Shaping tomorrow:

AT&T's drive for open, automated networks

AT&T has laid the foundations for an open, disaggregated and programmable network. This will accelerate innovation in the telecommunications industry across the US and enable advanced network capabilities such as automation and differentiated connectivity.

A bold vision for programmable networks

In 2023, Ericsson and AT&T began an industry-defining Open Radio Access Network (Open RAN) transformation.[1] This move toward an open, agile and programmable network is a key step toward building a robust ecosystem of network infrastructure providers and suppliers. It will foster innovation by increasing the possibilities for independent, third-party software vendors.

The transformation includes harmonizing the network management systems into one unified platform, with Ericsson Intelligent Automation Platform (EIAP) as the overall RAN automation solution. Alongside capturing the business and innovation opportunities Open RAN presents, the transformation also: streamlines operations; consolidates automation processes; and optimizes areas such as data management, security and energy efficiency.

AT&T and Ericsson's commitment to openness

By embracing Open RAN standards and interfaces such as O1,[2] O2 and R1, AT&T is harmonizing network management and automation across a multi-vendor environment. The O1 interface, for example, is already enabling seamless integration of:

- Ericsson macro RAN via Cloud Native Ericsson Network Manager (cENM)
- Distributed antenna system (DAS) and indoor systems using O1 interoperability distributed by third-party RAN suppliers
- Open RAN units (O-RUs) from a third-party supplier directly controlled via M-Plane from Ericsson's RAN Compute

This consolidation eliminates redundant systems, reduces operational complexity, and ensures consistent lifecycle management, alarms, performance monitoring and fault management across multi-vendor RAN environments.

"We are looking for the opportunity to create the most open, programmable network on the planet. This gives us the opportunity to create differentiated connectivity for our subscribers."

Rob Soni, VP RAN Technology, AT&T

[1] Ericsson, 'Ericsson and AT&T strategic agreement to pioneer networks of the future' (4 December, 2023)
[2] Ericsson, 'Ericsson makes it easier to manage subscriber connection experience in different environments' (29 January, 2025)

From legacy SON to autonomous networks

Historically, AT&T's network relied on fragmented self-organizing network (SON) capabilities and proprietary systems. While this provided benefits in the past, it also created lifecycle management and operational challenges.

Industry alignment around service management and orchestration (SMO), the RAN Intelligent Controller (RIC) and rApps offers a way forward, via new architecture for the network management landscape and foundational capabilities. Through the deployment of EIAP, AT&T is migrating disparate SON functionalities into a unified, open and programmable non-real-time RIC-based environment. EIC supports industry-standard R1 interfaces and hosts both third-party and in-house rApps, providing:

- a portable and scalable network management and automation ecosystem
- flexibility to integrate advanced rApps from a broader set of developers
- a pathway to incorporate leading AI capabilities
- a unified platform for automation and optimization across the macro, indoor and DAS domains

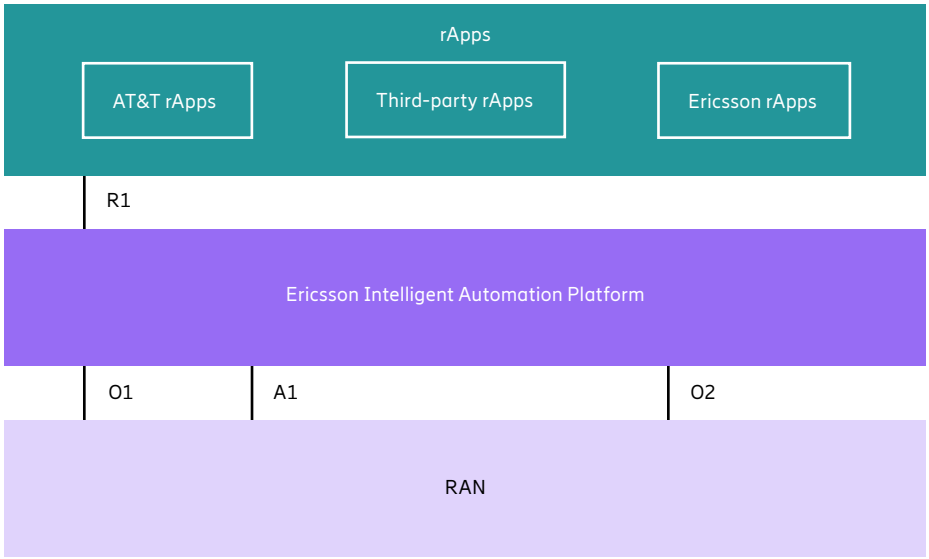
This approach drives consistent and programmable network behavior, laying the foundation for autonomous networks.

rApps and the rise of programmable networks

Through the rApp ecosystem enabled by EIAP, AT&T is unlocking new levels of agility and intelligence and transforming its network into a programmable, open and innovation-ready platform. Specifically, AT&T aims to:

- using largely Ericsson services, migrate proven internal automation functions into rApps to preserve value while aligning with open standards and enabling portability across vendors
- engage new rApp suppliers to address emerging challenges, particularly in generative AI, spectrum sharing and interference management
- prioritize functionalities such as traffic steering, outage compensation, energy savings, adaptive scheduling, load balancing, service-level agreement assurance and self-healing networks
- highlight a focus on performance assurance, observability, and dynamic RAN optimization

Overview of AT&T's RAN automation high-level architecture



Note: O1, O2, A1 and R1 are interfaces defined by the O-RAN Alliance

In a telecom-industry first, AT&T successfully deployed a third-party rApp on its live production network via the R1 interface. This demonstrated the maturity of the ecosystem and the viability of open, vendor-agnostic automation.[3]

EIAP in AT&T's network – realizing the benefits of a strategic decision

AT&T is already seeing indications that the transformation is delivering positive results in several areas:

- operational efficiency
- enhanced flexibility
- ecosystem innovation
- future-readiness

Security and trust

As part of its transformation, AT&T is implementing zero-trust principles across its network. The rApp certification process further enhances trust by validating that applications are secure, privacy-preserving and integration-ready. This approach protects the network and levels the playing field for smaller, innovative developers.

A strategic leap toward network leadership

AT&T's journey toward open, autonomous networks is a blueprint for the future of the telecom industry and sets a new benchmark for RAN automation and programmability. The approach not only improves operational efficiency and flexibility, but also establishes an innovative ecosystem that enables differentiated 5G services that are expected to unlock new avenues for revenue growth by leveraging differentiated connectivity.

With EIAP at the core, AT&T is leading the industry into a new era of differentiated connectivity, ecosystem collaboration and intelligent automation.

Key takeaways

- AT&T's transformation will enable an open, disaggregated and programmable architecture
- EIAP powers automation at scale, enabling multi-vendor support and efficient orchestration
- EIAP enables AT&T to unlock programmability and accelerate innovation through rApps
- Open RAN enables differentiated connectivity and tailored network experiences, creating revenue opportunities
- AT&T and Ericsson achieved industry-first integration of O1 and R2 interfaces
- EIAP secures zero-trust principles, enhanced threat detection and anomaly response

[3] Ericsson, 'AT&T deploys first third-party rApp on live production network via Ericsson Intelligent Automation Platform' (29 July 2025).