verticals by value

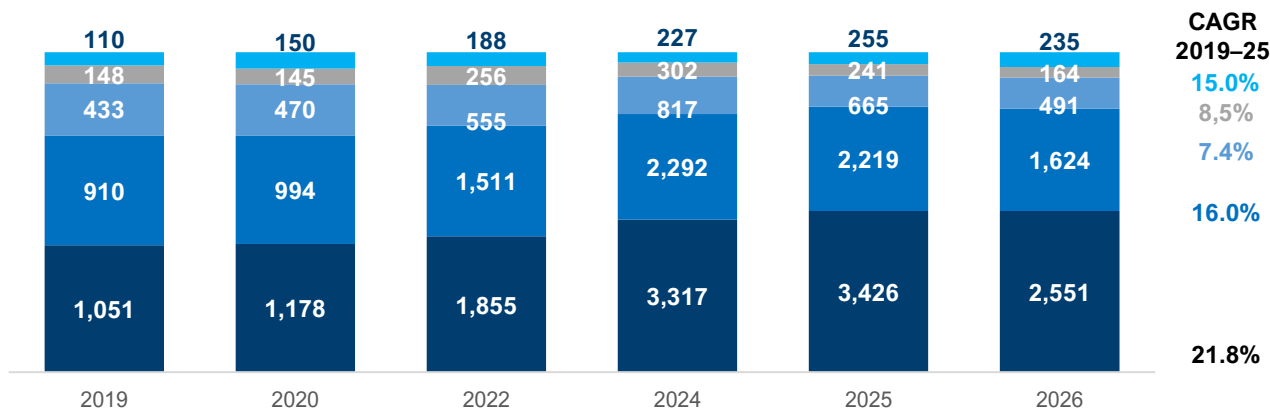
Capital invested

2019–26 YTD | in USD bn



Number of deals

2019–26 YTD | in units



- AI & ML accounted for 31.6% (USD 319.6 bn) of combined capital across the five verticals in 2026 YTD, followed by SaaS at 27.2% (USD 275.6 bn) and Big Data at 25.1% (USD 254.6 bn).
- Significant SaaS and Big Data allocations underscore their role in enabling AI development and deployment. AI & ML led deal activity with 50.4% (2,551 deals), followed by SaaS at 32.1% (1,624) and Big Data at 9.7% (491).
- However, Big Data recorded the fastest investment growth during 2019–25, with a 66.4% CAGR versus 54.9% for AI & ML and 52.6% for SaaS, highlighting divergent investment dynamics across the ecosystem.
- With Gartner forecasting worldwide AI spending of USD 2.7 tn in 2026, opportunities extend beyond model developers to enabling technologies.
- Sustained funding will depend on translating these capabilities into scalable applications and measurable returns.

Sources: PitchBook, Aranca Analysis

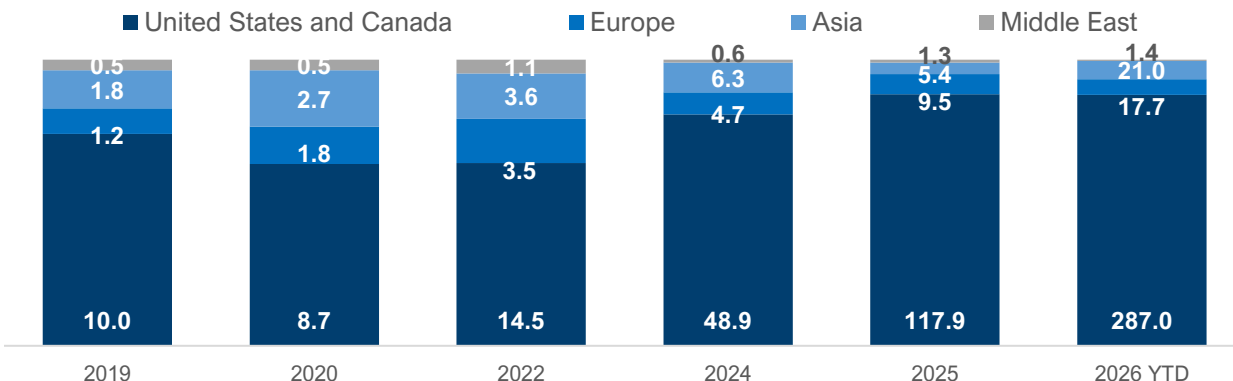
NOTE: Vertical are not mutually exclusive. One company can be tagged to multiple verticals.

By region, the capital clusters around depth of funding, with North America holding close to 88%, while Asia's larger cheque sizes lift it past Europe into second place

VC investment in emerging technologies - By region

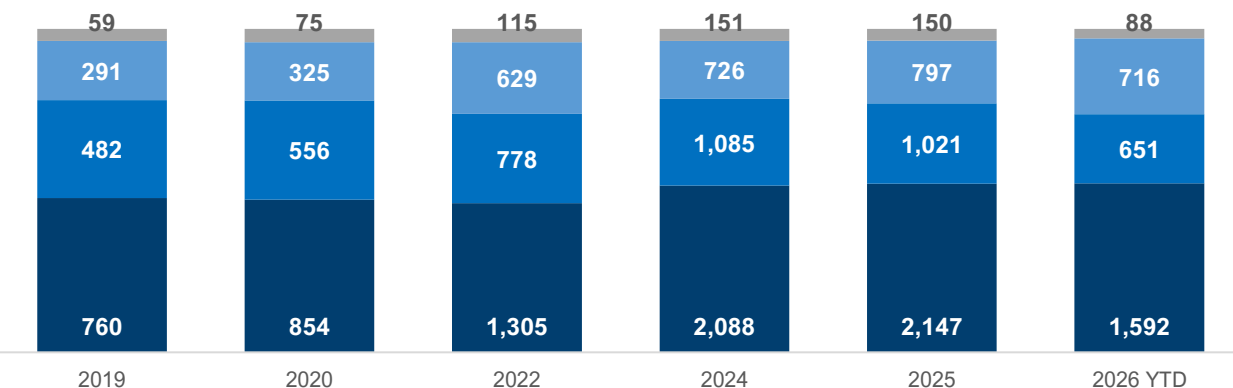
Capital invested

2019–26 YTD | in USD bn



Number of deals

2019–26 YTD | in units



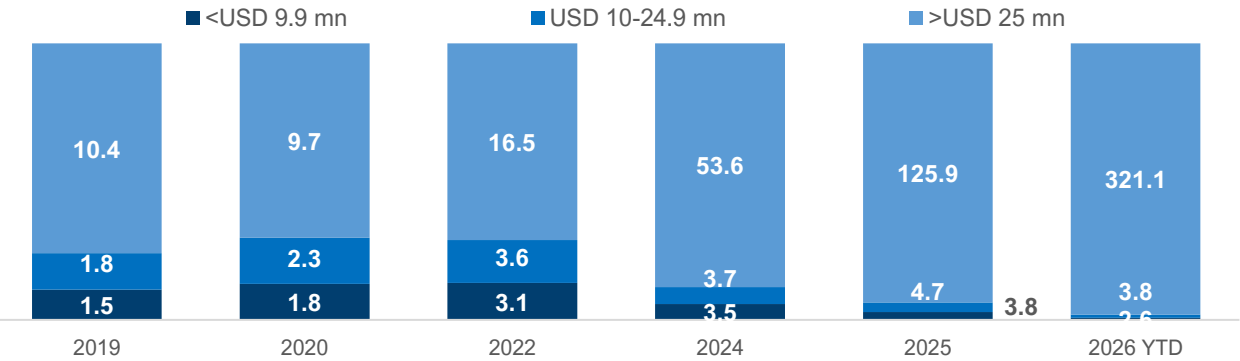
- The capital remains heavily concentrated in the North America, which attracted ~88% (USD 287.0 Bn) of total funding in 2026 YTD, reflecting the region's ability to support AI businesses through deeper funding pools and established technology ecosystems.
- The gap between capital and deal activity suggests that larger funding rounds rather than proportionately higher deal volumes are reinforcing North America's lead.
- Asia has overtaken Europe in capital investment, attracting USD 21.0 bn in 2026 YTD versus Europe's USD 17.7 bn, despite similar deal activity. This suggests Asia's growing relevance is driven more by funding scale than transaction volume.
- Overall, VC capital in emerging technologies remains geographically concentrated, with North America dominating large-scale financing while Asia strengthens its position as the second-largest funding market.
- Access to larger rounds is increasingly shaping regional investment outcomes.

Sources: PitchBook, Aranca Analysis

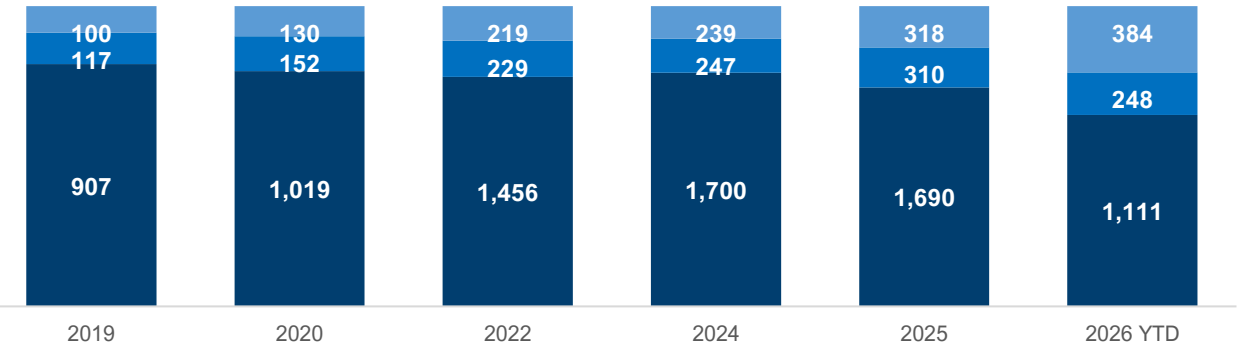
By deal size, the tilt is even sharper, with USD 25 mn+ rounds absorbing around 98% of 2026 capital as a handful of outsized transactions carry the market

VC investment in emerging technologies - By deal size

Capital invested
2019–26 YTD | in USD bn



Number of deals
2019–26 YTD | in units



- The increasing concentration of capital in large financing rounds, with USD 25 mn+ deals accounting for USD 321.1 Bn, or ~98% of 2026 YTD funding indicate that capital deployment is being driven by a narrow set of large transactions.
- This concentration contrasts with deal activity, as smaller rounds continue to account for a substantial share of transactions but contribute relatively little to aggregate capital, reflecting the rising cost of scaling AI and other emerging technologies.
- The shift reflects both investor preference for companies with demonstrated traction and growing requirements for compute, infrastructure, and commercial deployment, favoring businesses capable of absorbing large funding commitments.
- Holistically, this suggests that the access to scale financing is becoming a critical competitive advantage, widening the gap between well-capitalized leaders and companies competing for smaller pools of funding.

Sources: PitchBook, IDC, Aranca Analysis

At the top, these outsized rounds center on AI, where financings for foundational-model and compute players signal conviction in the firms building AI's core systems

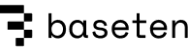
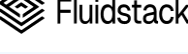
Top 20 VC investment deals in emerging technologies – 2026 YTD (1/2)

Companies	HQ	Deal size (USD Bn)	Deal date	Year founded	Lead investors	Verticals	Deal type
 OpenAI		122.0	Mar-2026	2015	Amazon.com, Andreessen Horowitz, Chainfund Capital, MGX, NVIDIA, SoftBank Group	AI & ML, Big Data, Mobile, SaaS	Later-stage VC
ANTHROPIC		65.0	May-2026	2021	Altimeter Capital Management, Dragoneer Investment Group, Greenoaks, Sequoia Capital	AI & ML, Big Data, SaaS	Later-stage VC
ANTHROPIC		30.0	Feb-2026	2021	Coatue Management, Dragoneer Investment Group, Founders Fund, GIC Private, ICONIQ Capital, MGX, The D. E. Shaw Group	AI & ML, Big Data, SaaS	Later-stage VC
 Prometheus		12.0	Jun-2026	2025	BlackRock, JP Morgan Chase	Advanced Manufacturing, AI & ML	Early-stage VC
 databricks		8.8	Jan-2026	2013	Fidelity Management & Research Company, Insight Partners, J.P. Morgan Growth Equity Partners	AI & ML, Big Data, Mobile, SaaS	Later-stage VC
 databricks		5.0	Aug-2026	2013	Blackstone, Coatue Management, MGX, Sixth Street Partners, T. Rowe Price Group	AI & ML, Big Data, Mobile, SaaS	Later-stage VC
 Moonshot AI		3.5	Jul-2026	2023	National Artificial Intelligence Industry Investment Fund	AI & ML, Big Data	Later-stage VC
 MISTRAL AI		3.5	Sep-2026	2023	EQT, PSG, Samsung Electronics	AI & ML, Mobile, SaaS	Later-stage VC
 NSCALE		3.4	Mar-2026		8090 Industries, Aker	AI & ML, Big Data, CloudTech & DevOps, SaaS	Later-stage VC
 StepFun		2.5	May-2026	2023	Undisclosed	AI & ML	Early-stage VC

Sources: PitchBook, Bloomberg

Below the headline raises, funding spreads across AI applications, enabling infrastructure and advanced computing and revealing a broad ecosystem that advances emerging technologies

Top 20 VC investment deals in emerging technologies – 2026 YTD (2/2)

Companies	HQ	Deal size (USD Bn)	Deal date	Year founded	Lead investors	Verticals	Deal type
 Moonshot AI		2.0	Apr-2026	2023	Dragonball Capital	AI & ML, Big Data	Later-stage VC
 baseten		1.5	Jun-2026	2019	Altimeter Capital Management, Conviction Partners, Spark Capital	AI & ML, Big Data, CloudTech & DevOps, SaaS	Later-stage VC
 Fireworks AI		1.5	Jul-2026	2022	Atreides Management, Index Ventures, TCV	AI & ML, SaaS	Later-stage VC
 Fluidstack		1.5	Sep-2026	2017	Jane Street	AI & ML, CloudTech & DevOps, SaaS	Later-stage VC
 SKILD AI		1.4	Jan-2026	2023	NVIDIA, SoftBank Group	Advanced Manufacturing, AI & ML, Big Data, Manufacturing, Robotics and Drones	Later-stage VC
 tenstorrent		1.3	Sep-2026	2016	Samsung Securities, AFW Partners	Advanced Manufacturing, AI & ML, SaaS	Later-stage VC
 SUPERHUMAN		1.1	Sep-2026	2009	Undisclosed	AI & ML, SaaS	Later-stage VC
 cerebras		1.1	Jan-2026	2015	Tiger Global Management	Advanced Manufacturing, AI & ML, CloudTech & DevOps, Infrastructure, Manufacturing, SaaS	Later-stage VC
 Domyn		1.1	Aug-2026	2016	Undisclosed	AI & ML, Big Data, SaaS	Later-stage VC
 river		1.1	Aug-2026	2026	AMP PBC, General Catalyst	AI & ML, SaaS	Early-stage VC

Sources: PitchBook, Forge Global

Driving this is a structural rise in capital intensity as AI moves from building models to deploying them commercially, concentrating funds in companies able to absorb that cost

Structural drivers behind the sharp increase in AI VC deployment in 2026

Driver	Insight	Industry evidence
 Frontier AI models require increasing investment	Frontier AI models are the most advanced AI systems, designed to perform complex tasks and push the limits of existing capabilities. Developing and operating these models requires substantial investment in computing power, specialized talent, and large-scale infrastructure .	• OpenAI raised USD 122 bn in March 2026 • Anthropic raised USD 30 bn in Series G and USD 65 bn in Series H.
 Computing & infrastructure drive up investment needs	Training and running AI models requires significant computing power, including specialized chips, servers, and data centers. As AI usage expands, companies must invest in additional computing capacity and supporting infrastructure , increasing the capital required to scale.	• IDC forecasts USD 497 bn of AI infrastructure spending in 2026.
 Enterprise AI moves into deployment	As AI moves from experimentation into workflows , investors are funding companies that can convert model capability into recurring enterprise usage.	• Stanford reports AI adoption at 88% of surveyed organizations, with GenAI used in at least one business function at 70%.
 Agentic AI expands the opportunity set	Agents create more complex workloads and increase the need for upgraded data, compute, and security infrastructure.	• Google Cloud reports 83% of organizations require infrastructure upgrades for production-grade agentic AI.
 Capital concentrates around category leaders	As capital requirements rise , investors increasingly favor companies with scale, distribution, strategic relevance, and demonstrated demand.	• OpenAI's latest funding explicitly links enterprise demand, developer adoption, and durable compute access as reinforcing advantages; • Anthropic reports rapidly increasing enterprise adoption and revenue.

Sources: PitchBook, KPMG Venture Pulse, Stanford HAI AI Index 2026, OECD, OpenAI, Anthropic, Google Cloud, Aranca Analysis

The result is a changed investment test, where success hinges less on AI exposure and more on building defensible economics, distribution and durable competitive advantage

Aranca's point of view



Scale is replacing experimentation

Capital is increasingly following companies that have moved beyond technical validation and demonstrated a credible path to commercial scale.



Capital concentration at scale

Later-stage and USD 25 mn+ rounds are capturing a disproportionate share of capital, making access to scale financing a competitive advantage in itself.



Infrastructure is becoming a competitive moat

Compute, proprietary data, deployment infrastructure, and distribution are increasingly determining who can deliver AI economically at scale.



Commercialization is raising the funding bar

As enterprise adoption expands, investors will increasingly underwrite revenue quality, retention, unit economics, and deployment depth, not model capability alone.



Value is migrating from models to applications

As foundation-model capabilities converge, differentiation is increasingly shifting toward workflow ownership, proprietary data, integration, and customer relationships.



Capital concentration will increase selection risk

Record aggregate funding can mask a narrower opportunity set, increasing both portfolio concentration risk for investors and funding risk for companies outside the leading cohort.

Aranca's outlook



→ Selective scale financing

VC capital in emerging technologies should remain active, but capital allocation will increasingly favor companies demonstrating commercial traction, infrastructure relevance, and credible paths to scale.



→ Infrastructure & enabling-layer focus

Compute, data infrastructure, enterprise orchestration, and AI security should remain priority areas as the cost and complexity of deploying AI at production scale increases.



→ Underwriting will shift from potential to proof

The next funding cycle should place greater weight on commercial traction, customer retention, deployment depth, and unit economics as AI moves from experimentation into production.



→ The new investor question

The critical question is no longer simply whether a company participates in AI, but whether it can build defensible economics, distribution, and strategic relevance as model capabilities become increasingly accessible.

Sources: Aranca Analysis



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