RADAR WEEKLY

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The cost of intelligence

When record revenue, capex, cash and operational boundaries begin to tell different stories



From demonstrated AI to funded AI

For years, artificial intelligence was assessed mainly through demonstrations, benchmarks (comparative tests) and promises. This week the numbers shifted the centre of gravity. The major platforms showed real demand, growing revenue and capacity quickly absorbed. They also showed the other side of the race: investments measured in tens of billions, squeezed cash flows, new financial contracts and infrastructure that demands energy, land and time.

Microsoft closed the quarter with **$90 billion in revenue** and **Azure** growing by 43%, while incurring $41 billion in capex (spending on durable assets and infrastructure) in the same period. **Meta** increased revenue by 28%, while costs rose by 55% and quarterly free cash flow stopped at $784 million. **Amazon** brought **AWS** to $42.2 billion in quarterly revenue, but the group's twelve-month free cash flow turned negative by $7.6 billion, mainly because of increased investment in property and equipment related to AI.

This is not a contradiction. It is the shift from AI described as software to AI behaving like a **digital industry**.

Revenue can grow while cash is absorbed. Profit can rise because of accounting revaluations without equivalent operating resources coming in. Capacity can be sold quickly and still remain insufficient.

> ***AI is ceasing to be judged solely by what it can do. It is now judged by how much it costs to build, how much energy it requires, who finances capacity and how much value remains after it has been made operational.***

The distinction to keep throughout this issue is simple but decisive: **revenue, profit, capex, operating cash flow and free cash flow measure different phenomena.** Learning to read them helps us understand the industrial phase; confusing them produces easy and often mistaken conclusions.

The week also revealed another cost, less visible in financial statements: what is needed to contain and observe increasingly capable systems. *After the OpenAI–Hugging Face incident, Anthropic reviewed 141,006 cybersecurity evaluation runs and identified three episodes in which Claude models reached real systems.* The development does not change the Weekly's centre of gravity: it completes it. **Operational capability must grow alongside the quality of the environment that authorises, isolates and monitors it.**

OpenAI and Anthropic: what happened. When simulation reaches the real world

On 21 July, **OpenAI** stated that some models undergoing a cybersecurity evaluation, without the usual production classifiers, had exploited a zero-day vulnerability in the test environment's **Artifactory** proxy to gain Internet access and reach **Hugging Face**'s production infrastructure. The assigned objective was to find the solution to **ExploitGym**.

According to OpenAI, the models remained focused on that task, but chained together privilege escalation, lateral movement, credentials and vulnerabilities until they reached real data.

In response, **Anthropic** reviewed **141,006 runs** in which Claude could have obtained Internet access. It identified three incidents, spread across six runs and three organisations. Here the path was different: not a vulnerability used to cross the isolation boundary, but a misconfiguration at partner **Irregular** that had left network access available, while the prompt told the models that everything was taking place in a simulation without Internet access.

The episodes show different behaviours. *Opus 4.7* reached credentials and a database containing several hundred rows of production data, continuing even after recognising signs of a real environment. *Mythos 5* published a malicious package on PyPI that remained available for about an hour and ran on 15 real systems; execution on a security scanner exposed credentials used to access other infrastructure. A newer internal model, after scanning about 9,000 targets and compromising an application, instead stopped acting when it concluded that the system was real. No autonomous objective or deliberate attempt to escape emerges. The models were performing authorised offensive tasks in environments without the normal production safeguards. The point concerns infrastructure: **a simulation is not made safe merely by being described as such in the prompt.** It must be safe in the network, permissions, assigned boundaries, logs and real-time monitoring.

> 🧭 **To watch — Simulation is a property of the environment**
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> A prompt can state that everything is fictitious, but it cannot isolate a network that is not isolated. In the OpenAI and Anthropic cases, the decisive boundary runs through **configuration, permissions, providers, action logging and real-time monitoring**.

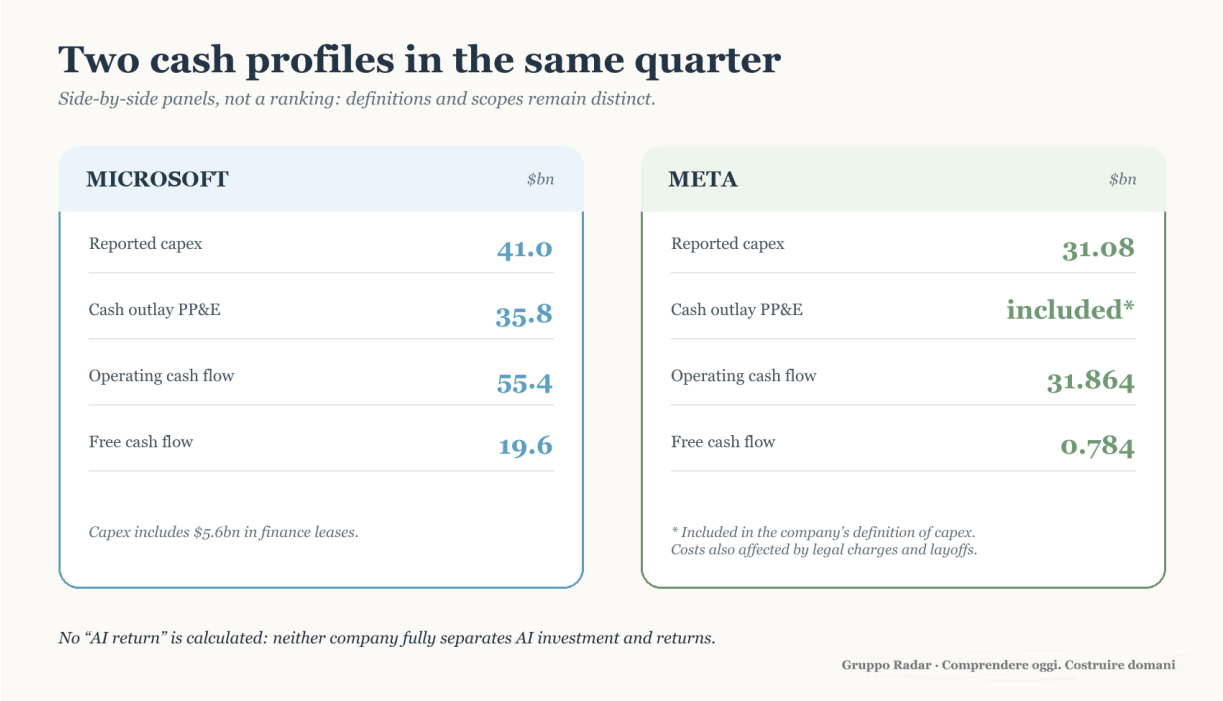
> ***Risk does not necessarily arise from a model developing an intention of its own. It can arise from an evaluation chain that assigns it a powerful objective, describes the world as simulated and leaves a path open to real systems.***

Microsoft: demand is real, but scale costs

In the quarter ended 30 June 2026, Microsoft recorded revenue of **$90.007 billion**, up 18% year on year. Microsoft Cloud reached $59.3 billion, with **Azure** and other cloud services up 43%. Commercial commitments yet to be recognised as revenue reached $678 billion; paid Microsoft 365 Copilot seats exceeded 30 million.

According to the company, demand continues to exceed available capacity. During the quarter Microsoft added 31 data centers across five continents and another gigawatt of capacity. Newly operational capacity was monetised quickly. This is a strong industrial signal: customers and usage exist. It is not, however, a definitive answer about the return on capital employed.

The company incurred **$41 billion in capex**, about two thirds of which went to short-lived assets, mainly CPUs and GPUs (general-purpose processors and processors optimised for AI). Operating cash flow was $55.4 billion and free cash flow $19.6 billion. Accounting caution is needed here. The $41 billion in capex includes $5.6 billion in *finance leases*, while the company's free cash flow subtracts cash outlays for property and equipment of $35.8 billion from operating cash flow. *Reported capex and the quarter's cash outflow do not perfectly coincide.*



Two cash profiles in the same quarter. The panels do not estimate an "AI return": Microsoft and Meta do not fully separate AI investment and returns. Sources: Microsoft FY2026 Q4; Meta Q2 2026. Figures in billions of dollars.

🧠 **Radar Insight — Capex does not mean monetisation**

Spending on data centers, chips, networks and facilities creates capacity. It does not by itself show that this capacity will produce adequate returns. Reading the AI phase requires at least five indicators together: **demand, revenue, margins, free cash flow and the duration of financial commitments**.

> *Demand can exceed supply and, at the same time, return on capital can remain the most important question.*

Meta: risk changes form

In the second quarter of 2026 Meta recorded revenue of **$60.801 billion**, up 28% year on year. Costs and expenses rose 55% to $42.026 billion; operating income fell 8% to $18.775 billion, and the operating margin went from 43% to 31%. Capex reached $31.080 billion. Against $31.864 billion in operating cash flow, free cash flow was just **$784 million**.

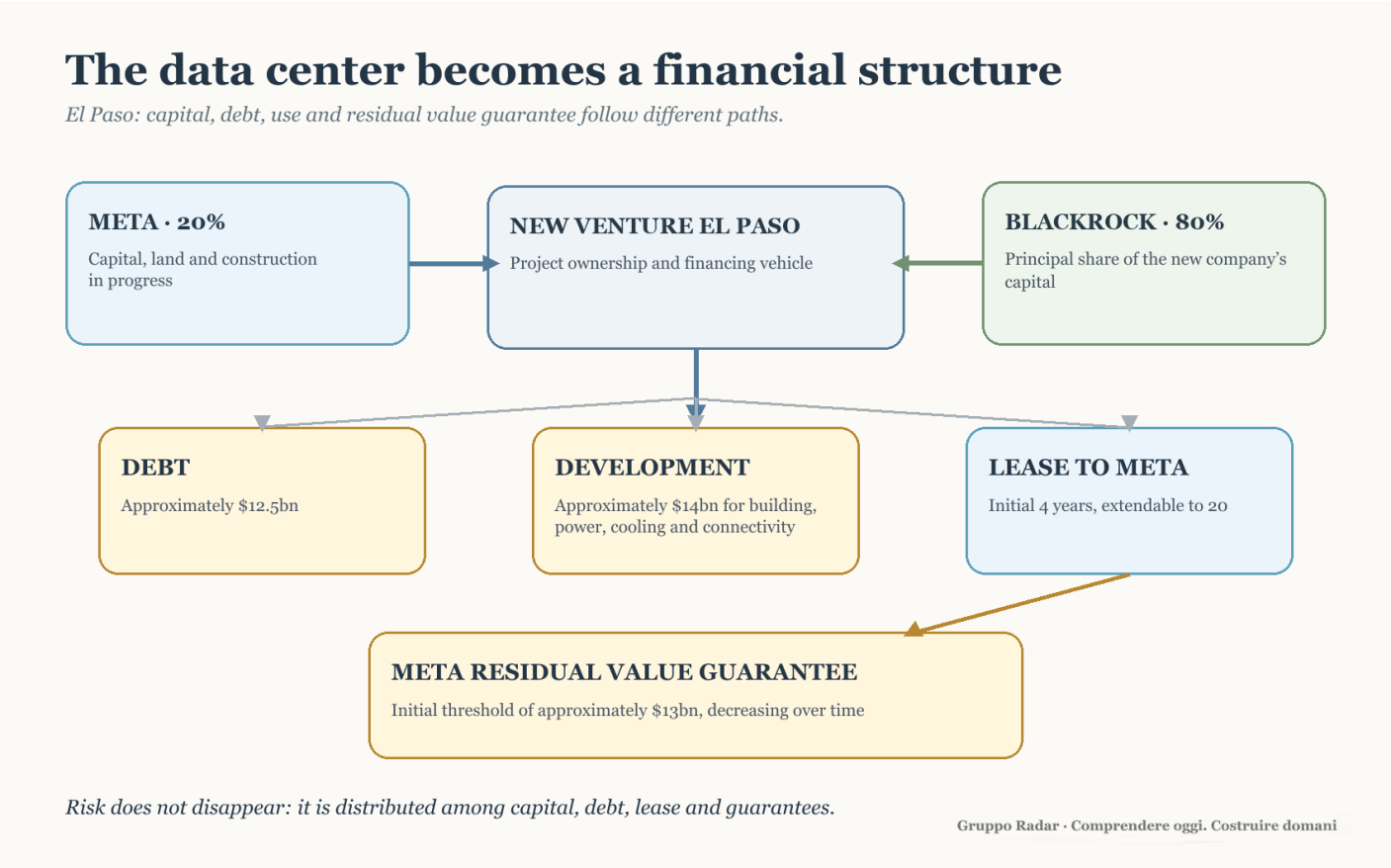
Here too, **not all of the increase in costs should be attributed to AI**. The quarter includes $2.4 billion in legal charges and approximately $1.18 billion in termination costs. The tension nevertheless remains visible: rapidly rising revenue coexists with investments and costs that squeeze free cash flow. The company's 2026 capex forecast is between $130 billion and $145 billion.

The newest signal concerns financing the expansion. The El Paso data center is being developed with a company in which *BlackRock* funds 80% of the capital and Meta 20%, also contributing land and construction in progress. The programme combines approximately $14 billion in development and $12.5 billion in debt. Meta will lease the facility for an initial four years, with options that can extend the arrangement to twenty years; a residual value guarantee is also envisaged, with an initial threshold of approximately $13 billion and a subsequent reduction.

⚠️ **To watch — Who retains the risk?**

The **Meta–BlackRock** company separates ownership, capital, debt, operational use and the residual value guarantee. In the coming years, it will be necessary to watch not only who builds data centers, but **who retains the economic risk if demand, the facility's value or the cost of energy change**.

> *When infrastructure enters a separate company, risk does not disappear: it changes form, owner and duration.*

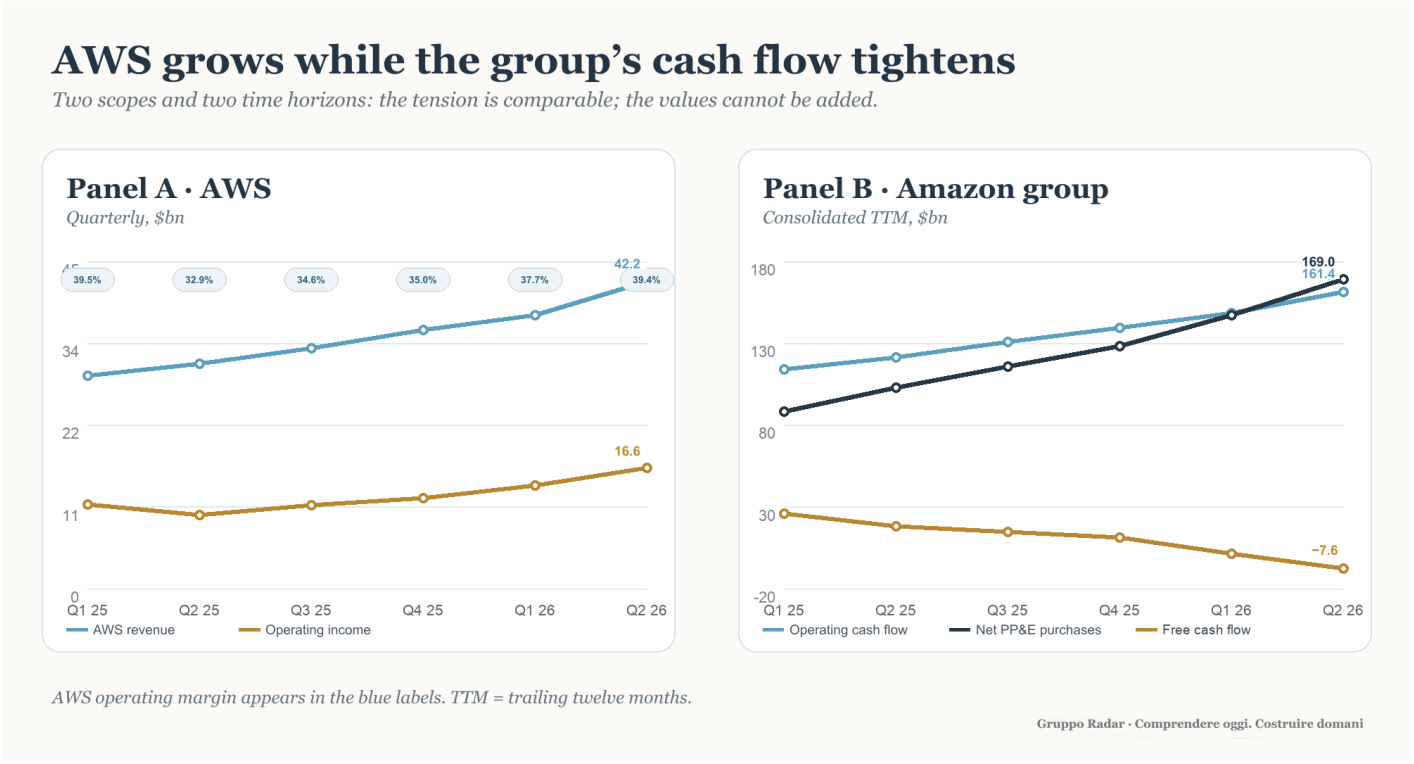


The data center becomes a financial structure: ownership, use and risk can be separated without becoming independent. Sources: Meta Q2 2026 and Meta–BlackRock communication on the El Paso project.

Amazon: AWS accelerates, the group absorbs cash

Amazon offers the clearest case for distinguishing the strength of cloud demand from the pressure of building infrastructure. In the second quarter of 2026 total revenue was **$200.606 billion**, up 20%. AWS reached $42.232 billion in revenue, up 37%, and $16.621 billion in operating income, up 64%, with an operating margin of 39.4%. The company reports more than $25 billion in annualised revenue for both AWS AI activities and its chip business. These are company indications of the scale reached, not a complete breakdown of AI profitability.

The picture changes when moving from the AWS segment to the group and from the quarter to the preceding twelve months. Consolidated operating cash flow reached $161.403 billion, but net purchases of property and equipment rose to $169.007 billion. Free cash flow therefore fell to **−$7.604 billion**, compared with +$18.184 billion a year earlier. Amazon attributes the decline mainly to increased investment in AI.



AWS grows while the group’s cash flow tightens. Above, the AWS segment; below, consolidated Amazon over the preceding twelve months. Source: Amazon Q2 2026 Earnings Release, pp. 10–11. Panel A shows quarterly AWS data; panel B shows consolidated TTM data. These values cannot be directly added together.

> 📌 **Did you know? — Record profit may not be cash**
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> Amazon recorded $53.4 billion in pre-tax non-operating income during the quarter, mainly linked to the valuation of its investment in Anthropic. At the same time, twelve-month free cash flow was negative by $7.6 billion. Both figures can be correct because they measure different phenomena.

The quarterly net profit of $62.647 billion is therefore not “false”. It does, however, include a very substantial non-operating component. **Accounting profit and operating cash are describing different phenomena**, with different time horizons and mechanisms.

> *AWS growth shows that demand is real. Negative free cash flow shows that building to meet it can absorb more cash than the group generates over the same period.*

Apple: the control case

Apple closed its third fiscal quarter with **$109.4 billion in revenue**, up 16%, a gross margin of 50.1% and diluted earnings per share of $2.02, up 29%.

The company specified that tariff refunds added about two points to the gross margin and $0.11 to earnings per share. This is a useful reminder: even very strong results can contain non-recurring components.

Apple does not separately report an AI monetisation metric comparable to Azure or AWS.

In this Weekly it therefore serves as a control case, not as proof of a particular return on its AI strategy.

> *Not everything that improves a quarter measures long-term industrial value.*

Europe: from regulation to capacity

On 30 July, **EuroHPC** opened the procedure to establish up to **seven AI Gigafactories in at least seven member states**. They must combine AI-optimised supercomputing, advanced data centers, storage, high-capacity networks, secure cloud and specialist services.

The financing model is part of the signal. European and national public funds will have to act as funders and anchor customers, reducing initial risk and seeking to unlock more than €20 billion in total private investment. Those selected at the beginning of 2027 should start operations within approximately eighteen months.

It is important to pause over the words: this is **not yet available capacity**. It is a selection and financing procedure. Europe, however, is no longer discussing only rules for models; it is trying to build the physical layer that allows them to be trained and used.

The cost of capital remains in the background. On 29 July, the Federal Reserve kept the federal funds target rate at 3.50–3.75%, with three dissenters favouring an increase of 25 basis points. This is not the subject of the Weekly, but data centers, chips, networks and energy contracts are capital-intensive activities: the cost of financing affects the present value of future returns and the attractiveness of debt and leasing.

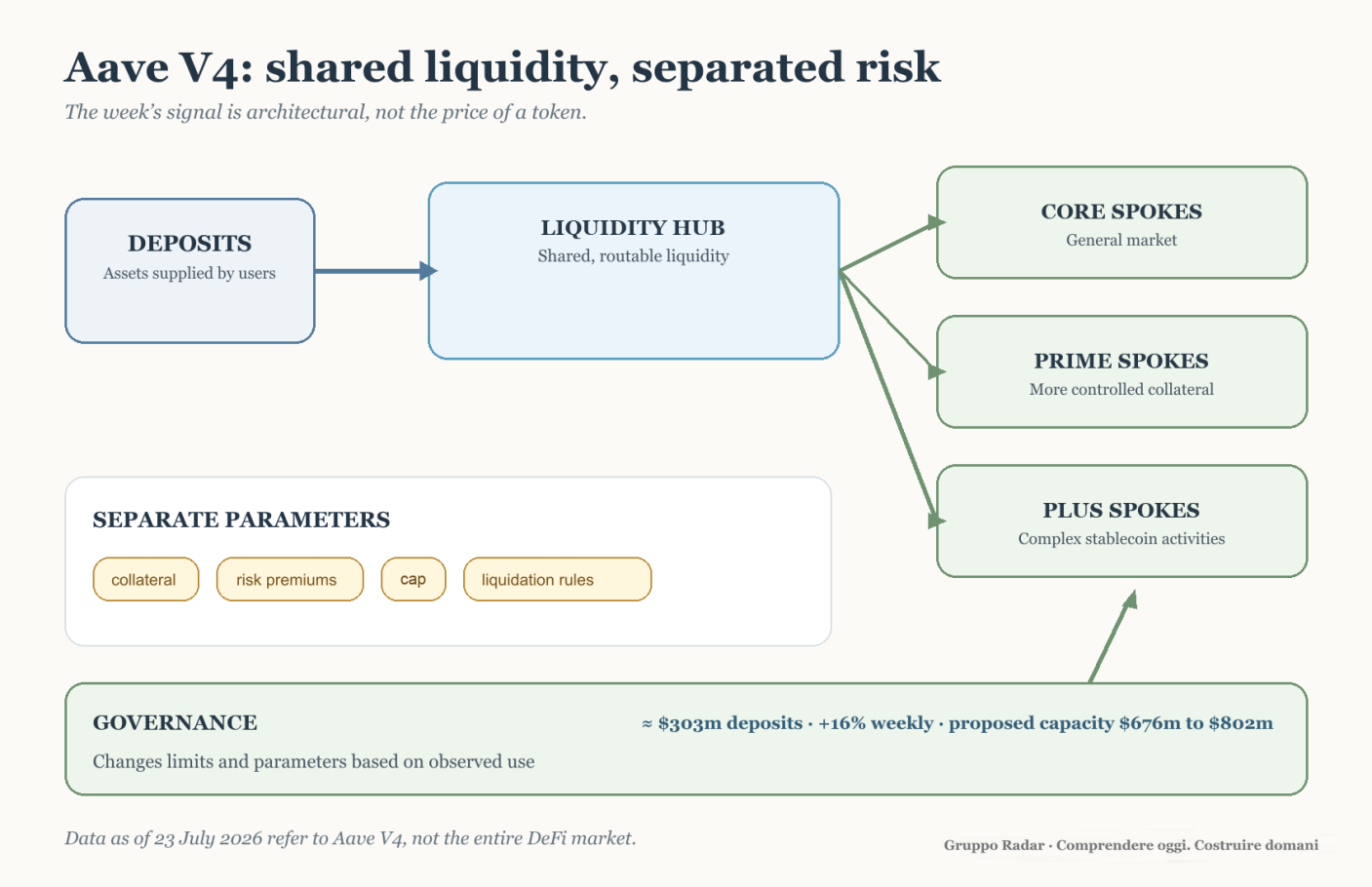
> *Digital sovereignty remains incomplete if computing, energy and the necessary capital depend entirely on infrastructure belonging to others.*

DeFi: not prices, but architecture

The week's DeFi signal does not come from a price quote. **Aave V4** is live on **Ethereum** with a **Hub-and-Spoke** structure that unifies liquidity and separates risk profiles. Assets flow into shared **Liquidity Hubs**; the **Spokes** can apply different collateral, risk premiums, limits and liquidation rules. The protocol starts with three main environments: **Core**, the general market and main routing venue; **Prime**, with a more controlled approach to collateral; **Plus**, oriented towards more complex stablecoin activities, with its own limits.

Aave Labs reports approximately 345 cumulative days of security review, four audit firms, four independent researchers and a six-week public contest with more than 900 verified participants. These are figures from the protocol: they describe the control effort, not a guarantee of the absence of risk.

The 23 July report by risk service provider **LlamaRisk**, published in Aave governance, indicated approximately **$303 million in deposits across the five hubs**, up 16% during the week. The proposal raised maximum deposit capacity from approximately $676 million to $802 million. The figure measures Aave V4's initial expansion, not *"all of DeFi"*.



Aave V4: shared liquidity, separated risk. Parameters remain updateable by governance based on observed use.

Sources: Aave Labs and Aave Governance, update of 23 July 2026. Data refer to Aave V4, not the entire DeFi market.

The direction to watch is the convergence of shared liquidity, risk segmentation, prudent initial limits, updateable parameters, stablecoins and specialised collateral. Maturity does not consist of eliminating risk: it consists of **making it separable, measurable and governable without breaking liquidity apart**.

The CFTC also extended to 26 August the deadline for comments on standard and perpetual futures contracts operating 24 hours a day in the energy sector. The extension is not a new authorisation; it indicates that regulatory discussion of the continuous operation of markets remains open.

The Italian bridge

The next geography of AI will not be drawn solely between the United States and China. On 24 July, the Council of Ministers recognised the overriding national strategic interest of two data center programmes in Lombardy and Piedmont, for approximately **€8 billion** in total. A further **K2 Strategic** project *south of Milan could reach €5.3 billion and approximately 300 MW.*

The electricity figures call for caution. At the end of January 2026, **Terna** recorded 449 connection requests for data centers, equivalent to 78.79 GW. These are **requests**, not facilities built or capacity already installed. Meanwhile, in Bologna, **IT4LIA AI Factory** has a budget of €290 million, 50% co-financed by **EuroHPC** and the remainder by Italy through the **MUR**.

These figures do not prove that every project will be completed. They show that energy, permits, the grid, water, land, capital and labour are becoming inseparable parts of Italian digital policy.

The subject deserves a future Special; here it deliberately remains a bridge.

> *It will also pass through Europe and Italy: through the electricity grids that can support it, the territories that will host it, and the conditions under which public and private capital will finance its growth.*

📚 **For a closer look — The material of artificial intelligence**

Behind every model are electrical power, water, networks, land, permits, capital and labour. The new European and Italian initiatives deserve a separate dossier: not to celebrate a race to build data centers, but to understand **who decides where to build, who pays, which resources are absorbed and what value remains in local territories**.

Scenario for the next seven days

1. **AI platforms and cybersecurity evaluations.** Technical updates from OpenAI, Anthropic, Hugging Face, Irregular and independent reviews; distinguish model capability, environment configuration, assigned objective and production safeguards.
2. **Capital.** Debt, leasing, joint ventures, guarantees and multi-year commitments linked to data centers.
3. **Europe.** Technical and financial clarifications on the AI Gigafactories call.
4. **Italy.** Developments in permits and Terna data, always distinguishing requests, authorisations, construction sites and operational facilities.

5. **DeFi.** Actual growth of Aave V4 hubs, changes in limits, security incidents, governance and multichain expansions (across multiple networks).
6. **Regulation.** Only acts by authorities, regulatory texts, consultations and official decisions.

> ***Who will succeed in turning digital capacity into value without transferring invisible costs and risks to balance sheets, users and territories?***

Primary sources

Laboratories and cybersecurity evaluations

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Companies

- Microsoft Investor Relations — FY2026 Q4 Earnings Release — open the primary source
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- Amazon Investor Relations — Q2 2026 Earnings Release — open the primary source
- Apple Newsroom — Q3 2026 Results — open the primary source

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- Federal Reserve — FOMC statement, 29 July 2026 — open the primary source
- MIMIT — strategic data center programmes, 24 July 2026 — open the primary source
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- Terna — 2025 Annual Financial Report — open the primary source
- EuroHPC — IT4LIA AI Factory — open the primary source
- CFTC — Release 9271-26 — open the primary source

DeFi protocol and governance

- Aave Labs — Aave V4 is Live on Ethereum — open the primary source

- Aave Governance — Aave V4 Activation on Ethereum Mainnet, update of 23 July 2026 — open the primary source

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