J.P. Morgan Research

AI Infrastructure: The $500B Capex Cycle

Investment implications across cloud, semis, and power

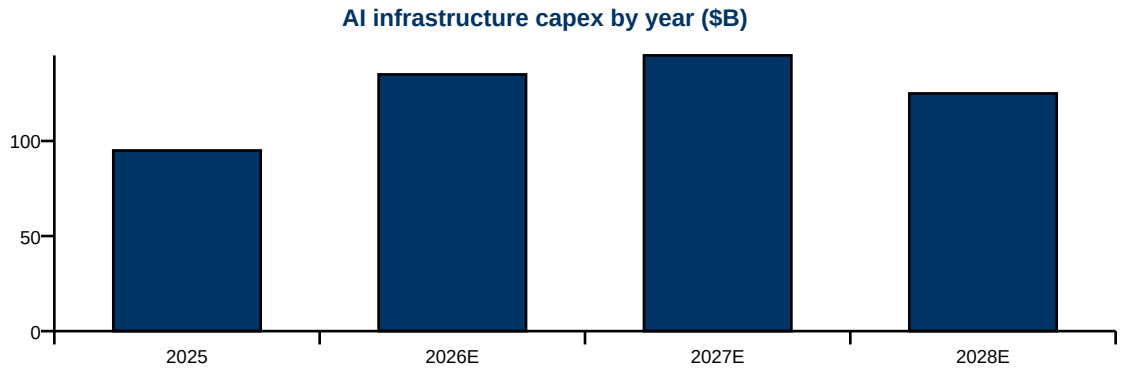
February 11, 2026

Executive Summary

We estimate aggregate capital expenditure tied to AI infrastructure will approach $500 billion over the 2025 to 2028 period, driven by hyperscaler buildouts and enterprise adoption. This note outlines our framework for sizing the opportunity and identifies the primary beneficiaries across semiconductors, data center real estate, and power and cooling. Our analysis incorporates announced spending plans from major cloud providers, chip level demand for GPUs and custom accelerators, and incremental investment in data center construction and grid connectivity. We present scenario analysis and discuss the implications for listed companies across our coverage universe.

Capex framework and timeline

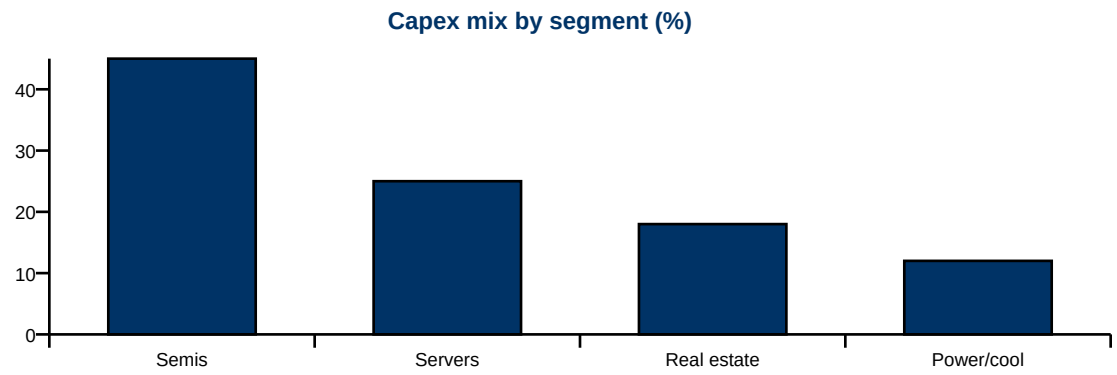
Our bottom up model incorporates announced spending plans from major cloud providers, chip level demand for GPUs and custom accelerators, and incremental investment in data center construction and grid connectivity. The cycle is front loaded, with the highest growth rates in 2025 and 2026 before deceleration as base effects expand. We segment the opportunity into compute (semiconductors and servers), data center real estate and construction, and power and cooling infrastructure. Each segment has distinct margin profiles and competitive dynamics. We update our assumptions based on recent earnings and industry commentary, and we provide sensitivity analysis around key drivers including adoption curves and pricing.



Source: J.P. Morgan Research. E = estimate. Cumulative ~$500B over period.

Semiconductor and hardware exposure

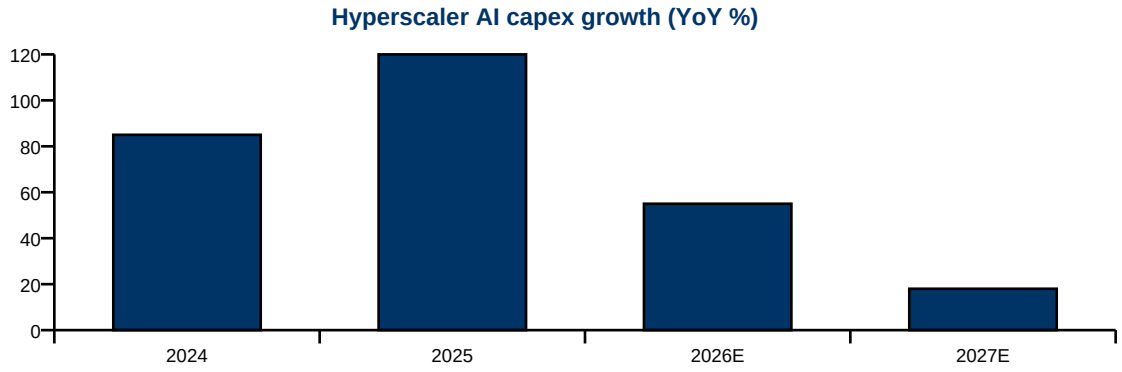
Semiconductors capture the largest share of incremental spend, with GPUs and custom accelerators representing the bulk of content growth. We model continued share gains for leading GPU vendors and custom silicon at hyperscalers. Memory and interconnect technologies are also critical enablers and should see sustained demand. Server and storage OEMs benefit from the buildout, though margin dynamics vary by vendor and product mix. We highlight selective names that are well positioned for order flow and margin expansion, and we discuss valuation and risk reward at current levels.



Source: J.P. Morgan estimates. Approximate share of incremental spend.

Data center real estate and power

Data center real estate and power infrastructure represent the next layer of the investment cycle. We expect sustained demand for new facilities in key markets, with power availability and permitting as potential constraints. Grid connectivity and backup power solutions are critical, and we see opportunities for utilities and power equipment vendors. Cooling technologies are evolving to support higher density deployments. We provide an overview of the competitive landscape and identify listed companies with material exposure. Execution and capital discipline remain important differentiators in our stock selection.



Source: J.P. Morgan Research. E = estimate.

Risks and scenario analysis

Risks include execution delays at hyperscalers, potential demand pull forward that could compress the cycle, and technology shifts that alter the mix of spending. We present bull and bear scenarios and discuss the implications for our coverage. Regulatory and environmental considerations may also influence the pace and geography of buildouts. Our base case remains constructive, but we advocate for selective exposure and attention to valuation and catalyst timing.