

## **Connected Ecosystems, Autonomous** Networks, and Customer-Centric Services



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## **Telecom in 2025**

Al is set to have a massive impact in 2025. For the telecom industry, it presents the opportunity to not only boost network capabilities, but to lead the charge into an Al-driven, high-performance future – from the automation of lifecycle management to deeper, more actionable insights into every service, technology, and device.

Nearly 90% of telco companies are already engaged with Al. 48% are in the assessing and piloting phase while 41% have reached the implementation stage, embracing this technology for use cases such as predictive fault management and real-time responses to customer interactions. More than half (53%) agree that adopting Al will provide a competitive advantage.<sup>1</sup> And this momentum will continue to build as telcos pursue efficiencies, cost savings, and resilience that span the entire value chain of network operations.

There is growing pressure from all sides to do and achieve more. Propelled by their customers' need for seamless connectivity, network operators are driven by the imperative to provide reliable network service with minimal downtime. This creates network complexity and issues with core infrastructure, as well as challenges with cost and OpEx pressures, which impact cashflow. Competitors, like OTT platforms, are adding to this by continuing to challenge and disrupt traditional telco business models.

So, they will need to double down on their investments to integrate AI and automation-driven solutions that overcome legacy infrastructure issues and tear down data silos that hinder operational efficiency and unified customer experiences.

Succeeding against this backdrop will not just be a case of connecting the world, but having the capabilities to transform it from the inside out. For the telecom companies that embrace the shift to Al-first transformation to overcome the hurdles they face, there is a significant opportunity to gain a strategic edge in 2025 and beyond.

### Focus Areas for Telecommunications in 2025

- **Connected ecosystems:** The world is increasingly connected. By combining 5G, IoT and edge computing capabilities, hyper-connected ecosystems where devices communicate in real-time will become the norm and enable integrated solutions across industries, delivering significant improvements in performance, agility, running costs, efficiencies, speed-to-market, and customization.
- Autonomous networks: The move from manual networks to Al-driven selfmanaging, self-healing, and self-optimizing networks is very much in its infancy, with only 17% of telcos having a comprehensive strategy with defined targets and timelines in place. Those that get ahead of the curve, however, stand to gain OpEx savings of between \$150 - \$300 million.<sup>2</sup>
- Customer-centric services and offerings: Subscribers today demand constant connectivity, real-time issue resolution, self-service solutions as well as customized offerings. Although the industry is lagging behind in meeting customer expectations, AI – and Gen AI – can turn the tide on tailored support that boosts customer satisfaction. Telecommunication companies using AIdriven chatbots report a 25% increase in customer satisfaction due to instant and personalized support, for example.<sup>3</sup>







Navigating this evolving landscape means investment into the six technological building blocks for Al success to drive a raft of new efficiencies, increase revenue, and improve customer service. Let's assess how the telecom industry can best achieve success in these areas, and drive measurable business outcomes in 2025 and beyond.



## Creating Connected Ecosystems

There's no doubt that the telecom sector plays an important role in enabling integrated solutions across a range of industries – from healthcare to smart cities, transportation, and beyond. However, to truly capitalize on these opportunities and unlock new business models, the industry must first overcome the challenges posed by legacy systems.

For decades, telcos have contended with legacy systems that have stifled innovation. Operating in disparate and inefficient silos with a significantly outdated technical stack, these systems make it difficult to integrate data and functionality across the range of capabilities and new technologies that a modern telco is expected to support. As a result, telcos have been saddled with high operational costs and difficulty customizing offerings to meet changing market demands, creating a bottleneck in today's complex connectivity landscape.

Adopting an Al-first approach across the business will be key for overcoming these roadblocks and delivering truly innovative, integrated services. Leveraging automation and intelligent orchestration will enhance interoperability between legacy systems and new technologies, increasing scalability and allowing data to flow smoothly. This will help telcos adapt to the needs of connected ecosystems in the future through as-a-service solutions.



### It'll also unlock new revenue streams through data monetization, for example, allowing telcos to mine the huge volumes of traffic they handle daily to deliver actionable intelligence that adds further value to vertical markets.

In 2025, telcos looking to modernize their networks and build flexible, scalable platforms that can underpin the connectivity needs of different industries should focus on:

# **Data and analytics:** Connected ecosystems depend on bringing together vast amounts of data from multiple sources and devices. This will require a strong data layer that can integrate and aggregate data from multiple sources to deliver actionable insights. Seamless interoperability will be key in this regard, creating a single source of truth.



**Cloud infrastructure:** Transitioning to cloud-native, Al-enabled platforms that can handle the surge in technologies like IoT will be equally important. Telcos must embrace edge computing solutions, too, leveraging cloud-based platforms to handle real-time data flows and device management in a flexible, scalable way.



## **Autonomous Networks**

Autonomous networks will, without a doubt, shape the telecom landscape in years to come – and it's already clear that the future of network operations lies with AI. However, many telcos are still in the early stages of this journey.

Although 60% of operators aim to reach Level 3 autonomy or higher by 2028, the vast majority (84%) are currently sitting at Level 1 or 2, which means human intervention is required for most operations and decision-making.<sup>4</sup> Reaching the stage where predictive intelligence and Al-driven automation take center stage will be a key focus for 2025 and beyond.

Achieving this will unlock a range of benefits. There's the immediate cost reduction that comes with the shift to predictive maintenance, for example, moving away from traditional approaches that often result in overspending and unplanned downtime. However, autonomous networks will also introduce new growth opportunities by enabling smarter, more responsive network infrastructure design – including dynamic network slicing – that can further enhance service quality and help deliver on the connected ecosystem vision.





Telcos aiming to accelerate their transition to autonomous networks should prioritize the following:

Data and analytics: Autonomous networks depend on real-time, high-quality data to drive intelligent decision-making. Al models and machine learning algorithms need a continuous stream of data to accurately predict network issues and optimize performance.

• Invest in robust data collection and analysis systems to gather data from every node, network element, and device. This will set the foundations for implementing the self-optimizing, self-healing network of the future.

**Cloud infrastructure:** Continuing the migration of core systems and applications to the cloud will provide the scalability needed to manage and analyze large volumes of data in real time. This will be essential to the functioning of autonomous networks, and the dynamic allocation of resources.

Application modernization: Modernizing legacy network management tools to introduce new Al capabilities will be essential. This will help telcos move away from the static, rule-based approaches that are currently used, and which often result in heavy manual intervention, to systems that can continually learn and optimize operations.

**Digital operations:** New digital operations will sit at the heart of the concept of network automation. This will see human and machine working closely together, reducing manual intervention to improve efficiency and allowing the Human-in-the-Loop to focus on higher value activities.

Resistance to change may present a barrier in this regard. Navigating this will require a clear vision driven for Al-first transformation that optimizes for employee adoption from the start, paired with comprehensive re-skilling and up-skilling to break down resistance and help employees embrace new ways of doing things.



## **Customer-Centric Services** and Offerings

Every sector faces increasing pressure to deliver tailored interactions that better respond to each customer's specific needs – and the telecom industry is no exception. In many cases, subscribers today are looking for selfservice options that can help them take control of their own product selections and customer journeys.

Yet, despite more than half (57%) of network operators already using Gen Al to support customer service, the sector is playing catch up in terms of delivering truly individualized products,

services, and support.<sup>5</sup> Compared to the retail industry, for example, many telcos are behind the curve in adopting recommendation engines, and are still offering mobile apps that are mostly static with limited customization to the preferences of individual users.

In 2025, telcos will need to take steps to elevate their omnichannel capabilities in this regard. The good news is they already have many pieces of the puzzle: troves of historical customer data. extensive network usage insights, and subscriber churn information.



By introducing data flows that can empower advanced analytics, telcos will be able to dynamically push bespoke plans, add-ons, and offers to meet unique subscriber needs. Leveraging AI and machine learning in this regard will help better predict and reduce churn, too, identifying at-risk customers early. Introducing advanced chatbots that take advantage of developments in agentic AI will also deliver better customer engagement overall, enhancing the self-service capabilities subscribers expect.

To establish the robust data layer that's needed to deliver on this vision, telcos should address the following building blocks:

Data and analytics: Integrating and centralizing data from multiple touchpoints and systems will be key. This will help create comprehensive subscriber profiles that can be fed into an advanced analytics engine to deliver customized recommendations, offers, and support, as well as tracking and optimizing the entire customer journey from acquisition to retention.

• Implementing an Al-powered recommendation engine can deliver content, products, or services based on real-time inputs and historic data to better address customer needs and reduce churn.

Application modernization: Customer service platforms must be modernized, integrating Al capabilities that will enable telcos to deliver personalized, seamless, omnichannel experiences that meet evolving customer demands.

• Deploy advanced chatbot and virtual assistant functionality into all customer-facing platforms to handle dynamic interactions. For example, automatically notifying customers about expected network maintenance that may cause disruptions, or responding to routine questions.

**Cybersecurity:** Achieving targeted, customer-centric service and offerings requires sensitive customer information to be structured and centralized, which makes securing this data more important than ever. Take steps to anonymize data that's used for AI modeling far as possible, and conduct regular AI integrity checks to mitigate the risk of data breach and ensure compliance with regulations like GDPR.





### **Unlocking Digital Performance.** Delivering Measurable Results.

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## **Embracing Al for a Smarter, More Connected Future**

Telecom companies that invest in intelligent Al capabilities to enable the creation of connected ecosystems and fully autonomous networks while also delivering highly tailored customer interactions and services will stay ahead of the game.

By modernizing legacy systems and integrating Al throughout their operations, telcos will be able to gain more granular and deep insight over both their networks and customers – enabling them to deliver comprehensive, end-to-end solutions. This will, in turn, allow them to use their technological foundation as a springboard to achieve the operational efficiencies, cost-savings, and improved customer experiences that will provide a strategic edge in 2025 and beyond.





