GSMA Intelligence

Telco AI:

State of the Market, Q4 2025

Moving to a pro-growth approach

January 2026

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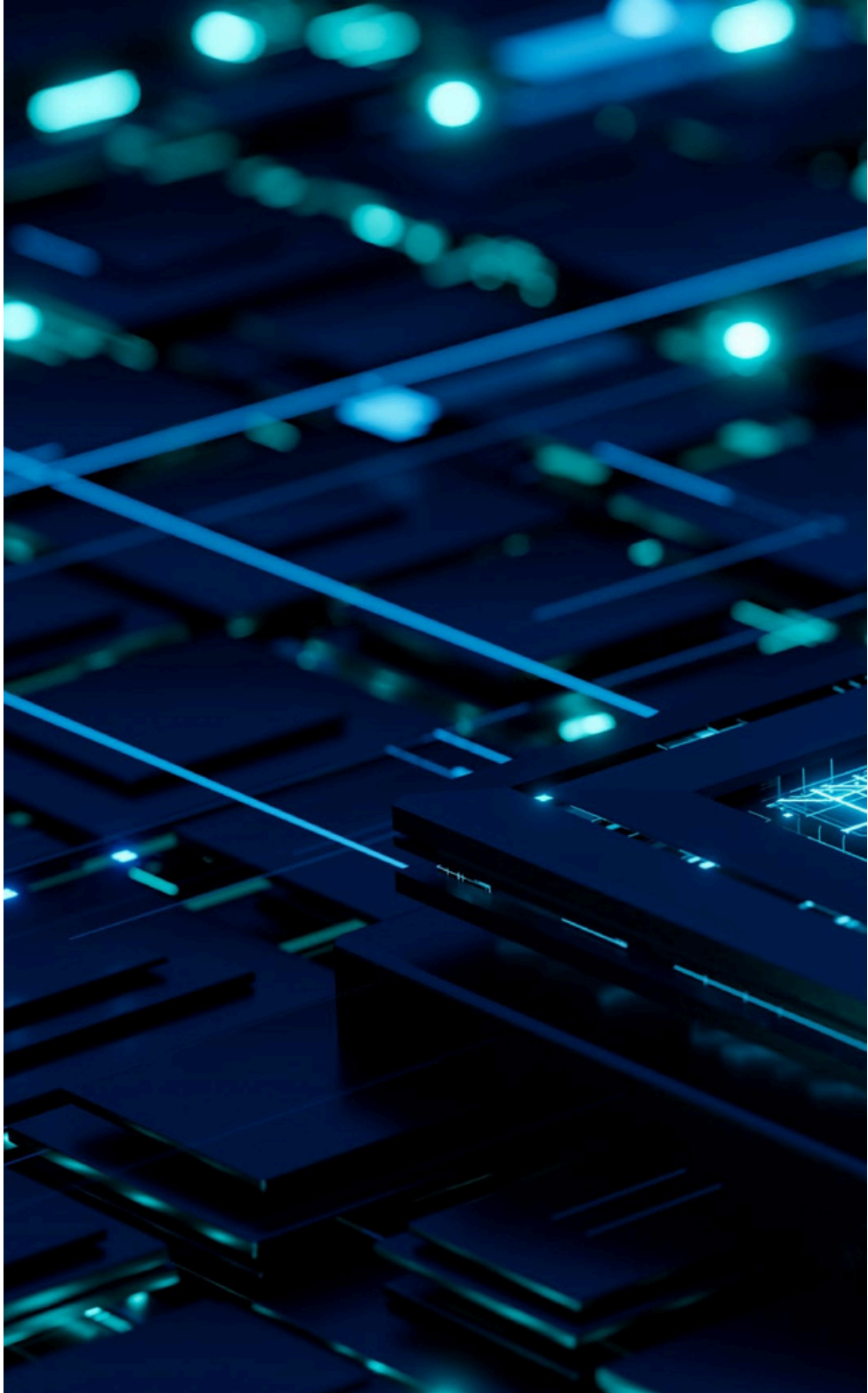
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AI in numbers

50%**AI for revenue**

50% of new AI deployments

inH2 2025 by USoperators have a revenue objective. This covers anything from inference applications to GPUaaS. Reported disclosure in 2026 will be an important indicator of monetisation efficacy.

26%

AI-driven energy rise

Itis too early to accurately predict how much AI will drive up energy use, partly because it can also help with offsets. However, energy use is clearly likely to rise, and potentially significantly. GSMA Intelligence's base-case scenario sees telco energy consumption increase by around 25% by 2030 compared to the current period.

2×

Telcodatacentres coming onstream

Half of the AI deployments tracked in telco private data centres are now live, a doubling of the 25% as of September 2025. Beyond the business rationale, the presence of private clouds speaks to compliance requirements to retain data in-country (sovereign AI), which will be a trend in 2026.

No.1

Perplexity – most common model partner for telco AI

GSMAopen LLM benchmarking suggests a hybrid approach of off-the-shelf and customised models makes most sense for operators. This is why Perplexity still shows up most commonly as a model partner for telco AI implementations, despite being a small company compared to the AI giants.

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Telco AI: where is it being deployed?

To helpshow where telcos are deploying AI, the various use cases have beencategorised according to a set of standard business areas. While every company is different, these categories are broadly consistent across operators.

Each category has a set of use cases that AI (or genAI) supports. The network category, for example, could include pre-emptive maintenance and energy saving through sleep states. Customer care could include AI agents or chatbots. Some use cases (e.g. energy saving) could apply to multiple business areas and are reflected as such.

Telcos deploy AI in different parts of their business

Deployment area	Example use cases	Internal/external primary objective
Network	Maintenance AI-RAN Energy saving Performance	Internal
Product sales and marketing	Customer sales Application development Solution provision (e.g. operators working with a third party to deliver AI-enabled services to enterprise customers, such as GPUaaS)	External
Customer care	Chatbots Spam filters User experience	External
Corporate functions	Employee development Operational support (e.g. finance, IT) Energy saving	Internal
Data centre	OSS/BSS Energy saving	Internal and external
Others	R&D Smart infrastructure Other	Internal and external

Source: GSMA Intelligence

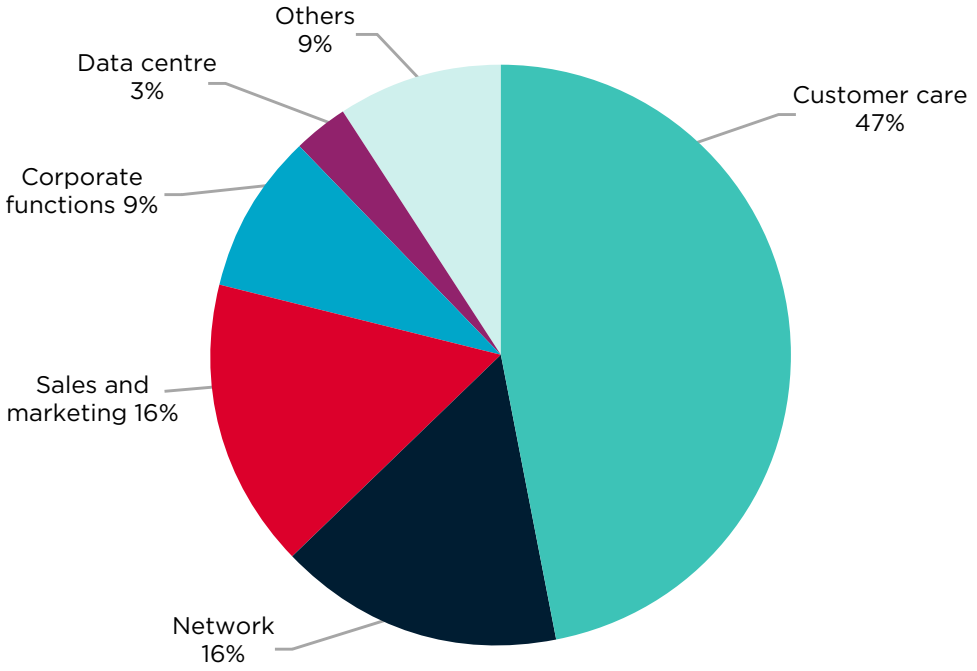
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AI adoption: Customer care still on top, but deployments span the business

- **It's a long race.** As noted in the Q3 2025 edition, telco AI deployments span a range of functions across the business, reflecting the pervasive applicability of the technology. However, not all of these will happen at the same time.
- **Customer care and the network are the most popular.**Telco activity continues to gravitate towards low-risk, easywins where functions can be automated through AI agent stacks. Customer care alone accounts for almost 50% of deployments, with networks at just under 20%. However, a shift is underway towards revenue-generating objectives.

Where is the AI sweet spot for telcos?

Percentage of telco AI deployments



Source: GSMA Intelligence

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Partnership ecosystem: AI RAN on tap will take time

- **AI RAN emerges.** Alot of GPUactivity fortelecomshas so farfocused on inference and thedevelopment of agentic applications in thenetwork and for customer care. AI RANis now emerging tohelp improvenetwork performance and make cost savings. Nvidia's $1 billion investmentin Nokia was the eye-catching story of Q4 2025, though all the vendors are experimenting with AI in the RAN and core. Full, zero-touch networking is still several years away.

- **Balancing general and specific LLMs.** Operators must decide on the balance between using general-purpose AI LLMs such as Gemini (Google) and those from OpenAI versus the more specific models trained for defined use cases. GSMA open LLM benchmarking suggests a hybrid approach is most sensible. This is why Perplexity shows up in so many telco AI implementations, despite it being a small company compared to the AI giants.

Alecosystempresence in telco AI

Large operators (top 250)

Category	Rank 1	Rank 2	Rank 3
GPU providers	Nvidia	AMD	Intel
Hyperscalers	Google	Microsoft	AWS
Foundational models	Perplexity	OpenAI	DeepSeek

Small and medium-sized operators (250–700)

Category	Rank 1	Rank 2	Rank 3
GPU providers	Nvidia	Intel	AMD
Hyperscalers	Microsoft	AWS	Google
Foundational models	OpenAI	Perplexity	Snowflake

Based on share of telco AI deployments where the company is a supplier or partner. Deployments are only those in the public domain, so this is a proxy for ecosystem presence rather than the true underlying picture.

Source: GSMA Intelligence

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