Navigating uncharted waters in telecom

DeepSeek is shaking up AI, forcing industry giants to rethink strategies while opening new capacity streams for telcos—both as providers and consumers.

BY PRATIMA HARIGUNANI

In his recent communication, Verizon CEO Hans Vestberg looked excited to talk about something deep in the AI wheelhouse, far away from a telco's playfield just a few months back. He said, "Our industry sits at the centre of the next wave of innovation as AI transforms how consumers and businesses operate. Our network assets and capabilities position us uniquely in this evolving landscape."

The company announced AI Connect, a suite that allows it to offer its fibre, land and 5G assets to data centre companies and enterprises with a big appetite for AI connectivity. Interesting and intelligent—after all, the company gets to use its existing assets to generate new revenue streams. That is something that most telco players need badly as they struggle with thin margins in traditional markets, commoditisation in their usual strong

> AI's relentless demand for computing power is transforming telcos from mere connectivity providers into strategic players in the AI-driven digital economy.

"DeepSeek is increasing AI adoption by enhancing efficiency, making AI more accessible for businesses of all sizes while reshaping investment strategies."

DR LAWRENCE A GORDON

EY Alumni Professor, Robert H. Smith School of Business, University of Maryland

IN BRIEF

- Telcos are repurposing unused network assets to support AI-driven data centres, unlocking new revenue streams amid market challenges.
- AI's growing bandwidth and computing needs make telco infrastructure essential for hyperscalers seeking scalable connectivity solutions.
- Jevon's paradox suggests AI efficiency gains may drive higher consumption, benefiting telcos as service providers and technology adopters.
- AI-driven network virtualisation and automation could help telcos optimise costs while expanding 5G and edge computing capabilities.
- Cost-effective AI solutions, like DeepSeek, enable telcos to invest more in infrastructure, fostering long-term growth and market competitiveness.
- Telcos must strategically balance AI investments between monetisation opportunities and internal efficiency gains to stay competitive.

suits and the heavy onslaught of hyperscalers. Is it not better to shell out all the excess space, power and cooling capacity that has been gathering cob-webs in data centres? Especially when telco AI delivery can be a USD 40 billion total addressable market, as surmised by some experts. Is it not better that Telcos also start bathing in the AI tide like everyone else is doing?

The question is not about 'if' but about 'where'. In a strange twist of destiny, this time, telcos can drink this water on both sides—upstream and downstream. While, as Verizon exemplified, they can be pumping in all the capacity in the rear trunks of the AI supercars that BigTech and AI Front-runners are driving, they could also be benefitting from all the computing leaps that these cars make—and those can be plugged back into a telco's infra advantage. It is a novel scenario of a cart before the horse and also a horse behind the cart.

TELCOS AS CAPACITY SUPPLY-PIPES

Apart from all the GPU and training breakthroughs that DeepSeek has brought into the spotlight, one thing is the role of the network in the distribution of AI workloads at scale.

AI needs a lot of bandwidth, network gas, fibre fuel, and optical transport architectures to handle the massive bandwidth and latency needs in spitting out all that training and inference work. After all, the whole 'USD 500 billion Stargate' saga and all the gargantuan data centre backyards and network facilities that Microsoft, Amazon, Meta and Google are pouring money into—signify that the AI bus needs a really-big fuel tank and lots of connectivity diesel—especially when you have to train and scale those data-hungry AI models.

A lot of this happens to be lying around in unused and unmonetised telco real estate. That explains why

"Cost-effective AI-driven networks will fuel strategic investments, enabling telcos to expand, innovate, and enhance network performance for future demands"

PRIYANKA KULKARNI
Manager – Telecom, Media and Technology Sector, Aranca

AT&T, Lumen Technologies, Frontier Communications, and Ziply Fibre are now leaning towards using their facilities for cloud deployments and hyperscale networking. It also explains why Hyperscalers have been leasing equipment, spooning up multiplexing systems, ensuring they have enough optical plugs and optical transport, and building telco facilities.

TELCOS AS CUSTOMERS WITH STRAWS

DeepSeek did one more thing besides disturbing the BigTech AI party. It has turned Jevons in his grave again, stirring up the paradox he left the world with, which was forgotten as we moved on to other theories and revolutions. When AI-led efficiency gains scale and cuts costs in a remarkable way, it would not mean less use of capacity but more. That's where Telcos will gain not just as suppliers but also as users.

The recent advancements in computing infrastructure, exemplified by innovations like DeepSeek, shall have significant implications for spending on computing infrastructure, affirms Priyanka Kulkarni, Manager – Telecom, Media and Technology Sector, Aranca. "It can help drastically reduce both Capex and Opex through technologies like network virtualisation, SDN, and AI-driven management. Boosted by these savings, telcos can invest more in expanding and upgrading their networks, deploying next-gen technologies like 5G and edge computing. These improvements can enhance network performance and reliability, which, in turn, can drive increased data consumption as users take advantage of more bandwidth-intensive applications."

A Gartner research note has introduced another way to look at this scenario: DeepSeek's R1 is not proof that scaling models via additional compute and data does not matter, but that scaling a more efficient model pays off.

There is a chance that Jevon's paradox could jump in here and change the party tune a bit. More cost efficiency improvements may not necessarily result in cuts in consumption but rather spike them up, as seen with coal and steam engines before.

Ask Dr Owen Rogers, Senior Research Director for Cloud Computing for Uptime Intelligence, who wistfully observes, "I think the impact of Jevon's Paradox on AI is the great unknown right now." Will telcos and other businesses use the time and cost savings from faster models to do more innovative projects, or will they do the same projects as before but more quickly and cheaply?

Dr Rogers points out that most companies will do the latter. "At the moment, the return on investment for AI is unclear. If expenditure in AI were clearly paying dividends, then it would make sense to do bigger projects. But now, organisations (including telcos) will take the cost-savings rather than attempt to 'do more' for an uncertain return."

Dr Lawrence A Gordon, EY Alumni Professor at the Robert H Smith School of Business, University of Maryland, brings the good old Economics glasses of elasticity to the table here. "Deepseek (as an open-source

> The intersection of AI and telecom is redefining infrastructure monetisation, creating new opportunities for telcos to capitalise on their existing assets.

"The impact of Jevon's paradox on AI remains uncertain—will businesses reinvest savings into innovation or focus on cost-cutting without expanding projects?"

DR OWEN ROGERS

Senior Research Director, Cloud Computing, Uptime Intelligence:

AI AND TELCOS: WHAT LIES AHEAD?

- Telcos are moving beyond traditional connectivity to AI-powered services.
- AI adoption could reshape telco business models and network strategies.
- Balancing AI investments between infrastructure and monetisation is key.
- AI's long-term impact on telcos will depend on strategic execution.
- The AI revolution presents both opportunities and risks—adaptation is crucial.

large language AI model) is increasing the use of AI models, including various computer-related products, among companies due to the efficiencies associated with AI models. For small companies, where the use of AI is highly price-elastic due to financial constraints, open-source AI like Deepseek and ChatGPT are profoundly impacting the use of AI."

In contrast, large companies have the funds to spend whatever it takes to use AI models. They tend to consider AI an investment rather than an operating expenditure. Nevertheless, the consumption of AI for large companies is probably also elastic, but less so for small companies.

Kulkarni points out that cost-effective networks will likely result in more strategic investments and higher usage, creating a positive cycle of growth and innovation in the telecommunications sector rather than leading to fewer network outlays and usage.

A SNOOKER-TABLE ROD, FOR NOW

Telcos are right to investigate whether AI can create new revenue streams or optimise operations. But they should not just throw money at AI in the hope it pays off, stresses Dr. Rogers. "More efficient models will let them experiment more, with less of a financial outlay."

Dr Gordon argues that even large companies are likely to increase their AI consumption due to its efficiencies. "In terms of Jevon's paradox, the question is: Do the efficiency gains from using more AI result in greater overall use of AI? I believe the answer to the above question is yes, so developments like Deepseek would fall under Jevon's paradox."

All things considered and chewed upon, Telcos cannot miss the AI bus – whichever side of the road they are on. Because this time, there is a lot to be gained by being in the pit-stop and not just at the bus-stop. If Jevons was right, as AI races faster, consumption and capacity needs will only shoot through the roof. He also said something else: "Value is the most invincible and impalpable of ghosts, and comes and goes un-thought of, while the visible and dense matter remains as it was." It's a good time for Telcos to think of that ghost. It's a good time to give it new clothes. The AI party has just begun.

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