

THE AI INSTITUTE / OPERATING INTELLIGENCE

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The Board's AI Capital Test

Why infrastructure spend now needs four investment cases—and a different evidence standard for each.

Boards, C-suite and senior management

Research period: August 2026 – August 2026

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PUBLICATION RECORD

An Institute thesis, supported by evidence

Boards should stop approving AI capital as one strategic pool. Every material commitment should be classified as contracted capacity, platform defence, a capability option or speculative exposure, then governed with its own evidence, owner and stop rule.

WHAT LEADERS SHOULD TAKE FROM THIS PAPER

- 01

Classify every material AI infrastructure commitment before approval; the label determines the evidence and risk appetite that should apply.
- 02

Review demand, utilisation, depreciation, energy, financing and supplier concentration together rather than reporting capacity or backlog alone.
- 03

Use one group-wide capital standard, but write the regional assumptions into each case because power, permitting, market structure and public support do not travel uniformly.
- 04

Set a dated renewal, reallocation or stop rule and name the executive accountable for proving the case after the money is committed.

Research method

This Monday synthesis reviews official company earnings and investor materials from Alphabet, Microsoft, Amazon, Meta and SoftBank, then tests the capital thesis against IEA energy modelling, World Bank infrastructure and trade work, European Commission capacity policy and Australian infrastructure expectations. Company measures are preserved as reported and are not treated as directly comparable. Institute analysis is explicitly labelled and regional evidence is used to test transferability rather than fill a quota.

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How to read the evidence

External research supports the Institute's thesis; it does not substitute for it. Figures retain their original populations and definitions. Institute frameworks and inferences are labelled, and limitations are recorded before the references.

The decision is no longer whether to invest

The latest earnings cycle does not support a simple verdict that AI infrastructure spending is either rational or excessive. It shows something more useful for directors: very strong demand is arriving at the same time as larger capital commitments, higher depreciation, power constraints, component inflation and concentrated strategic bets. Those conditions can all be true. The board decision is therefore not whether AI matters. It is which economic case supports each commitment, who owns that case and what evidence would cause it to change.¹²³⁴

Alphabet lifted its 2026 capital-expenditure guidance to \$195–205 billion after reporting \$44.9 billion of quarterly capex, negative \$5.9 billion of quarterly free cash flow and a \$514 billion cloud backlog. Microsoft reported \$59.3 billion of quarterly cloud revenue and 43% Azure growth; its earlier official outlook put calendar-2026 capex near \$190 billion, including about \$25 billion attributed to higher component pricing. Amazon reported its fastest AWS growth in 18 quarters while trailing-12-month free cash flow moved to a \$7.6 billion outflow, primarily because of higher property and equipment purchases for AI. Meta narrowed its 2026 capex range to \$130–145 billion while continuing to expect operating income above 2025.¹²³⁴⁵

These numbers are not directly comparable. Company definitions, business mixes, asset lives and financing structures differ. They nevertheless make one governance weakness visible: the phrase ‘AI capex’ collapses commitments with different demand evidence, strategic purpose and downside. The Institute view is that boards should stop approving it as one pool.

Institute thesis — classify the investment case before approving the capital; conviction is not a substitute for evidence.

Four cases are hiding inside one budget line

The first case is contracted capacity. It is supported by enforceable customer commitments, credible conversion of backlog into revenue and an operating plan for delivery. The board should ask about contract duration, termination rights, customer concentration, pricing, capacity allocation and the cost of bridging supply. A large backlog is relevant evidence, but it is not cash, utilisation or margin.¹²⁴

The second case is platform defence. A cloud, advertising, software or data business may need capacity to retain customers, protect a product position or prevent a competitor from controlling a critical layer. Its return may appear across the existing franchise rather than as stand-alone AI revenue. The evidence is therefore customer retention, product performance, pricing power and avoided strategic loss—not a generic statement that the market is moving quickly.

The third case is a capability option. A bounded commitment can buy learning, scarce access, talent, data or a future right without assuming the full market materialises. Good options have a maximum cost, an expiry date, observable learning goals and a decision owner. An option with no boundary is simply an open-ended programme with a more attractive name.

The fourth case is speculative exposure. It can be legitimate when the board deliberately accepts concentrated, uncertain return for exceptional upside. SoftBank provides unusually direct language: its chief risk officer describes another planned \$30 billion follow-on OpenAI investment, high uncertainty from technology, competition and regulation, and monitoring of financing, market and portfolio risk. The useful lesson is not whether that bet succeeds. It is that concentration and financing belong in the decision record.⁶

EXHIBIT / THE FOUR-CASE CAPITAL TEST

01 Contracted capacity Prove contract quality, conversion, margin, delivery and customer concentration. Board evidence standard	02 Platform defence Prove franchise protection, retention, product advantage and pricing power. Board evidence standard	03 Capability option Bound the cost, expiry, learning objective and next decision. Board evidence standard	04 Speculative exposure State concentration, funding, downside and explicit risk appetite. Board evidence standard
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Demand is necessary evidence, not the complete return case

The latest disclosures contain substantial counter-evidence to a blanket capex warning. Alphabet says cloud revenue grew 82% and backlog reached \$514 billion. Microsoft reports 84% growth in commercial remaining performance obligation. Amazon says AWS grew 37% and both its AI and chips businesses exceeded \$25 billion annual revenue run rates. Supply remains constrained. A board that responds by freezing investment could destroy customer value and strategic position. ¹²⁴

The return question still matters because capital converts into expense and cash demands on different clocks. Accelerators and CPUs are shorter-lived than buildings, networking and grid connections. Alphabet expects higher depreciation and data-centre operating costs, including energy. Microsoft's official commentary separates shorter-lived compute assets from facilities intended to support monetisation for 15 years or more. Amazon's free-cash-flow definition subtracts property and equipment purchases, making the current investment cycle visible even while operating performance is strong. ¹³⁴

A useful board pack therefore puts six measures on one page: contracted demand, delivered capacity, utilisation, unit economics, lifecycle expense and free-cash-flow effect. Add customer and supplier concentration, because a capacity plan tied to a small number of labs, chip vendors, utilities or anchor customers can be diversified in legal form while remaining economically correlated.

The test is not a single hurdle rate applied without context. Contracted capacity may justify staged expansion against signed demand. Platform defence may need a portfolio view. An option should be judged by learning and preserved choice. Speculation should be sized against loss capacity. What matters is that the case is explicit before approval and testable afterwards.

One capital standard, different regional assumptions

North American hyperscalers can fund capacity from large global platforms, sell across several layers of the stack and reallocate compute between model development, first-party products and cloud customers. That flexibility is economically valuable, but it also makes stand-alone return attribution difficult. Their reported growth is evidence of demand for their businesses; it is not a global proxy for enterprise adoption or for the economics available to a regional operator.

Europe is combining commercial investment with industrial policy. The European Commission says 19 AI Factories and 13 antennas are being established, while an AI Gigafactory programme supported by up to €10 billion in EU and national funding is intended to unlock at least €20 billion of private investment. That creates access, sovereignty and ecosystem value, but the board case must still separate public-policy support, commercial demand and conditions attached to capital.¹⁰

For lower-income and emerging markets, the constraint set is broader. The World Bank describes four foundations—connectivity, compute, context and competency—and argues that viable markets need coordinated supply, demand and rules. A July working paper covering 85 countries adds an important warning: cheap electricity rarely creates compute-export competitiveness by itself because hardware cost, delivery frictions, regulation and trust can dominate. A proposal for an ‘AI hub’ should therefore prove hardware access, anchor demand, connectivity, serviceability and institutional credibility, not merely an attractive power price.⁸⁹

Australia offers a useful comparative lens rather than a universal model. National expectations ask data-centre and AI infrastructure developers to support new renewable supply, pay their share of grid connection, use water responsibly and invest in skills and local capability. These are policy expectations operating alongside existing approvals, not a single new global rule. They show how infrastructure externalities can move from a sustainability appendix into the investment case.¹¹

EXHIBIT / WHAT CHANGES THE CASE BY MARKET

NA	EU	EM	AU
Platform depth Cash generation, internal allocation and multi-layer monetisation support scale but complicate attribution. Company disclosures	Public capacity Test subsidy, access, sovereignty value and commercial demand separately. European Commission	Market formation Prove power, hardware, connectivity, demand anchors, rules and trust together. World Bank	Community bargain Include grid, water, skills and local capability in approval economics. Australian Government

Map the exposure across the whole portfolio

A board can approve several individually defensible commitments and still create one correlated exposure. The same frontier lab may be an equity investment, a cloud customer, a supplier dependency and the source of demand supporting new capacity. The same chip vendor can sit behind several cloud contracts. The same grid or financing market can constrain sites that appear geographically separate. Legal diversification is not necessarily economic diversification.

The portfolio record should therefore connect equity, debt, leases, purchase commitments, customer concentration, supplier dependence and energy exposure. Stress the shared assumptions: slower model demand, a pricing reset, a delayed grid connection, export controls, component inflation or one anchor customer changing its plan.

This is especially important for speculative and platform-defence cases, where the return may depend on several linked outcomes rather than one contracted cash flow. Show the board both the stand-alone case and the loss if shared assumptions fail together.

The investment clock is constrained by energy and delivery

The International Energy Agency projects global data-centre electricity consumption to more than double to about 945 TWh by 2030. It estimates that data centres account for around one-tenth of global electricity-demand growth over the period, but the local effect is far more concentrated. The United States and China dominate absolute growth; Southeast Asian demand is also expected to more than double. The IEA estimates around 20% of planned projects could be at risk of delay unless grid constraints are addressed.⁷¹²

This changes board timing. A server delivery is not useful capacity until power, networking, cooling, permits and customers are ready. A cheap site is not a low-cost site if energisation is late, curtailment is frequent or water and community conditions are unresolved. Capacity that misses the demand window can turn a contracted case into speculation.

The counterpoint is equally important: efficiency, geographic flexibility and better grid integration can change the outlook. The IEA's scenarios span materially different energy paths depending on adoption, supply chains and efficiency. Energy forecasts should be treated as planning ranges, not a reason to assign false precision to a 10-year return model.

A disciplined test should preserve good investment

The strongest challenge to this framework is that delay can be more expensive than overcapacity. Cloud demand is growing quickly, major providers remain supply constrained and long-lived sites can support several technology generations. A board that requires perfect attribution before acting may miss customer commitments, lose scarce power or surrender platform position.¹²³⁴

That is why the test classifies uncertainty instead of pretending to remove it. Contracted demand can support staged delivery. Platform defence can be funded against explicit franchise measures. An option can preserve speed while bounding loss. Speculation can move rapidly when its concentration and downside fit the agreed risk appetite.

The governance objective is not slower investment. It is faster recognition when the evidence no longer supports the original case, with a pre-agreed action that prevents sunk cost, strategic prestige or management momentum from becoming the decision rule.

Put the capital case into the board record

For every material commitment, record the case, the accountable executive, the geography, the asset mix and the dependency chain. Then answer eight questions: What customer or franchise demand supports it? Which assets are short-lived and which are long-lived? When is usable capacity available? What utilisation and unit-economics range is required? Who pays for power, grid and water? Where are supplier and customer concentrations? What financing or public-policy assumptions are embedded? Which dated finding triggers expansion, reallocation or stop?

Review the record at least quarterly and whenever the model, chip, supplier, customer, site, regulation or funding structure changes. Do not allow a strategic option to become permanent operating spend without renewal. Do not present voluntary policy support as contracted demand. Do not use U.S. cloud growth to stand in for global adoption, or a low power price to stand in for a viable regional market.

The decision is not anti-investment. It is an attempt to preserve the investments that have evidence while making uncertainty visible enough to govern. Boards can move quickly when the case is clear: expand contracted capacity against conversion; fund platform defence against explicit franchise measures; buy options with bounded loss; and accept speculation only within an agreed risk appetite.

AI infrastructure may become one of this decade's most consequential capital cycles. The organisations that benefit will not be those that simply spend the most or wait the longest. They will be those that know which case they are funding, can see when the case changes and have already agreed what to do next.

EXHIBIT / THE BOARD RECORD

CASE	OWNER	REGION	TRIGGER
Purpose Contracted capacity, platform defence, capability option or speculation. Institute framework	Accountability One executive owns the demand and return evidence after approval. Institute framework	Assumptions Power, permitting, financing, market structure and institutional conditions. Institute framework	Next decision A dated rule to expand, reallocate, renew or stop. Institute framework

RESEARCH RECORD

Method and limitations

Method

This Monday synthesis reviews official company earnings and investor materials from Alphabet, Microsoft, Amazon, Meta and SoftBank, then tests the capital thesis against IEA energy modelling, World Bank infrastructure and trade work, European Commission capacity policy and Australian infrastructure expectations. Company measures are preserved as reported and are not treated as directly comparable. Institute analysis is explicitly labelled and regional evidence is used to test transferability rather than fill a quota.

Limitations

The framework is a management tool, not an accounting standard, valuation, investment recommendation or legal opinion. Backlog, remaining obligations, AI revenue and free-cash-flow definitions differ by company. Public disclosures do not provide complete utilisation, contract-quality or project-level return data. Energy forecasts are scenarios. The World Bank compute-trade source is a working paper, and Australian expectations are policy guidance operating alongside existing law.



Evidence conventions

Source facts are cited to the original publication. Institute analysis reconciles definitions or combines evidence. Institute inference extends that analysis into a management proposition. Frameworks are decision aids, not claims of universal causality. Every important statistic should be read with its population, date, definition and caveat.

Research cutoff: 10 August 2026. Review cycle: six months, or earlier after a material change in evidence, standards or policy.

REFERENCES

Evidence behind the thesis

01	Alphabet, Q2 2026 earnings call
	Official call dated 22 July 2026; reports cloud demand, backlog, capex, free cash flow, asset mix and updated 2026 guidance.
02	Microsoft, FY2026 Q4 earnings release
	Official release dated 29 July 2026; reports cloud revenue, Azure growth and commercial remaining performance obligation.
03	Microsoft, FY2026 Q3 earnings call
	Official call dated 29 April 2026; provides calendar-2026 capex guidance, component-pricing effect, asset-life mix and supply constraints.
04	Amazon, Q2 2026 results
	Official release dated 30 July 2026; reports AWS and AI business growth, property and equipment purchases and trailing free cash flow.
05	Meta, Q2 2026 results
	Official release dated 4 August 2026; reports the narrowed 2026 capital-expenditure range and operating-income outlook.
06	SoftBank Group, Message from the Chief Risk Officer
	Official annual-report page current to 27 July 2026; describes planned OpenAI investment and portfolio, financing and market-risk controls.
07	International Energy Agency, Energy and AI
	Global modelling published 10 April 2025; includes regional electricity-demand scenarios, grid-delay risk and explicit uncertainty.
08	World Bank, Building Data Infrastructure for AI Readiness
	Official results brief dated 6 May 2026; sets out connectivity, compute, context and competency plus coordinated market-development evidence.
09	World Bank, Cheap Energy Might Not Be Enough
	Policy Research Working Paper dated 20 July 2026; model across 85 countries tests hardware, delivery, regulation and trust frictions.
10	European Commission, AI Factories
	Official page updated 7 August 2026; reports current factory network and public-private gigafactory investment design.
11	Australian Government, Data-centre expectations
	Official policy summary dated 23 March 2026; covers grid, renewable power, water, skills and local capability expectations alongside existing approvals.
12	International Energy Agency, Electricity 2026: Demand
	Official 2026 global electricity outlook; provides updated regional demand context for data centres, advanced economies, China, India and Southeast Asia.

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