

Amdocs accelerates generative AI deployment for CSPs, leading in the race to adopt generative AI solutions

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Adaora Okeleke

As generative AI (GenAI) activities are increasing in the telecoms industry, Amdocs has launched its amAIz framework which provides operators with a platform for developing generative AI use cases. The amAIz framework aggregates capabilities at lower levels of the generative AI value chain including foundation models (FMs), machine learning operations (MLOps) platforms and Model Hubs. The amAIz framework will then use these to build generative AI into its portfolio of solutions. Amdocs will showcase these capabilities to communications service providers (CSPs) with the aim of developing custom solutions for them in a governed and convenient way. Amdocs will provide new professional services around the framework, including prompt engineering, fine-tuning and the monitoring of FMs. Amdocs' CSP customers using this framework will benefit from faster time-to-value for generative AI solutions, while Amdocs gains total cost of ownership (TCO) benefits. However, to succeed with its amAIz framework, Amdocs must continue to evolve its generative AI partnerships at the lower levels of the value chain to deliver a comprehensive framework to CSPs.

Generative AI continues to progress in the telecoms industry, but it still faces several barriers

The telecoms industry is exploring opportunities with generative AI. In previous articles, we identified use cases and activities from early adopters of generative AI, specifically among CSPs.¹ Since publishing these reports, we have identified other activities and use cases in recently updated trackers.² e& (new brand name for Etisalat), SK Telekom and Softbank recently made announcements focused on generative AI. In July 2023, SK telecom announced a deal with start-up company FriendliAI to use its platform in order to enable enterprises to create their own generative AI models. In May 2023, Softbank signed a deal with NVIDIA to use its GH200 Grace Hopper superchip in order to run generative AI and 5G/6G applications in Softbank's distributed data centres in Japan. Vendors such as AWS, EnterpriseWeb and KX are currently exploring the use of the generative AI to support network operations.

Despite these opportunities, challenges such as data access, the reliability of results and costs are expected to impact CSPs' generative AI adoption. Key cost factors include computing infrastructure, data storage, transfer and bandwidth, model training, inferencing and maintenance costs. Other liabilities include responsible use, data privacy, latency and security vulnerabilities.

Ensuring cost-effective methods to assist CSPs in adopting this new technology while protecting them from potential liabilities, particularly those linked to generative AI concerns, will play a crucial role in the success of CSP vendors. These vendors aim to pursue new opportunities in the CSP generative AI market.

¹ See Analysisys Mason's [Generative AI presents opportunities as well as challenges for the telecoms industry](#) and [Consumer-facing opportunities for generative AI: telecoms operators should now consider their options](#).

² See Analysisys Mason's [Communications service provider data and AI/analytics activity tracker 1H 2023](#) and [Data, AI/analytics and development products and cloud services launch tracker 1H 2023](#).

Amdocs takes the lead in setting out its generative AI strategy for CSPs

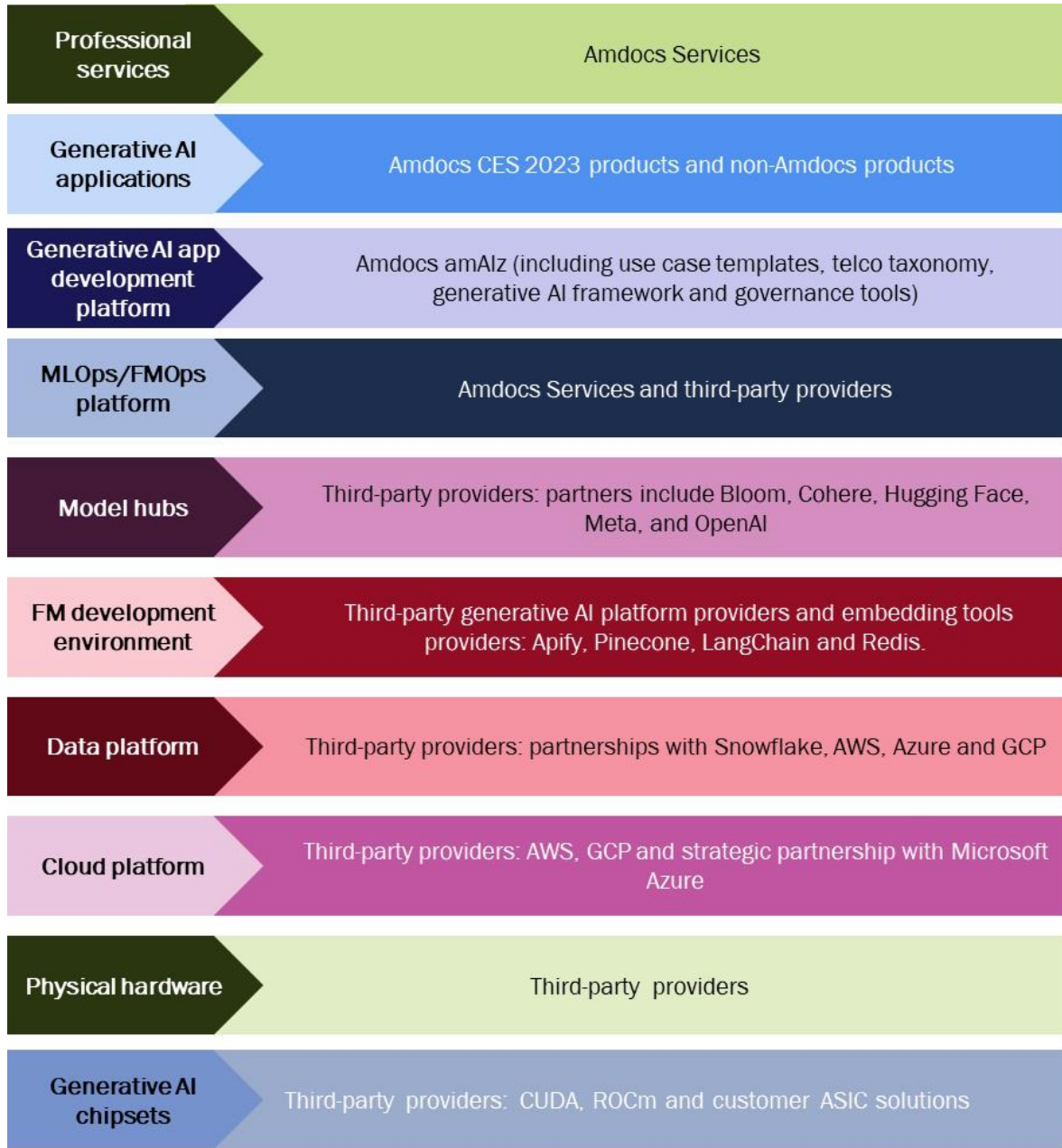
In June 2023, Amdocs announced its generative AI strategy and launched its amAIz framework – a framework that provides CSPs with opportunities to implement generative AI capabilities into their business strategy and addresses the associated challenges.³ The amAIz framework will enable the following.

- **The enhancement of Amdocs’ portfolio with generative AI capabilities.** Amdocs will embed generative AI capabilities within its products (with its Billing, CPQ and Product Catalog being the first products to get an uplift using the technology) and services offerings, including managed services to analyse trouble ticketing data and testing services.
- **The provisioning of guardrails to assure, govern and secure generative AI implementation and operations.** Amdocs is positioning pre-existing services such as its FinOps and its DevSecOps capabilities to enable CSPs to address cost, performance and security-related concerns, especially as it relates to the tuning and inferencing of FMs for generative AI. Amdocs will provide new services, including prompt engineering, the fine-tuning of FMs to understand telecoms context and addressing telecoms-specific use cases (using a large language model (LLM) enhanced with telecoms taxonomy) as well as continuous monitoring of outputs to ensure that they align with expected outcomes.
- **The self-service development of generative AI-based solutions by customers and partners.** The prevalent risks associated with exposing a CSP’s IP and private information to the competition through the use of public FMs, and the fear of breaking data security and privacy regulations, creates opportunities for Amdocs to offer its amAIz framework to CSP customers to develop generative AI models using their own data and specific to their own environments.

Amdocs intends to operate within the services, applications and generative AI application development platform layers of the generative AI value chain. Figure 1 maps Amdocs’ amAIz framework with the generative AI value chain and highlights the key capabilities that Amdocs will be offering to CSPs.

³ Amdocs’ amAIz is a telecoms-specific generative AI framework which combines open-source technologies with large language models to enable CSPs to benefit from the potential that generative AI presents. The vendor gave a detailed presentation of its strategy and the framework at its recent Up Close Industry Analyst event which took place in Tel Aviv, Israel.

Figure 1: Mapping Amdocs' amAIz framework onto the generative AI value chain



Source: Analysys Mason

The framework (delivered as software-as-a-service) does not provide capabilities to develop FMs and large language models (LLMs) but provides access to FM/LLMs from third-party providers and open-source communities.⁴ The amAIz framework will instead provide use case templates, telecoms taxonomy, generative AI framework and governance tools to fine tune and embed FM/LLMs into its solutions and customers' business processes.

⁴ LLMs are AI systems (or models) trained on large amounts of text data and can generate natural language outputs. FMs, on the other hand, are a broader concept that refer to models trained on multimodal data (text, images, audio, etc.) and can serve multiple tasks including image, code and audio generation. Consider LLMs as a type of FM.

The amAIz framework enables CSPs to achieve faster time to value and offers Amdocs an efficient generative AI approach

CSPs benefit from Amdocs' amAIz framework by receiving increased time to value for generative AI solutions as well as receiving help to circumvent the technology's associated risks and liabilities. The framework achieves this by providing Amdocs' CSP customers with a platform for developing generative AI use cases which aggregates key tools and environments at lower levels of the value chain, offered by Amdocs and third-party providers.

The structure of the amAIz framework also benefits Amdocs. It will provide Amdocs with enablers to build generative AI into Amdocs' portfolio of solutions, leveraging the capabilities of third-party providers within the generative AI value chain. By taking this approach, Amdocs is likely to reduce the TCO by focusing on less time-consuming functions, like developing and training the FMs, and focusing on immediate value creating propositions. In addition, Amdocs isn't being prescriptive at every level of the framework, giving room for customers to choose their preferred solutions. Amdocs can also capture new revenue opportunities through the new set of professional services it plans to offer around the framework.

Amdocs should continuously assess its partner ecosystem to ensure it delivers a comprehensive framework to customers

As Amdocs expands its partner ecosystem, it needs to ensure these engagements generate the most comprehensive and flexible framework for CSPs, while aligning with its own objectives – to reduce the time to market and increase revenues for generative AI solutions. This consideration will help adapt Amdocs' capabilities to remain competitive in the CSP market. For example, Amdocs needs to work with many FMs to broaden the array of use cases it can support, and this will drive revenue growth. However, each model that Amdocs chooses to work with will add time and cost as it needs to be fine-tuned for different use cases, affecting Amdocs' time to market. Amdocs needs to weigh up which models to work with as there are trade-offs. LLMs like GPT-3 and GPT-4 support multiple use cases but their size (for example, GPT-3 has 175 billion parameters) means that they may not be as cost-effective to work with as, for example, NEC's LLM (with 13 billion parameters), but its use cases may not be as flexible as GPT-3 and GPT-4.

We expect other telecoms-specific players like Ericsson, Huawei, Netcracker and Nokia to launch their generative AI strategies and frameworks in the near term. These vendors should learn from Amdocs' strategy and aim to complement their core capabilities with partners' capabilities to succeed in the CSP generative AI market.