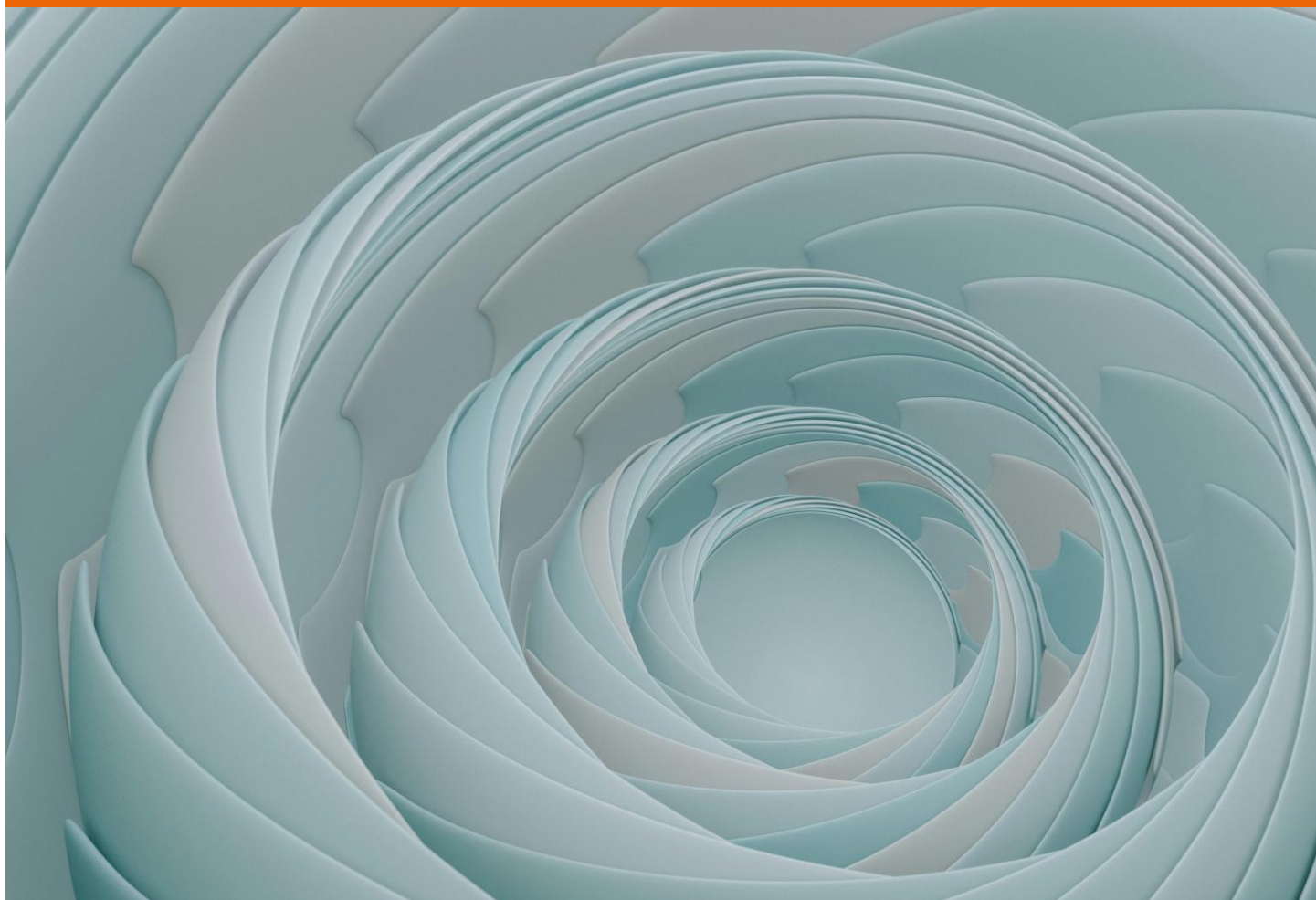


Amdocs Cognitive Core

The brain powering the Agentic Operating System for telcos

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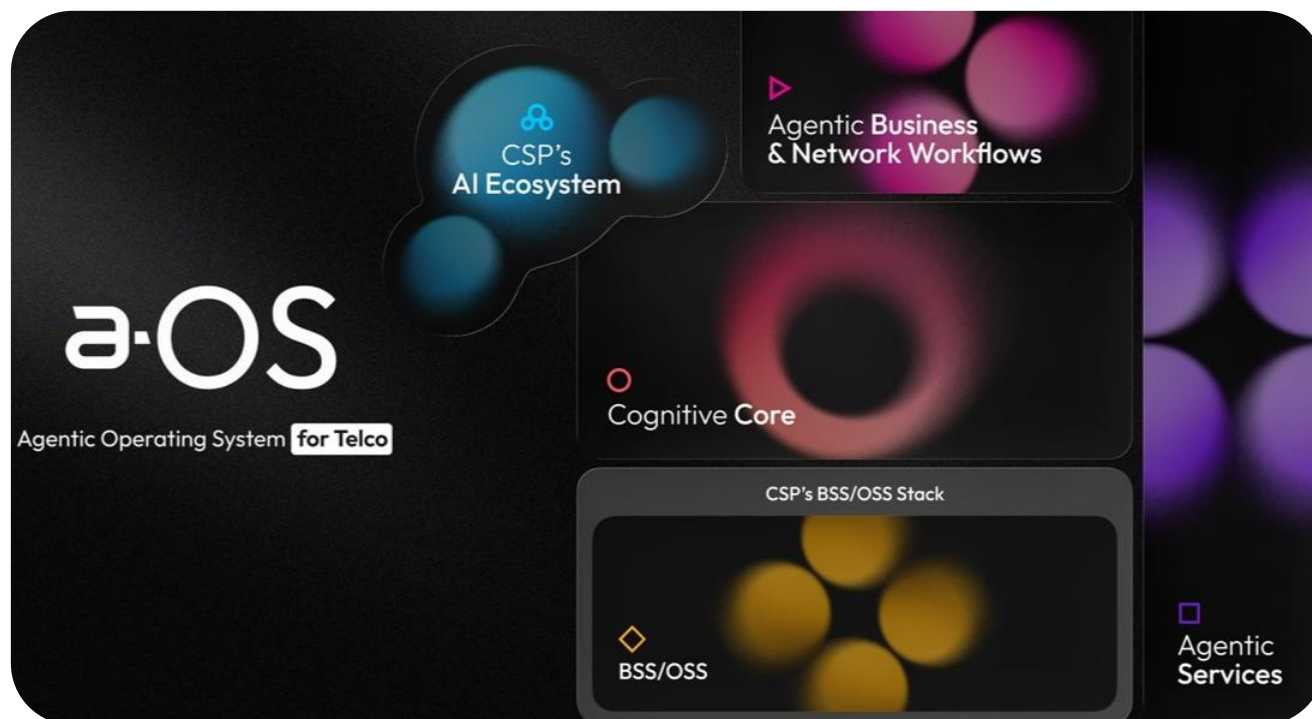
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INTRODUCTION

Amdocs unveiled its **Agentic Operating System** (aOS) (figure 1) on February 3, 2026 — a solution designed and purpose-built for the telecoms industry. Built on a modular, telco-grade architecture, aOS aims to simplify and accelerate enterprise-wide adoption of generative AI among CSPs. The company positions aOS as a telco-native agentic OS that operates on top of any BSS/OSS stack, embedding intelligence directly into core telecom operations to drive improvements in customer and employee experiences, operational efficiency, and growth.

Figure 1: Overview of the constituents of Amdocs' Agentic OS



Source: Amdocs

aOS is designed to be agnostic and co-exist seamlessly within a CSP's existing AI ecosystem — supporting their preferred LLM and any other AI-specific partnerships across infrastructure and beyond.

The offering is built on four core building blocks, with the first two rooted in Amdocs' existing portfolio and the latter two representing newly introduced capabilities:

1. The first building block is the **Cognitive Core** — a significant evolution of the Amdocs amAIz platform and the heart of aOS. It serves as the central intelligence layer through which all data flowing from systems of record must pass. Acting as the brain of the entire platform, the Cognitive Core powers the other three building blocks, enabling agents and APIs to interact with it and extract relevant information as needed. The commercial model for this layer is consumption-based.

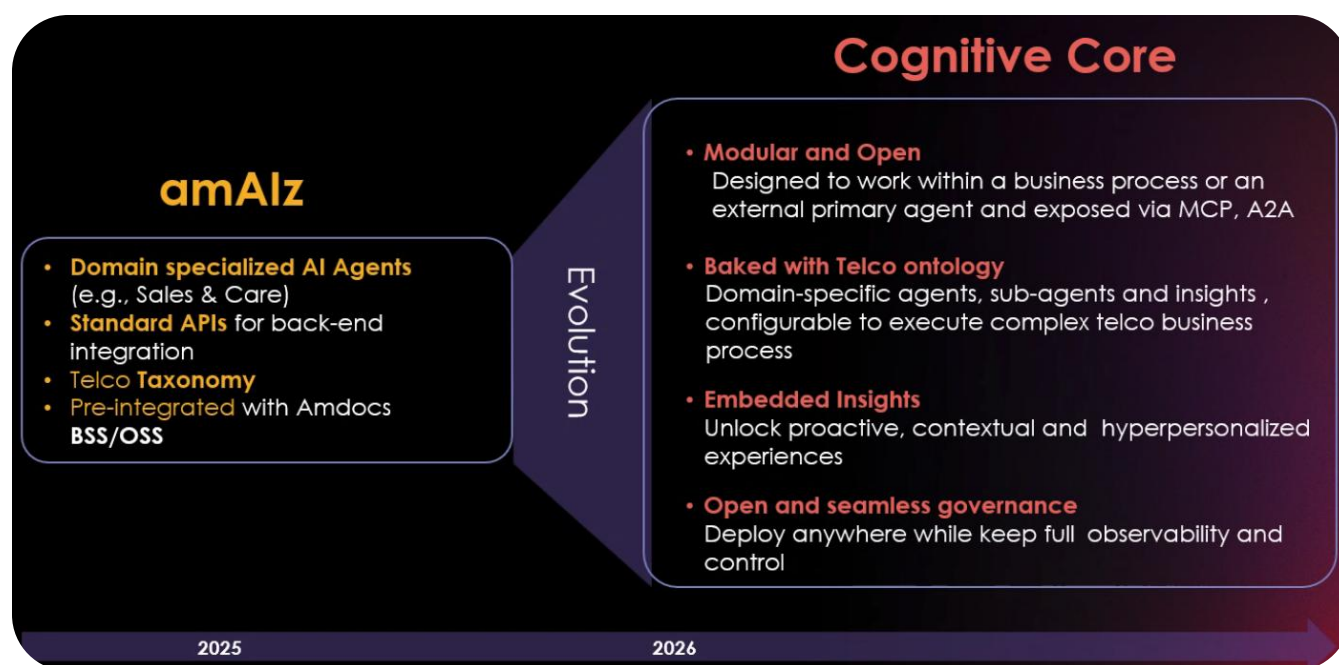
2. The second building block is Amdocs' **OSS/BSS stack** — its flagship portfolio that forms the backbone of the company's revenue, encompassing the CES suite among other offerings. This layer operates on a traditional licensing-based commercial model.
3. The third building block is **Agentic Business & Network Workflows**— an entirely new offering that was not part of the portfolio previously. Amdocs is developing an expansive catalog of processes spanning business and network operations, with the goal of transforming traditionally manual and reactive telecom workflows into autonomous, agentic ones. This is a significant and deeply verticalized effort, purpose-built for telecom initially, with the potential to extend into other industries over time. Like Agentic Services, this layer is also commercialized on an outcome-based model.
4. The final building block is **Agentic Services** — Amdocs' well-regarded professional services arm, now operating under the Amdocs Studio banner. This offering is vendor-agnostic, extending beyond Amdocs-only implementations to support a broad range of environments. It spans migration, design consulting, implementation, cloudification support etc. Notably, this team is expected to take on a more agentic, proactive support role going forward. The commercial model shifts to an outcome-based structure.

This report focuses on the Cognitive Core, offering an overview and in-depth analysis of its role and capabilities within the aOS framework.

AMDOCS COGNITIVE CORE

Amdocs was among the first solution providers to bring a dedicated telco AI platform to market, launching amAlz in 2023. The platform has since been deployed across multiple CSPs and has earned good recognition in the industry. The Cognitive Core builds directly on this foundation — it is an evolution of amAlz, retaining its core strengths while introducing a new layer of capabilities that elevate it into the central intelligence engine of aOS (Figure 2).

Figure 2: Overview of evolution of amAlz to Cognitive Core



Source: Amdocs

The Cognitive Core (figure 3) inherits the same cloud infrastructure foundation as amAlz, which was certified across AWS, Azure, and GCP — meaning all existing amAlz certifications are carried forward (it can also be deployed on-prem).

Building on that foundation, the Cognitive Core introduces a range of enhancements: greater openness, a built-in telecom ontology, an expanded library of sub-agents, and deeper transparency. ML and analytics-based insights are now more focused on agent needs and are a native part of Cognitive Core.

Figure 3: Overview of Amdocs' Cognitive Core



Source: Amdocs

The six main components of Cognitive Core are:

1. Libraries of Agents
2. Telco insights
3. Telco context and ontology
4. Access – MCP, A2A etc.
5. Agentic layer
6. Governance and Trust

Cognitive Core is not just a standalone product — it is embedded into every Amdocs solution going forward. Whether the sale involves billing, catalog, services, or any other telecom offering, the Cognitive Core comes with it as the essential engine underpinning all business and IT requirements. It includes an agentic gateway, enabling access to agents, sub-agents tools and insights. The Cognitive Core will be embedded as a standard component across all future upgrades and individual system sales, with Amdocs also able to support retrofitting it into already-deployed implementations — a move that significantly broadens its potential reach across the existing install base.

Amdocs claims four key value propositions for Cognitive Core:

1. The first is **time to value**. The Cognitive Core accelerates project delivery through pre-built agentic libraries, significantly reducing development timelines

2. The Cognitive Core is built on a **telecom-specific** ontology, enabling it to initiate and orchestrate telco-specific agents and sub-agents capable of executing complex, domain-specific tasks across the telecom environment. It also has an insights capability that is designed to work on top of whatever data management infrastructure a CSP already has in place.
3. **Openness** has been framed as a foundational principle of the Cognitive Core — a deliberate design choice given that most telecoms operate across complex multi-vendor, multi-technology environments. Amdocs has built the Cognitive Core to be open, modular, and cloud-agnostic, with support for emerging agentic interoperability standards such as MCP (Model Context Protocol) and A2A (Agent-to-Agent), enabling a high degree of observability and flexibility across diverse operational landscapes.
4. Amdocs claims Cognitive Core is designed to operate at **telco scale** while keeping TCO optimized and providing end to end security, governance and traceability that can be used to track agentic actions to any downstream system.

APPLEDORE ANALYSIS

Amdocs' launch of aOS should not be viewed as another routine AI platform announcement. It represents a deliberate strategic effort to reposition BSS/OSS as the control plane for Agentic AI within telecom operators. The industry is shifting away from isolated generative AI experiments toward embedding intelligence directly into operational workflows. The constraint is no longer model capability. Instead, the bottlenecks are data coherence, system integration, and orchestration across operational domains.

Agentic OS is sweeping in its ambition, positioning itself as the definitive operating layer underpinning the AI aspirations of CSPs worldwide. It takes a vendor-agnostic stance — leaving CSPs free to retain their preferred LLM and cloud infrastructure choices — a design philosophy that may be key in winning over telco approval. Equally important is its accommodative approach to legacy systems; rather than mandating a costly, high-risk rip-and-replace exercise, it allows operators to build forward from their existing foundations.

At the heart of the Agentic OS sits the **Cognitive Core**. Built on the foundations of Amdocs' amAIz platform, it is designed to serve as the central intelligence layer for telco operations, regardless of whether the underlying OSS/BSS stack is Amdocs-native or not. This vendor-neutral positioning is deliberate and significant. Cognitive Core is best understood not as an *additional AI layer*, but as an attempt to establish *semantic consistency and governance control* across multi-vendor operational environments. This aligns with what Appledore has consistently observed across CSPs: pilot programs are plentiful, but scaling remains constrained by fragmented data silos, inconsistent ontologies, and brittle integration pathways. The challenge is not building an agent; it is granting that agent trusted, structured access to operational data and workflows.

The central question is therefore not whether aOS is technically viable, but whether CSPs will materially increase operational investment to enable this transition. Appledore's research has shown that telco OPEX intensity has remained relatively flat as a percentage of revenue. Despite

sustained rhetoric around autonomy and AI, there has been no structural surge in operational spending. Most AI expenditure to date has been substitutional rather than incremental.

By embedding Cognitive Core into system sales, Amdocs effectively seeds its intelligence layer across its installed base without requiring a discrete capital allocation. This reduces procurement cycles and aligns with the disciplined investment patterns. The outcome-based pricing model attached to Agentic Services and Agentic Business & Network Workflows is similarly pragmatic, as CSP adoption is far more likely when ROI is tied to measurable outcomes such as reduced truck rolls, improved first-call resolution, accelerated order-to-activate cycles, and lower mean-time-to-repair.

The Cognitive Core's telecom-specific design is a meaningful differentiator against more generically positioned competitors. It reflects a broader industry shift from prompt engineering to contextual engineering, requiring the platform to operate across multi-state, multi-actor telco environments with the openness needed to support agentic collaboration and seamless data exchange. It aims to move CSPs beyond isolated AI deployments toward managing end-to-end experiences, creating the foundation for hyper-personalized customer engagement.

Architecturally, Cognitive Core appears designed to sit in the mediation layer between systems of record, data mediation frameworks, an agentic decision layer, and downstream execution systems. If successful, this positioning strengthens Amdocs' role beyond traditional BSS/OSS provision, elevating it to orchestrator of operational decision logic across the enterprise.

However, three structural risks remain.

First, data readiness remains the most significant problem today. Many CSPs still lack normalized, real-time operational data across domains.

Second, expecting that other key infrastructure suppliers will concede their position is unlikely as that is where the expertise lies. While aOS is positioned as vendor-agnostic, incumbents such as Ericsson and Nokia are advancing their own orchestration layers, and operators may resist consolidating decision authority under a single OSS/BSS vendor.

Third, budget realities cannot be ignored. Agentic AI will not displace entrenched enterprise software rapidly. Telecom systems are long-lived and buyers of this technology are risk-averse. Adoption will occur incrementally, embedded within existing upgrade cycles rather than through disruptive rip-and-replace programs.

CONCLUSION

Amdocs' Agentic OS represents one of the more structurally coherent efforts to move telecom AI beyond isolated pilots and into integrated operational environments. Its differentiation does not stem from model innovation, but from architectural positioning and commercial pragmatism. If it succeeds in establishing itself as the semantic and governance layer through which AI-mediated decisions are executed, Amdocs meaningfully deepens its entrenchment within tier-1 operators and evolves from a traditional systems vendor into an operational intelligence layer embedded in day-to-day workflows.

The trajectory of adoption, however, will be shaped less by strategic ambition and more by operator economics and data maturity. Agentic AI in telecom is unlikely to emerge as a disruptive inflection point. Instead, it will be incrementally integrated into existing workflows, upgrade cycles, and cost-reduction programs. Progress will be gradual, aligned to fiscal discipline and operational risk tolerance.

Ultimately, competitive advantage will accrue not to vendors with the most advanced models, but to those capable of embedding intelligence into the operational fabric of the network in a way that delivers measurable financial impact.

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