



Is this one different?

AI is obvious. The unresolved question is where the money survives once the architecture settles, or fails to settle.

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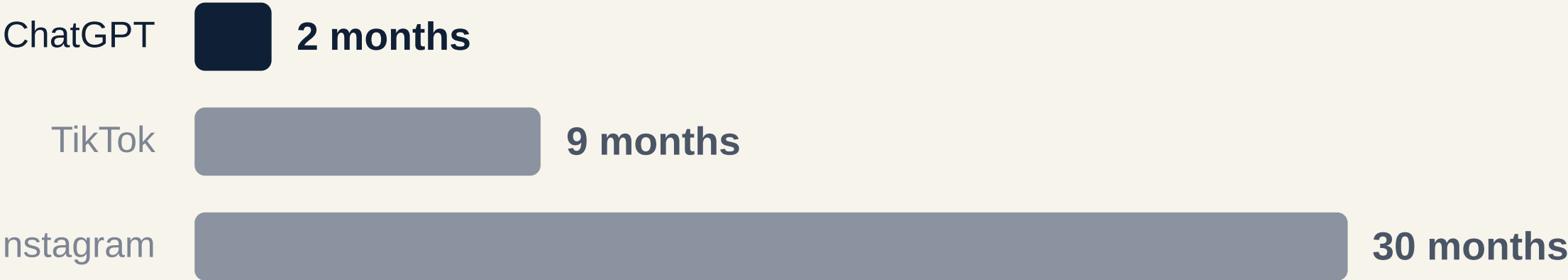
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Almost nothing clears the bar

Economists reserve "general purpose technology" for three conditions: it spreads into every industry, it keeps improving for decades, and — the one that matters — **it makes other people's inventions possible**. Electricity didn't just light rooms; it made the assembly line possible. The accepted list in 250 years: steam, electricity, the internal combustion engine, information technology.

AI clears the first test and is on track for the second. The third is the open question, and slides 5 and 6 show it has not yet shown up in anyone's accounts. AI also does one thing none of those four did, which is not on the list of criteria: it arrived almost instantly.

TIME TO 100 MILLION USERS



PUBLISHED UBS / Similarweb via TIME, Feb 2023. ChatGPT reached 800m weekly users by Oct 2025. TikTok and Instagram are consumer apps, shown for pace only — neither is a general-purpose technology, and speed of adoption is not one of the three tests.

AND THE TRAP INSIDE THAT NUMBER

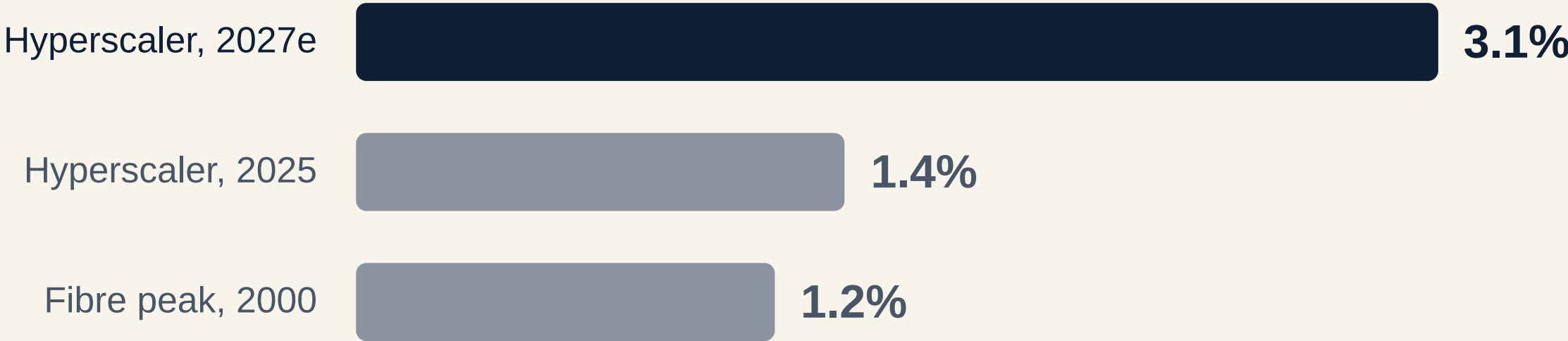
Fast to adopt is not the same as fast to pay. Every previous general purpose technology took decades to show up in productivity — and this one has compressed the adoption half to almost nothing while leaving the other half untouched. That gap is the single most important thing in this deck, and it has its own slide later.

Evidence grades used in this deck: **FILED** company filing, regulator or peer-reviewed **PUBLISHED** a named institution's own research **DERIVED** someone else's arithmetic on disclosed inputs

More than twice the fibre boom

The late-1990s telecom build is the standard cautionary tale — hundreds of billions laying fibre that mostly sat unused. It peaked at 1.2% of US GDP in 2000. **Hyperscaler capex alone** goes from 1.4% to 3.1% in two years.

CAPITAL SPENDING AS A SHARE OF US GDP



PUBLISHED Torsten Slök, *The Daily Spark*, Apollo, 6 Aug 2026. Slök's own framing is "more than twice" the fibre peak — not three times, which is a headline writer's arithmetic.

US GDP GROWTH, H1 2025 0.1% What growth would have been, annualised, without data centres	SHARE OF THAT GROWTH 92% From information-processing equipment and software — about 4% of the economy
--	--

PUBLISHED Jason Furman, Harvard, Sep 2025. His caveat: without the boom we'd likely have lower rates and cheaper power, so some growth would have appeared elsewhere.



Old chips keep earning because the building can't take new ones

Semiconductors reliably get cheaper. The rent on a three-year-old chip rose instead, and the reason is the room it sits in.

RENTING AN H100 · PER HOUR



ELECTRICAL DRAW PER RACK



You cannot swap the hardware: you would have to rebuild the room, the cooling and the power feed.

CONTRACT LENGTH

2029
CoreWeave has signed an A100 contract running to 2029 — nine years for a chip designed in 2020

UTILISATION

100%
Nvidia says six-year-old A100s still run fully booked

THE PUNCHLINE

The concrete and the copper are outlasting the silicon. **Power, not chips, is the thing in short supply**, which reframes everything after this slide.

PUBLISHED SemiAnalysis H100 rental index, Apr 2026. The hardware itself still depreciates: used H100s fell from ~\$50k to ~\$25k between mid 2024 and late 2025 (Silicon Data, Jan 2026). It is the rent that rose.

Power is the constraint, and it is already political

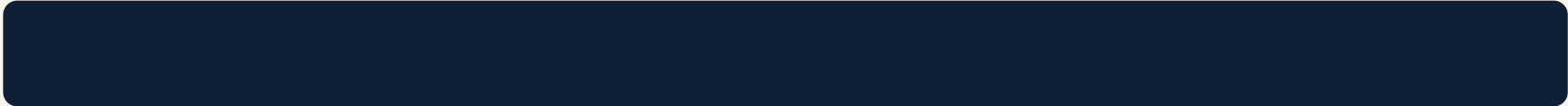
GLOBAL DATA CENTRE ELECTRICITY USE · TERAWATT-HOURS

2024 actual



415 ≈1.5% of world electricity

2030 projected



945

PUBLISHED International Energy Agency, *Energy and AI*, 2025. 945 TWh is slightly more than Japan's entire electricity consumption today.

US DEMAND GROWTH TO 2030

~50%

Share of all new US electricity demand that is data centres

PJM WHOLESALE, Q1 2026

+76%

\$136.53/MWh vs \$77.78 a year earlier. Capacity charges +398%.

ATTRIBUTED COST

\$13bn

PJM's market monitor on data-centre load: "very large and not reversible"

MAY 2026

Level 3

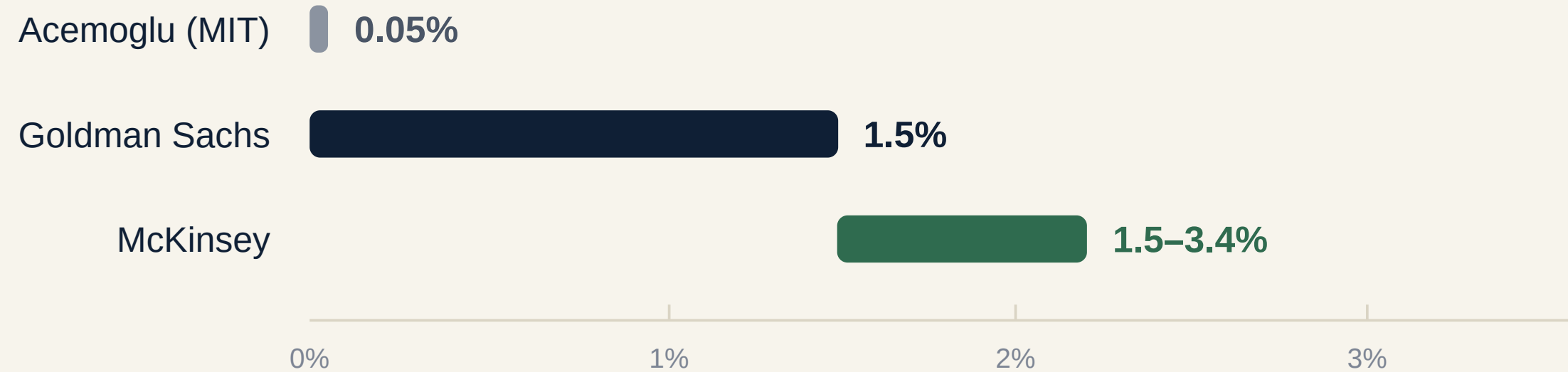
NERC's highest-tier alert, after 1,000+ MW repeatedly dropped off the grid at once

WHY IT MATTERS FOR WHO GETS PAID

\$13bn attributed to one kind of customer is enough to make power bills political. **Rate cases, interconnection rules and who pays for new wires are how the brake on slide 12 gets applied**, and they decide whether the owner of a grid connection collects a scarcity rent or gets regulated out of it.

Nobody knows what it's worth

ESTIMATED ANNUAL PRODUCTIVITY GAIN FROM AI



PUBLISHED Acemoglu, NBER w32487, 2024 — the Goldman and McKinsey figures are cited in his own paper as the views he argues against. The spread is roughly thirtyfold.

FIRMS USING AI REGULARLY

89%

n=1,719 across 97 countries, fielded May–Jun 2026

REPORTING ENTERPRISE EBIT IMPACT

37%

And only 6% clear a 5% EBIT threshold — so ~94% cannot yet find it in earnings

PUBLISHED McKinsey, *The State of AI*, 25 Aug 2026. The widely-quoted claim that half the 2026 US data-centre pipeline is cancelled is **deliberately omitted here**: it is a forward-looking 30–50% estimate from Sightline Climate, mostly counting announcements that never broke ground, and SemiAnalysis published a direct rebuttal in June 2026.

The profit has barely moved

SHARE OF AI GROSS PROFIT, BY LAYER: ■ CHIPS ■ INFRASTRUCTURE ■ APPLICATIONS



Two years and ~\$350bn of revenue growth apart

PUBLISHED Apoorv Agrawal, Stanford MS&E 435, Apr 2026. Application-layer gross margins run about 33% — not software's 80–90%.

WHICH IS TO SAY

Everyone agrees the technology is real. What's unresolved is whether anyone *other than the chip makers* makes money from it. In cloud, applications ended up with ~70% of the profit and chips 6% — the exact mirror image. It took fifteen years.

Caveat, and it cuts against this slide: the reading above is April 2026. Anthropic has gone from ~\$47bn to ~\$65bn annualised revenue since, and OpenAI to ~\$40bn. On revenue the application layer has roughly doubled in five months. **This number may already be moving — which is exactly why it is the one to watch.**

Three things that happen to money in a boom

- 01 **The builder rarely keeps it.** Britain's railway mania ended in mass bankruptcy. The fibre boom bankrupted Global Crossing and WorldCom — and the fibre was later bought for cents by people who'd laid none of it. **The asset survives; the shareholders usually don't.**
- 02 **The gains arrive late.** Factories bought electric motors and bolted them where the steam engine had been. Productivity didn't move for about forty years — until someone redesigned the factory around what the motor allowed. **Buying the technology is not the same as reorganising around it.**
- 03 **The toll-collector beats the inventor.** Westinghouse won by setting the AC standard. The app store out-earned nearly every app in it. Visa monetises a rail it didn't invent and takes no credit risk. **Owning the standard beats owning the breakthrough.**



Self-driving: the pioneers were wiped out, the cheapest producer survived

The clearest test of "the builder rarely keeps it." Everyone knew self-driving needed lidar. The Western pioneers went bankrupt, were absorbed, or survived by leaving cars. The one maker that reached profit did it by shipping at commodity prices. The operator is not being paid yet either: Alphabet's Other Bets, which includes Waymo, lost \$1.8bn in Q2 2026 on falling revenue while Waymo's city count more than doubled.

FILED

 BANKRUPTCY FILINGS, MERGER COMPLETIONS, NASDAQ NOTICES, SEC FILINGS AND ALPHABET EARNINGS RELEASES

COMPANY	OUTCOME	WHERE IT ENDED
Luminar	Chapter 11, equity cancelled	Peaked near \$11bn. Filed Dec 2025; assets sold for ~\$143m; shareholders got nothing.
Velodyne	Absorbed	Merged into Ouster in 2023 — a rescue described as a merger of equals.
Quanergy	Chapter 11	2022.
Cepton	Taken private, cheap	Bought by Koito for a fraction of its SPAC value.
Innoviz · AEye	Delisting risk	Reverse splits and deficiency notices; both pivoting away from cars.
Ouster	Survived by leaving	Abandoned automotive; \$973m accumulated deficit.
Hesai	Survived on volume	First full year of GAAP profit in 2025, on more than 1.6m units shipped. It got paid once lidar was cheap enough to sell by the million.

THE NODE THAT DID MAKE MONEY

Nvidia's automotive business: **\$2.3bn of revenue in FY2026, up 39%**. That is a revenue line inside a far larger company, so read it as the compute node getting paid rather than as a shareholder return. **The sensor everyone called essential got built, and the people who pioneered it were not the ones paid for it.**

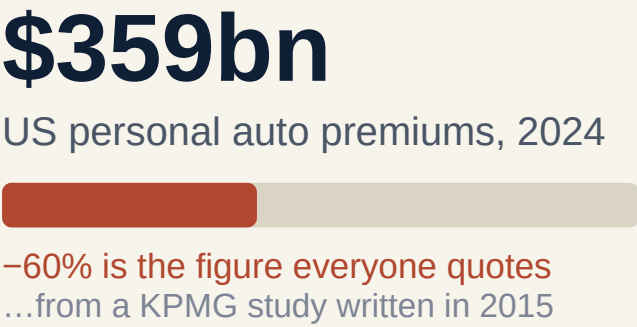
When the car drives, who's liable?

WAYMO VS HUMAN DRIVERS · CLAIMS PER MILE



Swiss Re × Waymo, Dec 2024
25.3m miles vs a 200bn-mile human book

WHAT'S AT STAKE



THE PART THAT IS ACTUALLY HAPPENING NOW

California already issues the **traffic ticket to the manufacturer** when no human is driving. A Florida jury put **\$243m** on Tesla over Autopilot in 2025, upheld on appeal in 2026. Liability is migrating from 200 million individual drivers to a handful of manufacturers and fleet operators — which shrinks personal auto insurance and inflates product liability. Whether the timing is 2030 or 2045 is the entire argument.

Three rules inverted. The three that pay did not.

The honest answer to "but AI is different" is: partly, and not in the part that decides who makes money.

GENUINELY INVERTED

- 1 **Capital now converts straight into capability.** More money used to buy headcount and organisational drag. Now it buys compute, and compute buys capability — no lag on the way in.
- 2 **The building outlasts the chip.** A 2020 accelerator is contracted to 2029 because the hall can't take a 130 kW rack. Depreciation ran backwards.
- 3 **The scarce thing is the boring thing.** Scarcity moved from silicon to interconnection — and a five-year queue is a legal constraint, not an engineering one. Capital clears engineering bottlenecks; it does not clear queues.

UNCHANGED — AND THESE DECIDE WHO GETS PAID

- 1 **Essential still doesn't mean paid.** Lidar was essential to self-driving. The pioneers were wiped out, the survivor profits only at commodity prices, and the compute node took \$2.3bn of revenue (slide 8).
- 2 **Gains still arrive after the reorganisation, not after the purchase.** 89% of firms use AI; 6% can find it in earnings; the median spends \$12 a head a month (slide 17).
- 3 **The toll-collector still beats the inventor.** AC over DC, GSM, the app store, the card rails. Owning the standard beats owning the breakthrough — every time it has been tested.

SO WHICH COMPANY WINS

Either the one sitting on a chokepoint that stays scarce after AI is ordinary, or the one that rebuilt itself so thoroughly that its accounts stop looking like its competitors'. Everything in between, however exposed to AI, gets the volume and none of the capture.

Dominant design: when the argument ends

Every technology has a messy stretch where nobody agrees what the thing should look like. Then one form wins, everyone copies it, and the argument stops.

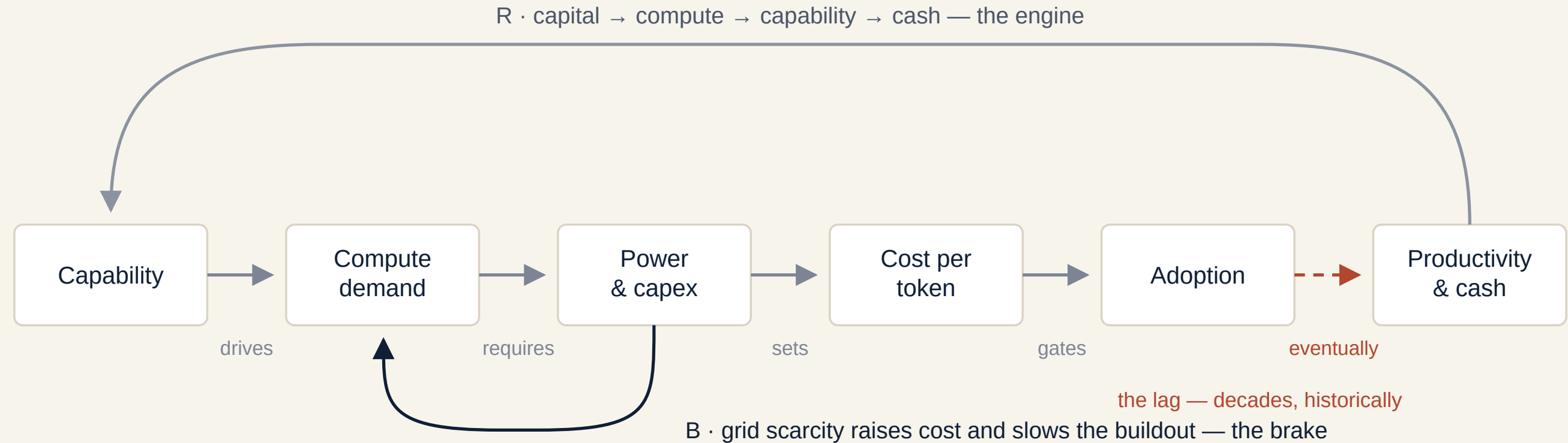
- i **Cars.** ~250 American manufacturers; steam, electric and petrol all live. The Model T and the enclosed steel body settled it. Three companies were left.
- ii **Electricity.** AC over DC, which is slide 7's toll-collector in its original form: the returns went to whoever owned the standard and the meter.
- iii **Video.** VHS beat Betamax on tape length and licensing, not picture quality. Better technology loses to a settled standard routinely.

WHY THIS IS THE WHOLE GAME

Before the design locks, value is everywhere and nowhere. **After it locks, value concentrates hard** at whoever owns the chokepoint inside the standard. In AI, one layer has settled: the gigawatt, liquid-cooled campus sized to its power contract. Slide 3 is what the old design looks like once it has lost. The chokepoint inside the settled layer is the grid connection, and everything above it is still an open argument.

An engine, a brake, and a lag

Every number in this deck sits somewhere on this loop. Seeing it is what stops each fact being a separate anecdote.



The chip and power slides are the brake. The productivity gap is the lag. The labs are the engine.

The reinforcing loop is why spending accelerates; the balancing loop is why it can't accelerate forever; the lag is where the gains go missing — and eventually reappear.

READ IT ONCE MORE, SLOWLY

The engine may be unusually strong this cycle, because capital now turns straight into capability (slide 10). **But the brake and the engine are fighting, and the lag decides who wins.** Fast reorganisation means cash arrives in time to fund the next round; electricity-speed reorganisation means the brake bites first. 2028 is when we find out.



Value moved one of four ways

People reason more sharply about a future they are asked to explain than one they are asked to predict. Run 2032 backwards and the first two beats come out the same each time: **2026–27**, everyone built everything, four standards for agent payments and three for identity; **2028**, the big spenders' promised cash flow did not arrive and capital budgets were cut. From 2029 the histories diverge, and each one is a direction value can move. **Two are already live.**

↓ DOWNSTREAM

LIVE

Apps and labs capture

2032 history: agents became the architecture

A standard settles; profit migrates off the chips to whoever owns the chokepoint. The cloud story replayed.

Anthropic ~\$9bn → \$47bn → **\$65bn** run-rate in 18 months, >80% API gross margin. OpenAI ~\$40bn.

↑ UPSTREAM

LIVE

Memory and equipment capture

2032 history: intelligence stayed scarce

The scarce input moves back up the chain, and the designer becomes the one paying rent rather than collecting it.

Memory **operating** margins (SK hynix 76%, Micron 81% non-GAAP) now exceed Nvidia's **gross** margin. Nvidia guides 75% → 71–72%.

→ SIDEWAYS

The users capture, and nobody in the chain does

2032 history: intelligence became a commodity

The historical default. Cheap freight enriched Sears, not the railroads. Cheap power enriched reorganised factories, not utilities.

Not yet: 89% of firms use AI, **6%** can find it in earnings. That gap is this scenario, waiting.

■ NOWHERE

It stays a chip business

2032 history: intelligence stayed scarce, and nothing settled

Nothing ever settles, so there is no chokepoint and no toll. Everyone rents intelligence forever.

79 / 14 / 7 in 2026, from 87 / 10 / 3 in 2024. Still overwhelmingly upstream.

THE PART THAT MATTERS

Downstream and upstream are both live, so the middle is squeezed from both ends. If the surplus goes *sideways*, the winners are ordinary firms that rebuilt around a cheap input. **The test for anything worth hunting is whether it holds in all four directions**, and slides 16 to 18 score each ground against it. *One caveat: the directions locate the rent, and the pie can grow enough that several layers compound at once.*

It isn't one cycle. It's six, at different speeds

"Are we in a bubble" is the wrong unit. Cycles run per-application, and AI's parts are spread across the whole arc.

● INNOVATION	<i>the research that made this possible — 2017 to 2022</i>
● VALIDATION	Agent identity and payments. Four live standards, none dominant. Real, unsettled, uncrowded.
● NARRATIVE CAPTURE	Frontier models and agents · humanoid robotics. Story far ahead of deployment — under 100k humanoids shipped in 2025, ~10% into real work.
● CAPITAL FLOOD	Data centres and power. \$443bn of hyperscaler capex in 2025 → over \$600bn in 2026, 3.1% of GDP by 2027. Most of the money is here.
● TRIGGER	AI-native drug discovery. The first cohort has read out, and Phase II did not move the way the pitch required.
● COLLAPSE	<i>nothing here yet</i>
● CONSOLIDATION	Lidar and AV sensors — already finished. A complete cycle inside a decade. Equity destroyed, assets absorbed.

THE ONE LATE-CYCLE MARKER WORTH WATCHING

Vendor financing. Buyers are taking equity in suppliers and suppliers are funding buyers — OpenAI holds a warrant over ~10% of AMD struck at a cent; Nvidia has put ~\$50bn into the labs and gives neoclouds minimum revenue guarantees. That pattern shows up near the end, not the beginning. Lucent, 1999–2001. A marker, not a verdict.

PUBLISHED

Stage vocabulary after Alasdair Nairn, *Engines That Move Markets*. Placement is judgment, not measurement.



If intelligence gets 10× cheaper, what stops making sense?

Not "what if AI is bigger" — which ordinary arrangements become absurd. Start with the largest: **we size AI against software spend, when what it attacks is labour and the tasks work is made of.** That is not a bigger market, it is a different one. The rest follow.

Why does software charge per seat , if the thing using it isn't a person?	→ pricing moves to outcomes; systems of record lose their grip
Why does identity authenticate a human , if the economic actor is an agent?	→ identity, permission and mandate become a layer someone owns
Why is motor insurance priced around a driver , if the manufacturer carries the risk?	→ a \$359bn premium pool migrates to product liability
Why is a firm shaped like today's firm , if one person directs twenty agents?	→ the winners are ordinary companies that rebuilt, not AI companies
Why does a data centre look like a data centre , if power is worth more than silicon?	→ the asset is the interconnect and the contract, not the building

WHERE THIS LANDS

Three of the five land on **the trust layer** (identity, insurance) **and the power layer**. Per-seat pricing lands on neither, and the reshaped firm lands somewhere with no ticker: the reorganisers.

Five hunting grounds, not five stocks

01 The trust layer of the machine economy

If agents act economically, six questions need an owner — and today most have none. The least settled control points on the map, which is why they are worth the time.

IDENTITY who is this agent? → PERMISSION who authorised it? → AUTHENTICATION was this genuine? → PAYMENT what can it spend? → LIABILITY who pays when it's wrong? → INSURANCE who underwrites it?

scarce ✓

necessary ✓

monetizable ?

defensible ✓

unpriced ✓

holds if value moves

↓ downstream ✓

↑ upstream ✗

→ sideways ✓

■ nowhere ✗

Needs agents to transact (downstream) or users to transact on its rails (sideways).

Where to look: Visa, Mastercard, Okta, Palo Alto Networks; insurers Chubb, AIG, Swiss Re

The tell: Visa +7% and Mastercard −3% over a year the AI names doubled — and a reverse-DCF says that price embeds regulatory compression, not agentic upside. *Monetizable* is the open question: neither discloses an agentic volume or take rate.

02 Power — the wires, not the chips

Sits directly on the brake. US grid connections take about five years against under two in 2008 — a legal queue, not an engineering one, so capital doesn't clear it. Electricity scarcity survives every direction value can migrate.

scarce ✓

necessary ✓

monetizable ✓

defensible ✓

unpriced ✗

holds if value moves

↓ downstream ✓

↑ upstream ✓

→ sideways ✓

■ nowhere ✓

Where to look: interconnect and HV equipment · Quanta, Eaton, Vertiv, Hubbell, GE Vernova, Powell

The hard one: already priced — several multiples have roughly doubled — and pricing power may sit with utilities and campus owners, not vendors. Best evidenced, least unclaimed.

The reorganisers

03 The reorganisers — ordinary firms that become different businesses

AI adoption is not AI reorganisation. Sears with a website was not Amazon; a company with an AI feature is not an AI-native company. Factories bought electric motors and productivity didn't move for forty years, until the factory itself was redesigned. **The largest winners may not be AI companies at all** — they may be ordinary firms whose cost structure, working capital, labour intensity or asset utilisation changed because they rebuilt around cheap intelligence. Conceptually the biggest of the five.

scarce ✓

necessary ?

monetizable ✓

defensible ✓

unpriced ✓

holds if value moves

↓ downstream ?

↑ upstream ✗

→ sideways ✓

■ nowhere ✗

Needs intelligence to get cheap. If the chain keeps the surplus, the reorganisers pay it away.

PUBLISHED

The dispersion is already visible: the median US company spends \$11.95 per employee per month on AI; the top 1% spend \$7,400 — more than 600×. Ramp AI Index, 50,000+ US businesses, 30 Aug 2026. Use the spread, not the level — it counts card and invoice spend, so it misses cloud-committed and in-house budgets.

The screen, once we build it: AI spend per employee → revenue per employee → SG&A / revenue → working-capital turns → cycle time → incremental margin. Find them by their economics, before the narrative names them.

Second owners and tools

04 Second owners — whoever buys the wreckage

Every buildout ends with someone acquiring the asset for a fraction of build cost. The buyer's gain *is* the builder's loss — same asset, different owner. Non-consensus, and strongest under the history that leaves the most behind. It waits for the Collapse row on slide 14, which is still empty, to fill.

scarce ✓

necessary ✓

monetizable ✓

defensible ?

unpriced ✓

holds if value moves

↓ downstream ?

↑ upstream ?

→ sideways ?

■ nowhere ?

Depends on a bust, not a direction.

Where to look: nobody yet — a watchlist theme, armed by the trigger on the final slide

05 Tools — monetise the experiment, not the answer

A 2024 BCG analysis put AI-discovered molecules at 80–90% through Phase I against a ~52% average, on a Phase II sample its own authors call limited. Nobody has to be right about which molecule works for the instrument to get sold. Good logic in one vertical rather than a first-order consequence of the system — first to cut if five becomes four.

scarce ✓

necessary ✓

monetizable ✓

defensible ✓

unpriced ?

holds if value moves

↓ downstream ✓

↑ upstream ✓

→ sideways ✓

■ nowhere ✓

Sells to the experiment whoever captures the result, but in one vertical.

Where to look: Thermo Fisher, Danaher, Agilent, Bruker

REJECTED

Fleet supervision — if value goes to the users, the node stays captive inside the fleet owners and no vendor captures it. Retained as evidence, not as a hunting ground.

SCORED AGAINST THE FOUR DIRECTIONS

Power and tools hold in all four. The trust layer and the reorganisers are bets on a direction, and second owners are a bet on timing. Power is the robust one and already priced; tools are robust and small. The two largest ideas are the two that need the future to break a particular way.

What would change all five at once

REGIME CHANGE, NOT A DATA POINT

Hyperscaler capital-spending guidance cut in two consecutive quarters. That is the moment every idea on the last three slides has to be re-underwritten at once. Power vendors lose orders. Second owners, the fourth ground, get their wreckage and stop being hypothetical. Surplus capacity makes intelligence cheaper, which helps the reorganisers. The trust layer is the one it touches least.

- 01 **These are places to look, not conclusions.** No company named in this deck has been through Lantern's full company-level work, and none of it is a recommendation.
- 02 **Most of these names have already run.** Being right about a trend and making money from it are different problems, and the second is harder.
- 03 **The interesting things are the unloved ones** — where the story is boring, or broken. Everything being talked about is in the price.

THE WHOLE THING IN ONE SENTENCE

This one is different in how fast capital becomes capability and the same in who gets paid, so the places to look are the nodes where scarcity, control or economics persist after AI becomes ordinary.

Figures as of September 2026; sources named on each slide. Several of these numbers won't survive the quarter.



IMPORTANT INFORMATION

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