Solving Manual Mayhem in Telecom With Agentic AI

The day's just begun, and a small mistake sets off a chain reaction. A missed click or mistyped command knocks a network offline and sends employees scrambling. As the downtime drags on, customers become frustrated and team morale falls.

This isn't a one-off crisis; 52% of communications and media providers say downtime is *often* or *very often* the result of human behavior — and it takes the longest to find and fix. As customer expectations rise and operations become more complex, even seasoned teams struggle to keep pace.

The rising flood of data from our increasingly connected world adds to the challenge. Traditional tools are overloaded, making it hard to create meaningful visibility and insights.

The latest generation of AI offers a way forward: it contextualizes data to drive smarter decisions. And unlike past models, agentic AI doesn't just assist — it acts.

Targeted AI for telecom challenges

As customer interest in next-generation services grows and network buildouts continue, communications and media companies need agentic AI to bring autonomy, adaptability, and real-time decision-making to the heart of their operations. AI is already addressing some of the most urgent industry concerns: fighting cyberattacks, maintaining uptime and reliable networks, and improving service levels.

- **Network optimization with foresight**: Agentic AI predicts issues before they occur — minimizing downtime, improving performance, and keeping services running smoothly.
- **Adaptive security and fraud detection**: Eighty-two percent (82%) of communications and media industry leaders say it is hard to maintain effective security hygiene and posture due to an expanding attack surface. AI agents can monitor real-time traffic patterns and adjust security protocols in response to emerging threats, working faster than humans can.
- **Smarter, self-directed virtual assistants**: Virtual agents powered by agentic AI go beyond scripted responses. They interpret intent, take proactive steps, and resolve issues autonomously to reduce the load on support teams and elevate customer experience.
- **Personalized, real-time customer engagement**: By analyzing context, preferences, and behavior, agentic AI delivers personalized offers and experiences at scale.
- **End-to-end process automation**: From fault detection to ticket resolution, agentic AI can orchestrate entire workflows — automating not just tasks, but decisions — with minimal human input.

Why data still rules

AI agents need accurate, high-quality, and well-structured data to reason, plan, and act. Agentic AI will hit a wall if data is siloed, outdated, or inconsistent.

Clean, unified datasets are essential to surfacing meaningful insights and making intelligent decisions. Fifty-five percent (55%) of communications and media companies are already making data quality a priority.

Setting realistic expectations is also key to unlocking data's full potential. Agentic AI can't— and shouldn't — replace human intelligence across the board. But when deployed strategically, with clear scope and reliable data, it can offload repetitive tasks, boost response times, and enhance decision-making.

Of course, no AI strategy is complete without security and governance at the core.

AI agents often touch sensitive customer and network data. Without strong controls, communications and media companies risk data exposure, noncompliance, or unintended system behavior. Governance frameworks should evolve with AI capabilities.

Laying the groundwork for agentic AI

To create a resilient, AI-forward enterprise, communications and media companies should focus on these three building blocks:

Unified and contextual data
Splunk and Cisco combine deep infrastructure telemetry and market-leading data processing to unify fragmented machine data. This approach provides real-time, actionable insights across security, networks, and applications — turning data overload into a strategic advantage. Splunk Observability Cloud brings all key data together, eliminating guesswork and boosting analytics-based decision-making with AI support.

Agentic AI for autonomous, cross-domain action
Together, Splunk and Cisco will build a foundation for the future by infusing agentic AI capabilities — reasoning, adapting, and acting autonomously — into SOC, observability, and network assurance solutions. Splunk Enterprise Security, for example, reduces alert fatigue with broad visibility, AI-driven detection, and AI-powered alert prioritization so teams can focus on and respond to critical alerts. AI-native features will manage the full data lifecycle and provide built-in guardrails for security and compliance.

Interoperability to break down silos
Splunk's commitment to open standards like OpenTelemetry, the Open Cybersecurity Schema Framework, and the Model Context Protocol will power seamless integration across hybrid environments and AI agents. Interoperability can power full-stack visibility, reduce blind spots, and support workflow automation to amplify human and AI productivity.

Turning data overload into a strategic advantage with Splunk

By building a foundation for AI, companies will reduce stress on their workforce and quickly deliver more secure, personalized experiences to customers. Splunk helps telecom companies build more resilient digital systems with AI-enhanced processes that ensure customers can connect when and where they need to.

Get ahead of network outages and crises with agentic AI agents that turn data overload into a strategic advantage. Increased visibility with end-to-end views accelerates incident response, keeping downtime minimal and customers satisfied. Splunk machine learning (ML) and AI-powered approach keeps the tech stack reliable without draining valuable time and resources managing it.

Let your data work for you. Fuel the future for agentic AI that anticipates, adapts, and acts.

SPOTLIGHT
SPLUNK STATE OF OBSERVABILITY REPORT, 2025

AI-enhanced observability

The communications and media sector is leaps ahead of other industries when it comes to observability. Leaders are investing in observability tools, with 92% saying they expect spend to increase in the next year. Nearly half (49%) of those companies point to growing data volume as the top reason for the expanding budget. And despite the huge load of data available to parse — service issue alerts, customer journey insights, satisfaction scores, oh my! — leaders are finding ways to stay a step ahead.

When alerts come in about potential issues, about 13% of teams in other industries ignore or suppress them. But not communications and media: only 6% ignore alerts and as a result, only 2% face outages due to suppressed notices (compared to 8% in other industries). With a proactive mindset, it's no surprise that communications and media companies also tend to be collaborative: 87% of observability and security teams access the same tools in this space, empowering quick resolution of issues. This mindset also enhances customer experience.

AI is a key factor in supporting communication and media companies' strong observability posture. These tools support complex network buildouts, customer experience, service reliability, and threat detection. Communications companies are early adopters of AI observability practices including AIOps (79%), generative AI (68%), and emerging AI, including agentic (18%). Most are using AI as part of daily workflows — 71% now trust AI to perform mission critical tasks.

Similarly, the communications and media industry is a leader in adopting OpenTelemetry, with 67% using it *often* or *always*. The results are largely positive so far, even beyond companies' observability practices. As the broader world explores how AI evolves, the communications and media world is serving as a model for the positive impact cutting edge AI implementations can have on customer experience.

OUTCOMES

Communications and media respondents cited they often or always use various types of AI in observability:

79%
AIOps

68%
Generative AI

18%
Emerging AI (such as agentic)

Learn more about Splunk for Communications and Media

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