BEYOND THE HYPE: UNLEASHING THE POWER OF THE RAPIDLY DEVELOPING GENERATIVE AI ECOSYSTEM AND ENABLING CSPS WITH TELCO-ORIENTED USE CASES

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Beyond the Hype: Unleashing the Power of the Rapidly Developing Generative AI Ecosystem and Enabling CSPs with Telco-Oriented Use Cases

Introduction

Since OpenAI's public release of ChatGPT, Generative AI has gripped all industries, including telecommunications, promising to change the way operators' access, consume, and analyze information, with implications for the speed and quality of decision making. Moreover, generative AI holds the promise of augmenting various domains in which telcos have already invested in AI solutions to enhance customer experience and network efficiency. Industry partnerships are emerging, with suppliers investigating and integrating generative AI into their product portfolios. AI is already an indispensable tool in the telecommunications industry's transformation, and the advent of generative AI has the potential to expedite and enrich ongoing transformation efforts.

GenAI Applications and Industry Context

It is safe to say that generative AI has made an enormous impact on the world. Within just a few months of OpenAI's ChatGPT release, the app had earned the title of the fastest-growing app in history. It is rare to go a day without hearing about a major company harnessing its power, or that of a similar AI tool, to revolutionize its workflows — often, with remarkable outcomes. The results of IDC's *Enterprise Intelligence Services Survey, 2023* (April) indicate that nearly 70% of enterprise intelligence services buyers are considering or actively working on use cases for generative AI. A technology's projected magnitude of disruption is unprecedented — a technology that had, within a span of less than 12 months, gained unparalleled executive support tied to clear business objectives and achieved rapid adoption.

AT A GLANCE

KEY STATS

IDC's *Enterprise Intelligence Services Survey, 2023* indicates that nearly 70% of enterprise intelligence services buyers are considering or actively working on GenAI-based use cases.

KEY TAKEAWAYS

Since OpenAI's public release of ChatGPT, generative AI has gripped all industries, including telecommunications, promising to change the way operators' access, consume, and analyze information, with implications for the speed and quality of decision making. However, the most immediate challenge for the market is addressing the time lag between conceptualization and actual productivity — how to successfully transition from a robust focus on formulating road maps to actual deployments within CSPs. Amdocs' amAIz framework goes beyond the realm of hype, showcasing substantive GenAI capabilities. This framework encompasses an array of use cases and templates, spanning internal operations and customer-facing domains. This initiative underlines a strategic recognition of the significance of generative AI and its importance for the telecommunications industry.

A mix of internal and externally facing use cases, each with its own level of potential risk and business impact, needs to be incorporated into a use-case prioritization framework. As generative AI assumes a central position in conversations spanning the technology industry, a pivotal question emerges in the market: How can a company develop industry-specific use cases to accelerate its journey to creating concrete business value? Many progressive organizations

have already begun utilizing the technology to develop innovative customer experiences, while others are employing it to streamline their internal operations for greater efficiency. In healthcare, it is being used to enhance medical image analysis by generating high-resolution images from low-resolution inputs for early disease detection. Within the finance sector, it is being used in algorithmic trading, employing AI models to analyze market data and automate trading decisions for portfolio optimization. In manufacturing, generative AI optimizes product designs and streamlines supply-chain management. In marketing and advertising, it generates content and assists with customer segmentation. In the energy sector, it optimizes energy management and enables predictive equipment maintenance.

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IDC expects different industries to take different approaches to GenAI adoption based on need. A key distinction arises within the broad scope of large language models (LLMs). **While general LLMs have a common orientation, the current global trend is toward specialized vertical-specific investments. Domains like finance and legal services are witnessing considerable investments, representing a paradigm shift from generic training models to models for specific applications.** It is imprudent to disregard the significance of specialized models in favor of universally applicable LLMs.

Impact on Telcos

In the rapidly evolving landscape of generative AI, a significant intersection is happening within the telecommunications industry, whereby GenAI capabilities are merging with various aspects of artificial intelligence. AI is increasingly becoming a foundational pillar of business for many telecom operators around the globe. Generative AI has been a vibrant discussion topic since Mobile World Congress 2023. The hype around generative AI has driven discussions on AI investments in the telecommunications industry — from network automation and optimization to service and customer management.

Telcos can reap significant advantages from GenAI's versatility. It can help telcos elevate their operational capabilities, for example. Its ability to process unstructured data efficiently facilitates quicker issue resolution, reducing operational costs and improving efficiency. Among the more immediate and accessible opportunities for GenAI in telcos is its integration into various digital channels and its use in customer interactions. It can significantly expedite value delivery to individuals in their respective roles. For instance, GenAI streamlines tasks for sales representatives, creating proposals with a high probability of success and thus fostering business growth. The implementation of these generative AI use cases will be contingent upon their ability

to demonstrate viability against specific performance metrics during pilots. These metrics will serve as a fundamental criterion for determining the precedence of deploying generative AI solutions within telcos.

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IDC expects governance — particularly around models — to emerge as a crucial focal point for CSPs. **A primary concern in this domain is the potential risk posed to customer data — particularly regarding the possibility of GenAI creating responses that lack factual accuracy.** Addressing this concern requires a well-structured approach to effectively governing generative AI's behavior. A comprehensive governance strategy must be considered — one that involves vigilant supervision and robust control mechanisms. These mechanisms serve a dual purpose: first, to ensure that generative AI's outputs align with ethical guidelines; and, second, to adhere to regulatory requirements.

Telcos are moving toward autonomous work patterns, and closed-loop automation can support them on their transformational journeys to becoming true digital service providers. Closing the loop involves extracting insights from a consistent flow of uniform data from CSPs' core systems and converting these insights into actionable steps. Using copilot capabilities (based on the comprehensive analysis of relevant data) to configure offers more contextually to provide optimal pricing and eligibility rules and guided selling is an example of a GenAI closed-loop use case. The transition to using back-end systems for provisioning and activation will move from the hypothetical to execution. In the B2B context, with quotes increasingly complex and the orchestration process ever more intricate, the need for closed-loop automation has become acute.

GenAI offers a broad spectrum of potential use cases within the telecommunications sector. Its versatility presents applications in areas such as content creation, business recommendation, action generation, data manipulation, operational support, and refining B2B and B2C sales experiences. From enhancing creativity in content creation to generating intricate lines of code, GenAI's potential spans many dimensions.
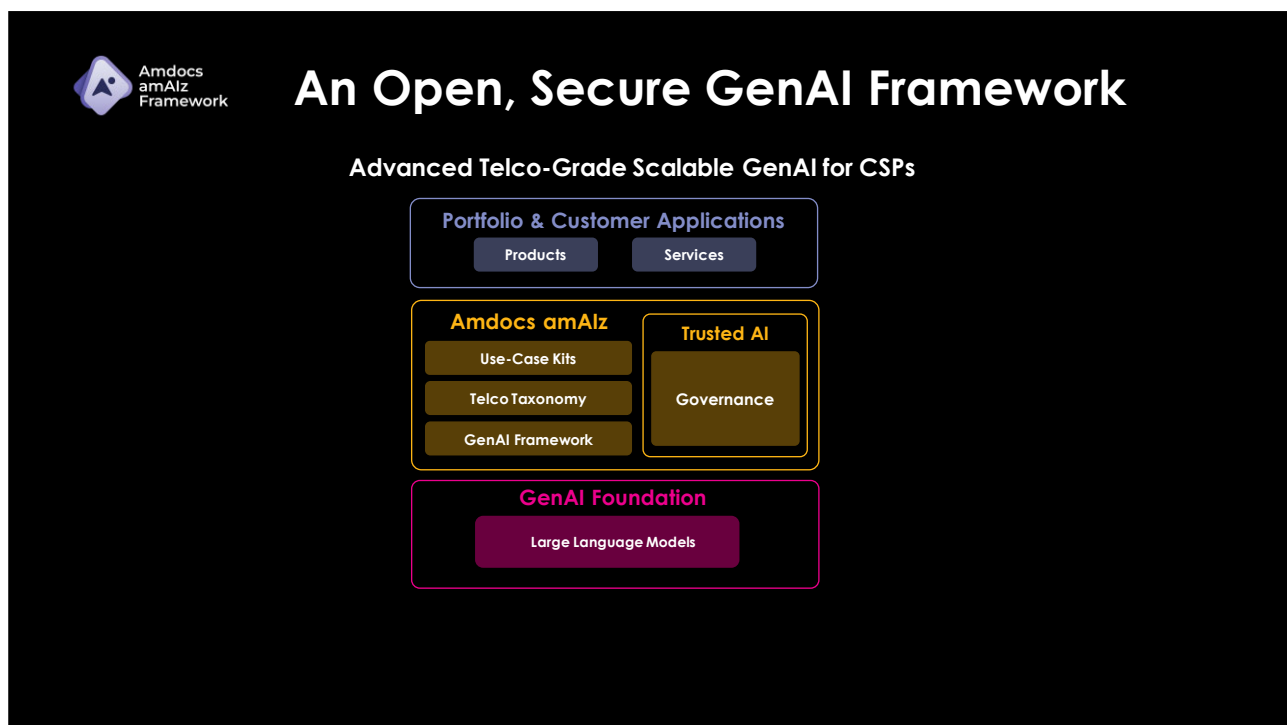
Vendor Profile

In June 2023, Amdocs launched its amAIz telco-specific generative AI framework, which it has incorporated across its entire portfolio of assets. These assets encompass customer engagement, catalog management, intelligent networking, smart operations, billing, B2B services, and cloud computing, with use cases spanning consumer and business domains. Amdocs has also strategically integrated GenAI frameworks across various aspects of its internal business functions, spanning product management, internal software development life cycle

(SDLC), and corporate functions such as HR and marketing. The Amdocs amAIz framework comprises four distinct models:

- **Generative AI Framework:** This connects to all foundation models, such as those offered by OpenAI frameworks, facilitating the creation of prompt templates, integration and orchestration, and the production of required outputs.
- **Use-Case Kits:** amAIz offers packaging capabilities based on a defined taxonomy, aligning with telco-specific semantic frameworks such as subscription, balance, and overdue charges to establish relevant use cases.
- **Governance:** Supervision and control mechanisms are implemented to guarantee conscientious usage (and adherence to regulatory mandates when necessary). These mechanisms are strategically designed to uphold the principles of responsible utilization.
- **Telco Taxonomy:** This augments data models to enhance telco-specific outputs. The taxonomy is sourced from associations such as TM Forum, as well as from internal resources and clients, and is extended to enhance LLMs with customer-specific terms, ensuring accurate results.

FIGURE 1

Source: Amdocs

IDC believes Amdocs' strategic approach of employing a specialized taxonomy based on telecommunications terminology can play a pivotal role in shaping the delivery and uptake of telco-specific applications for customers.

IDC believes Amdocs' strategic approach of employing a specialized taxonomy based on telecommunications terminology can play a pivotal role in shaping the delivery and uptake of telco-specific applications for customers. The collaborative development of the taxonomy, with data sourcing from CSPs, industry associations, standards bodies, and Amdocs, has resulted in the creation of diverse datasets that Amdocs customers can harness to exceed market expectations. Amdocs' commitment and investment in generative AI within the telecommunications sector are demonstrated well through the compelling use cases it has crafted:

- **Elevating Sales Experience with CPQ:** Amdocs employs generative AI sales assistants to streamline sales operation, such as configure, price, quote (CPQ) processes. The technology has the potential to significantly shorten the time needed for B2B sales quotes.
- **Redefining Offer Creation:** By integrating GenAI, Amdocs has revolutionized the creation of telco offers. AI interprets product managers' intent-driven statements regarding basic offer attributes, subsequently generating an array of sample offers. This expedites the implementation process, which can ultimately shorten the time to market (TTM) of new offers.
- **Self-Service Application:** This enables self-service solutions that interpret customer needs, delivering greater relevance and context for improved efficiency across five key use cases: acquiring 5G services, preventing fraud, managing roaming, customizing family plans, and supporting work-from-home arrangements.

The use cases are part of an expanding collection of out-of-the-box (OOTB) capabilities from Amdocs and form just a segment of the vendor's extensive repository — and it is worth noting that the abundance of use cases contributes to one of the distinctive values of the amAIz framework. The architectural blueprint of the Amdocs amAIz framework not only enables autonomous functioning; it also encourages customization, with Amdocs Studio being instrumental in creating new use cases. In short, a self-service application utilizing GenAI simplifies user interactions and empowers users to create their own use cases.

Amdocs' unveiling of amAIz is timed well, aligning with growing demand among CSPs for the integration of analytics, AI, and machine learning into their networks and operations. Following OpenAI's public release of ChatGPT, generative AI swept across industries, including telecommunications, offering telcos the potential to revolutionize how they obtain, process, and evaluate information and improving their decision-making speed and quality. For IDC, a major

factor that differentiates the amAIz framework from various other generative AI platforms is its training models for distinct industry-centric applications.

Conclusion

The most immediate challenge for the market is addressing the time lag between conceptualization and actual productivity and how to successfully transition from a robust focus on formulating road maps to actual deployments within CSPs. Amdocs' amAIz framework goes beyond the realm of hype, offering substantive GenAI capabilities. This framework encompasses an array of use cases and templates that span internal operations and customer-facing domains. This initiative underlines a strategic recognition of the significance of generative AI and builds upon a previously disclosed collaboration with Microsoft, aimed at integrating AI into Amdocs' Customer Engagement Platform.

The introduction of the amAIz framework marks an impactful stride by a major OSS/BSS vendor to integrate GenAI into its overarching company approach and strategy.

The introduction of the amAIz framework marks an impactful stride by a major operations-support-system/business-support-system (OSS/BSS) vendor to integrate generative AI into its overarching company approach and strategy. In a landscape in which competitors are poised to unveil their own generative AI solutions, Amdocs can leverage the early momentum generated by its amAIz framework. It is worth mentioning that maintaining strong governance and control is paramount in using generative AI; it represents the responsible approach. This focus aligns with Amdocs' commitment to providing governance-by-design capabilities, ensuring regulatory compliance and oversight.
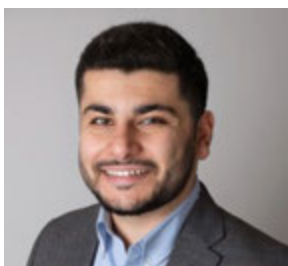
Moving forward, the infusion of GenAI into telecommunications will broaden the dynamic telco landscape with specialized investments, a plethora of applications, and evolving partnerships. As the telecommunications industry continues to evolve, the approach to AI will shift to domain-specific specialization and tailored models, shaping the future of this critical industry. The introduction of GenAI has already tangibly impacted our daily lives. A distinct ecosystem has arisen around GenAI. For Amdocs, the aim is not to compete with this ecosystem but rather to seamlessly integrate with it.

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About the Analyst

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Ahmad Latif Ali leads IDC's EMEA Telecommunications Insights program, directing research in this area as the telecommunications industry becomes an integral part of cutting-edge technology adoption. He provides strategic insight and perspectives on how telcos across the EMEA region are evolving from traditional communications service providers to platform players at the heart of digital ecosystems, as they decide where to operate in the digital value chain, who to partner with, and how to manage and orchestrate new technologies.

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