



The AI-Powered Telco

How Global Telco Providers Are Using
Automation and Conversational AI
to Transform Operations

AMELIA®

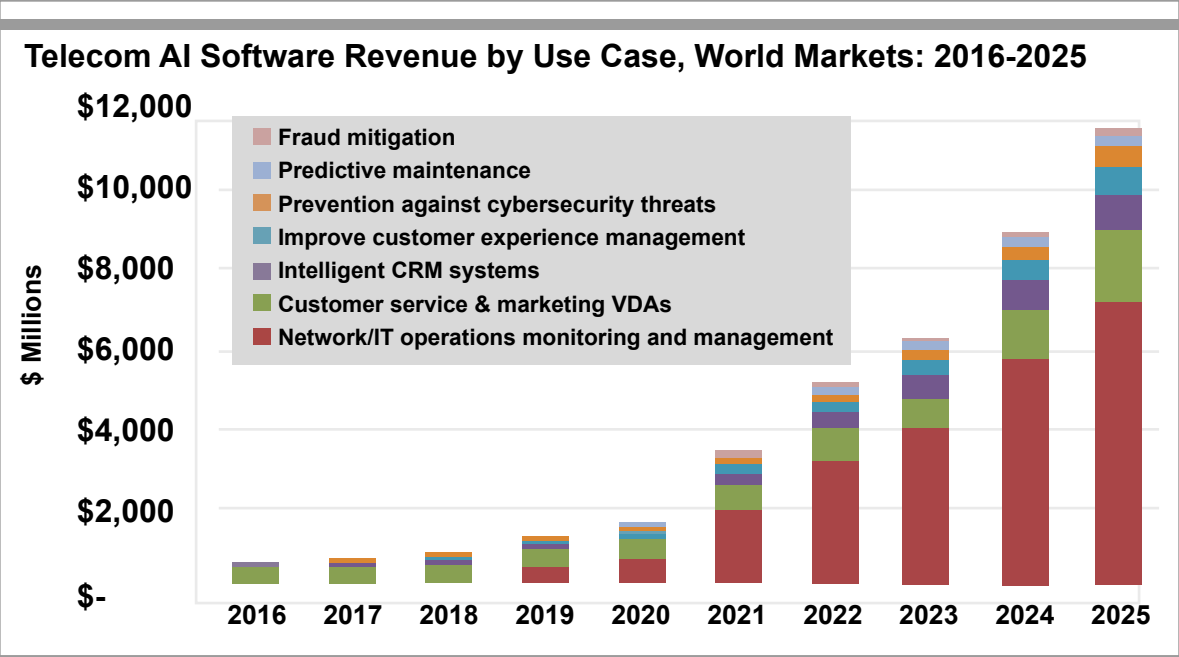


Telcos around the world are under constant pressure to provide high-quality services to millions of customers.

These challenges only promise to grow as we step into the 5G era which will underpin an expanding number of connected devices and services.

To address this 5G-enabled technological acceleration, many industry leaders have already placed huge bets on Artificial Intelligence (AI) to build new operational efficiencies through the automation of both internal- and external-facing processes. As seen in Figure 1, AI investments in the sector are predicted to reach \$36.7 billion annually by 2025 according to Tractica. The largest area of investment is network/IT operations monitoring and management, but resources are also being poured into customer service, cybersecurity, predictive maintenance and fraud mitigation.

FIGURE 1



Source: Tractica

In this white paper, we'll review how AI technologies enable digital transformations within companies, detail how telcos can take further advantage of emerging automation and cognitive AI solutions to improve business operations and customer experiences, and provide some real-life examples of AI technologies making a difference within today's premier telco providers.

AI: A Transformation Enabler

Traditionally, enterprise-scale automation efforts have centered on building machines to take on physical, calculative and transactional tasks. However, recent technological advances are allowing companies to automate complex cognitive tasks as well. In the telco space, this new potential has been used to greatest effect in the automation of scaled conversational engagements (which we detail in another section of this paper).

Throughout various industries, including telco, AI technologies have enabled a number of fundamental digital transformations, aimed at having an impact across several dimensions: cost (both reducing capital expenditures and optimizing investments), operations productivity and customer service.

Human Intermediation → Scaled Automation

Bottlenecks hinder operational efficiency. IT support operations driven predominantly by a human-only workforce are not only expensive, but often cannot scale to meet demand, leading to inefficient queuing or ticketing systems. The automation of high-volume tasks in one area such as IT support can have a positive impact throughout an entire organization. For example, when employees no longer need to wait in queue for a routine IT service like password reset, they can get back to work more quickly; with automated customer service, users can arrive at a resolution for their query or issue without waiting for human intervention, which can improve a company's brand and reputation.

Reacting to Technological Failures → Proactive Prevention

AI-enabled systems can monitor, identify and independently resolve technological issues — ideally, before problems ever impact any users. Preventing issues is far easier than addressing them after the fact, in terms of cost, time and reputation management. In fact, self-management features have proven to be valuable for telcos through the automation of internal IT operations, and we'll dive into some specifics in another section.

Gradual Expansion of Capabilities → Acceleration via Intelligent Automation

Many advanced AI systems can even automate the process of creating new automations, via cognitive-driven intelligent automation. For example, virtual engineers observe the steps IT professionals take to resolve technical issues. The AI can then suggest a new workflow to add to standard operating procedures in order to improve operational efficiency. This means that intelligent systems are able to become more valuable over time and opens the automation-making process to non-technical users.

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Internal Ticketing Systems → On-Demand Employee Services

Automation can provide internal stakeholders with 24/7 on-demand access to information and internal services. This functionality allows all employees with technical issues or corporate policy questions to return to work faster, and it also is vital for new workplace models that are increasingly reliant on remote, part-time and contract employees.

Automation and cognitive AI, with their ability to deliver personalized and localized information and services at scale, are becoming essential for providing high-quality employee services across multiple time zones and countries. For example, when a company leverages AI, an employee will never need to wait for regular business hours to fix a common VPN problem, inquire about a payment issue or update information in their HR profile.

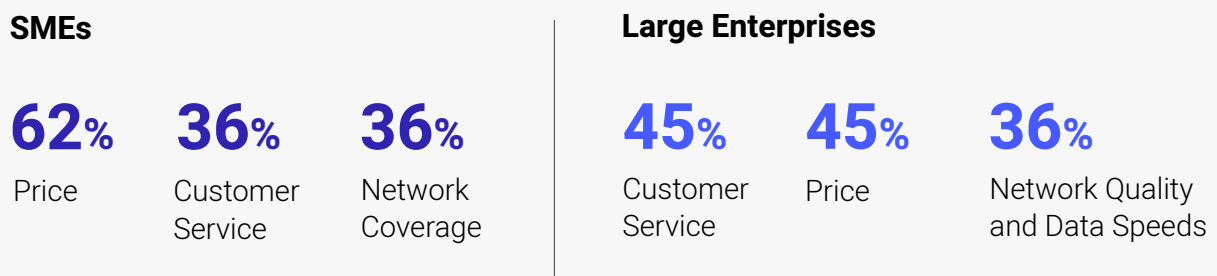
Conversational AI-powered employee support has become even more important as many employees will be working remotely in a permanent or part-time capacity for the foreseeable future as a result of the COVID-19 pandemic.

Traditional Call Center → AI-Powered Concierges

External customer-facing engagements are particularly ripe for ROI in an AI implementation. Advanced conversational and cognitive interfaces allow customers to access business systems by just asking for them, the same way they would with a human agent. This can provide an elevated level of customer service that can assist any company with buyer retention, and in telcos' case, it can help mitigate the effects of customer churn.

FIGURE 2

Top three reasons for churn by enterprise size (mobile services)



Source: *Analysys Mason, 2017*

As seen in Figure 2, a report from *Analysys Mason* found that when it came to dumping a carrier, customer service was a top decision trigger among mobile small and medium enterprise (SME) customers – and among large enterprises, customer service was the top pain point.

While studies show most users still prefer to speak with a human when contacting customer service, the majority would choose to speak with a machine if it would save them 10 minutes of time. Automation provides external customers with 24/7 access to information and the ability to manage issues quickly, often with little-to-no human intermediation.

AI in Telcos: Use Cases

Leading telcos around the world are already realizing the benefits of initial AI implementations – both internal- and customer-facing. In this section, we examine the results of four successful transformations where telcos have used AI to realize new operational efficiencies, with an eye toward growing their businesses.

Use Case: Reinvention of the Customer Call Center

Telefónica is a Spanish multinational telecommunications company headquartered in Madrid. It has a presence in 15 countries across Europe and Latin America. In 2017, Telefónica sought to introduce digital voice agents into its call centers with two main objectives: Drive customer experience and optimize costs.

The company decided to focus its initial digital transformation efforts on its Peruvian call center. The call center's various hotlines (commercial and technical B2C care mobile, landlines and TV) fielded roughly 72 million calls in 2018, 38 million of which were handled by humans. However, customers were spending far too long navigating the center's Interactive Voice Response (IVR) system, and when those customers were finally able to speak to a human agent, they were unlikely to resolve their issue without being transferred to another service representative. Telefónica wanted to limit the number of transferred calls in order to reduce costs and improve overall customer experience.

Amelia as a Call Center Agent

7 million

Amelia currently handles **7 million calls per month**

90.2%

Amelia recognizes caller intent on **90.2% of calls**

44%

Customer abandonment rates **decreased by 44%**

In 2019, Conversational AI system Amelia went live as a first (and in some scenarios, only) point of contact. Telefónica developed 28 specific skills it wanted Amelia to master spanning a variety of customer queries such as outstanding balances, plan changes, invoice dates and payment methods (including 18 that she would resolve without any human intermediation). Following a four-month ramp-up period, Amelia now handles 100% of all mobile call volume at the Peruvian call center, and manages 17.5% of calls without human intervention. She recognizes customer intent correctly on 90.2% of calls, and customer abandonment rates on Amelia-led calls decreased 44% from the initial week of deployment. In addition, customer satisfaction in calls managed by the virtual agent are at the same level as human representatives. Amelia's success at Telefónica has encouraged the company to train her on 15 additional skills, such as handling home services issues, including TV, Internet and home phone queries.



Use Case: New Channels for Customer Engagement

One of the largest telecommunications companies in Japan sought to bolster sales through social engagements with customers. Previously, customers could only receive information on SIM cards, data plans and smartphones by visiting a physical location or sending a request to a representative through LINE, Japan's most popular messaging platform. The company built a Conversational AI solution for social powered by Amelia to add an interactive, always-available social-chat element to its sales and marketing operations.

In September 2017, the intelligent voice operator (VO) went live on the company's official LINE account. Customers engage with the VO through a chat directly within the LINE app. After answering three to six questions from the VO, users receive automated recommendations for products accompanied by links to the product page where they can make a purchase.

Within a few months of deploying the VO, traffic to the company's LINE account grew considerably. Similarly, the conversion rate from LINE to the company's product page underwent a period of accelerated growth. Sales of SIM cards and smartphones multiplied during this same period. Part of the success of these numbers is due to the fact that AI has empowered the company to offer 24/7 customer support, which is notable as more than half of engagements with the VO take place outside of business hours.

Beyond additional sales, the telco has combined its customer engagements on LINE with a log analysis engine, which allowed the company to optimize marketing campaigns. Previously, the system would direct marketing campaigns to all registered LINE users, but now the company can easily categorize users into segments. This new highly-targeted paradigm has increased cost-effectiveness of marketing campaigns within LINE by a factor of 80.

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Use Case: On-Demand Internal Service Desk

A large U.K.-based telecommunications company with more than 90,000 employees sought a way to automate high-volume IT and HR requests for its employees. In 2016, the company used a Conversational AI solution powered by Amelia to handle internal IT issues by connecting employees to 22 of the company's back-end information systems (including its Active Directory, ITSM ticketing, and HR) via an intuitive conversational UI.

Today, Amelia communicates with workers to resolve 36 distinct use cases, including helping employees find and register for training sessions. In the training use case, employees tell Amelia what department they're in, their roles, and which trainings they've already completed. Amelia applies this information to recommend new courses and automatically adds those courses to the employees' training schedules.

Amelia as an IT Service Desk Agent

92%

Amelia recognizes customer intent on **92% of chats**

40,000

Amelia handles 40,000 chats per month in German, English and Spanish

50%

50% of chats handled without human intervention

Amelia autonomously handles other service desk tasks, such as ticket management, Active Directory password resets, Outlook-related troubleshooting and software installation requests. Amelia is available in seven of the company's markets in English, German, and Spanish.

Amelia was a first-point of contact for 50% of IT service desk calls. Of the 40,000 chats per month that Amelia handles, she can complete 50% without human intervention. She also recognizes employee intent 97% of the time for her trained use cases.

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Use Case: Automated IT Operations

A leading global communications service provider is leveraging automation to help clients improve IT services for customers and employees. For the past 12 years, Amelia has helped the company bring IT services, including network automation, Windows and Unix troubleshooting, and storage and cloud management services to more than 20 clients. Amelia's autonomic backbone replicates and automates basic and complex processes, such as incident, change and problem management, all communicated through a Conversational AI front end.

By employing virtual engineers to monitor and replicate processes usually conducted by human engineers, the company is able to automate the services it provides to clients. This frees the company's technology professionals to focus on unique and higher-value tasks, and allows the company to more quickly serve clients by reducing first-touch and overall resolution rates.

Enable AI To Grow

In dynamic industries such as telecommunications where the marketplace doesn't evolve incrementally as much as explodes exponentially, AI is a must for telco providers to maintain a competitive edge.

AI empowers companies to optimize business processes (automated workflows executed with error-free efficiency) while subsequently improving the user experience (on-demand access to information and services). It even enhances the employee experience by freeing humans from high-volume mundane tasks to build business value through the application of more fulfilling attributes like creative problem solving, negotiation and people skills.

There are many ways to apply AI within the grander telco ecosystem, and exploring and implementing various use cases that will deliver high business impact and ROI needs to be a top priority in any telco's growth strategy.

Amelia is the world leader in Enterprise AI and the home of Amelia, the industry's most-human digital AI colleague. Amelia's ability to learn, interact and improve over time makes her the market's only AI that can fully understand user needs and intentions.

Learn more about Amelia for Telco at Amelia.ai/solutions/telecommunications/

Contact us at Amelia.ai/contact.

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