

Survey Reveals How Telcos Plan to Ring in Change Using AI

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The telecommunications industry has for decades helped advance revolutionary change — enabling everything from telephones and television to online streaming and self-driving cars. Yet the industry has long been considered an evolutionary mover in its own business.

A recent survey of more than 400 telecommunications industry professionals from around the world found that same cautious tone in how they plan to define and execute on their AI strategies.

To fill in a more complete picture of how the telecommunications industry is using AI, and where it's headed, NVIDIA's first "State of AI in Telecommunications" survey consisted of questions covering a range of AI topics, infrastructure spending, top use cases, biggest challenges and deployment models.

Survey respondents included C-suite leaders, managers, developers and IT architects from mobile telcos, fixed and cable companies. The survey was conducted over eight weeks between mid-November 2022 and mid-January 2023.

The survey results revealed two consistent themes: industry players (73%) see AI as a tool to grow revenue, improve operations and sustainability, or boost customer retention. Amid skepticism about the money-making potential of 5G, telcos see efficiencies driven by AI as the most likely path for returns on investment.

Yet, 93% of those responding to questions about undertaking AI projects at their own companies appear to be substantially underinvesting in AI as a percentage of annual capital spending.

Some 50% of respondents reported spending less than \$1 million last year on AI projects; a year earlier, 60% of respondents said they spent less than \$1 million on AI. Just 3% of respondents spent over \$50 million on AI in 2022.

The reasons cited for such cautious spending? Some 44% of respondents reported an inability to adequately quantify return on investment, which illustrates a mismatch between aspirations and the reality in introducing AI-driven solutions.

Technical challenges — whether from lack of enough skilled personnel or poor infrastructure — are also obstructing AI adoption. Of respondents, 34% cited an insufficient number of data scientists as the second-biggest challenge. Given that data scientists are sought after across industries, the response suggests that the telcos industry needs to push harder to woo them.

With 33% of respondents also citing a lack of budget for AI projects, the results suggest that AI advocates need to work harder with decision-makers to develop a convincing case for AI adoption.

Likewise, for a technology solution that relies on data, concerns about the availability, handling, privacy and security of data were all critical issues to be addressed, especially in the light of data privacy and data residency laws around the globe, for example GDPR.

Some 95% of telecommunications industry respondents said they were engaged with AI. But only 34% of respondents reported using AI for more than six months, while 23% said they're still learning about the different options for AI. Eighteen percent reported being in a trial or pilot phase of an AI project.

For respondents at the trial or implementation stage, a clear majority acknowledged that there had been a positive impact on both revenue and cost. About 73% of respondents reported that implementation of AI had led to increased revenue in the last year, with 17% noting revenue gains of

more than 10% in specific parts of the business.

Likewise, 80% of respondents reported that their implementation of AI led to reduced annual costs in the last year, with 15% noting that this cost reduction is above 10% — again, in specific parts of their business.

The telecommunications industry has a deep and multilayered view on where best to allocate resources to AI: cost reduction, revenue increase, customer experience enhancement and creating operational efficiencies were all cited as key priorities.

In terms of deployment, however, AI focused on improving operational efficiency was a clear winner. This is somewhat expected, as the operational complexity of new telecommunications networks like 5G lend themselves to new solutions like AI. The industry is responsible for critical national infrastructure in every country, supports over 5 billion customer end points, and is expected to constantly deliver above 99% reliability. Telcos have also discussed AI-enabled solutions for network operations, cell sites planning, truck-routing optimization and machine learning data analytics. To improve the customer experience, some are adopting recommendation engines, virtual assistants and digital avatars.

In the near term, the focus appears to be on building more effective telecom infrastructure and unlocking new revenue-generating opportunities, especially together with partners.

The trick will be moving from early testing to widespread adoption.

Download the “State of AI in Telecommunications: 2023 Trends” report for in-depth results and insights.

Learn more about how telcos are leveraging AI to optimize operations and improve customer experiences.

Original URL: <https://blogs.nvidia.com/blog/2023/02/21/telco-survey-ai/>