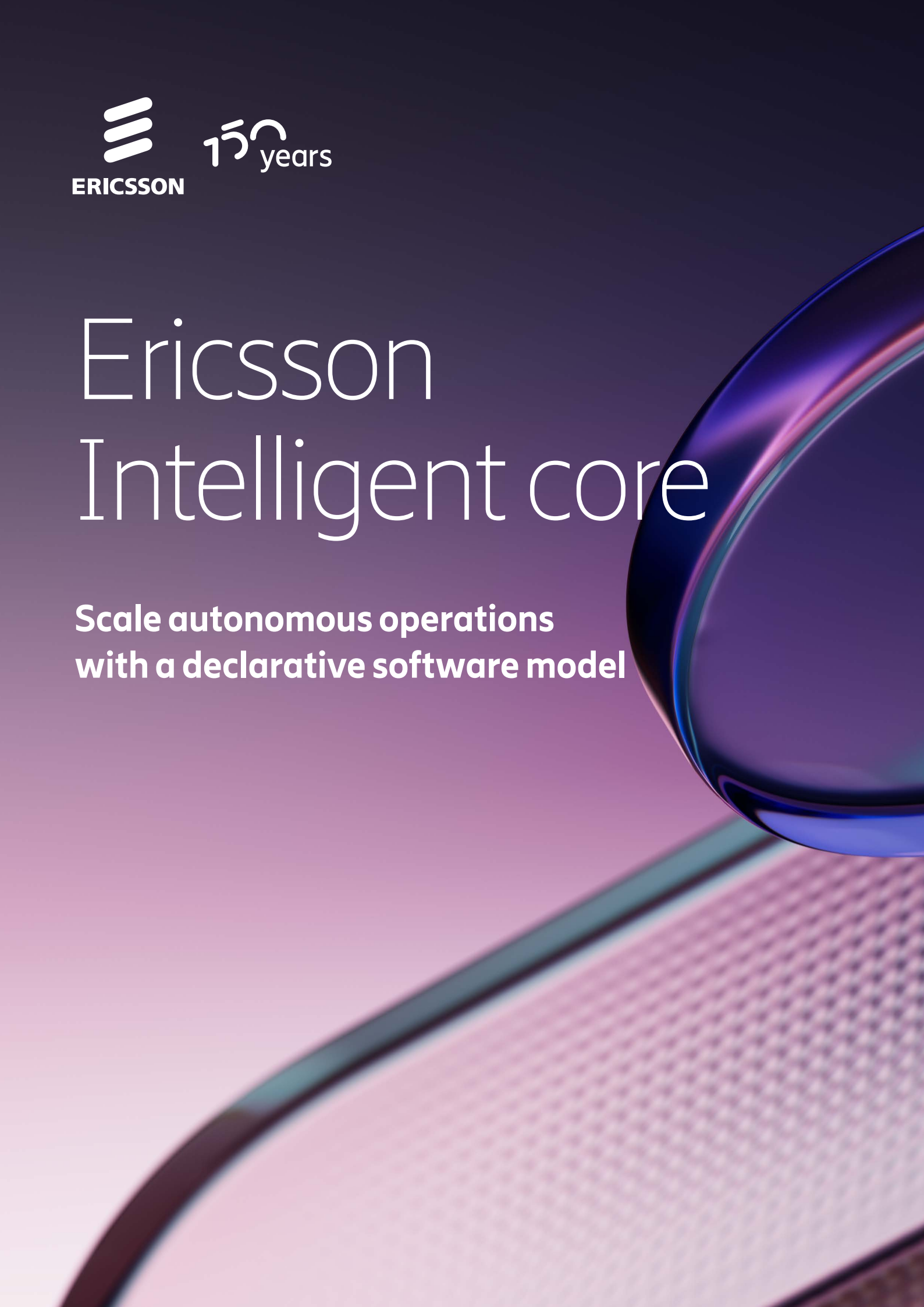
ERICSSON

150 years

Ericsson Intelligent core

Scale autonomous operations with a declarative software model



Current approaches cannot scale

The transition toward autonomous networks is accelerating as communication service providers (CSPs) seek to improve operational efficiency, reduce complexity, and respond faster to changing business demands. Cloud-native environments offer greater flexibility and scale, but they also require more advanced configuration and lifecycle management.

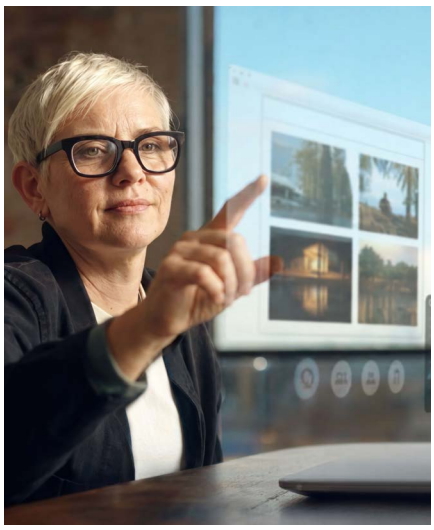
At the same time, artificial intelligence (AI) is reshaping both business opportunities and the way networks are operated.

CSPs need a core network that supports complex, performance-sensitive use cases—differentiated connectivity, physical AI, and intelligent user services—while running AI-driven network operations that can predict, optimize, and deliver a premium user experience. Meeting these business needs requires a core network that can adapt to continuous, large-scale change without adding operational risk.

Traditional operational approaches make continuous change nearly impossible at scale. Fragmented tools, manual processes, and lengthy validation cycles create inconsistency, configuration drift, limited traceability, and increased operational risk.

Efficient, secure, and consistent configuration management is becoming a critical foundation for network autonomy and the safe scaling of AI-driven change. By applying declarative operations wherever possible—defining the desired state, applying changes reliably, and maintaining full visibility and control across distributed cloud environments—CSPs can strengthen the cloud operating model and scale autonomous operations.

Managing continuous change



Meeting these demands requires a core network designed to adapt to continuous, large-scale change without increasing operational risk. Ericsson Intelligent core is built for this reality—enabling CSPs to reliably introduce, manage, and reconcile software and configuration changes across complex distributed environments.

To manage this continuous change reliably, Ericsson Intelligent core uses a declarative GitOps approach. The desired state—covering applications, configurations, infrastructure, and policies—is captured in a structured, version-controlled format.

By ensuring every change is defined, reviewed, and automatically reconciled, GitOps strengthens the cloud operating model, enabling faster, more consistent, and reliable software deployments and upgrades across even the most complex environments. Automated workflows eliminate configuration errors and operational drift, driving down costs and protecting service continuity.

And it unlocks the next frontier: monetizing complex, AI-driven use cases at scale. Agents and orchestration systems can apply large-scale configuration changes consistently across the network while a GitOps-governed single source of truth keeps every change traceable and aligned with the desired state.

What do declarative operations and GitOps bring?

GitOps began in software development and is now becoming a way to operate carrier-grade networks: automated, consistent, and fully traceable.
The idea is simple: adopt a declarative model. Instead of telling the network how to perform a task step by step, engineers, orchestration systems, and agents define what the network should look like including the software, settings, infrastructure, and policies that should be in place.

This definition is stored in a shared, version-controlled repository.
The repository then becomes the trusted source of truth.

A GitOps agent continuously compares the configuration of the live network with this desired state and automatically makes the necessary adjustments to keep them aligned. If the network drifts out of line because of a failed component, a manual change, or an incomplete update, the agent detects the difference and restores the intended state without manual intervention.

Because every change is documented, reviewed, and approved before it reaches the network, there is a complete record of what changed, when, and why. If a change causes a problem, the network can also be rolled back to a previously approved version.

Zero-touch operations and faster Change

Automates network changes at scale and accelerates deployment, removing manual steps from lifecycle and configuration management.

Reliability via reconciliation

Continuous self-healing and drift correction ensure the desired state is always maintained across clusters and clouds.

Auditability and Governance

Version-controlled configuration gives full traceability, controlled, reviewable change and lower operational risk.



What is the Cloud operating model

A cloud operating model brings together people, processes, tools, and automation to run and continuously evolve cloud-native core networks. It improves agility, resilience, security, and service quality, while laying the foundation for greater network



Strengthening the cloud operating model

Taking the next step with the cloud operating model, GitOps gives you a consistent, automated way to deploy, scale, operate, manage, and upgrade software across the network—and a faster path to launching new services for your customers.

Every upgrade captures the desired state of the software version, configuration, infrastructure, and policies in a structured, version-controlled format. Instead of following step-by-step procedures, the operator declares the intended outcome, and the system reliably configures the network to that state. This makes upgrade complexity, operational risk, and continuous change manageable by design.

For example, to upgrade a cloud-native core network function, a CSP updates its target software version in the Git repository. The change is reviewed, approved, and validated through automated checks before it is merged into the main configuration repository. Once merged, it becomes the approved desired state that the GitOps system automatically deploys and continuously reconciles across the environment.



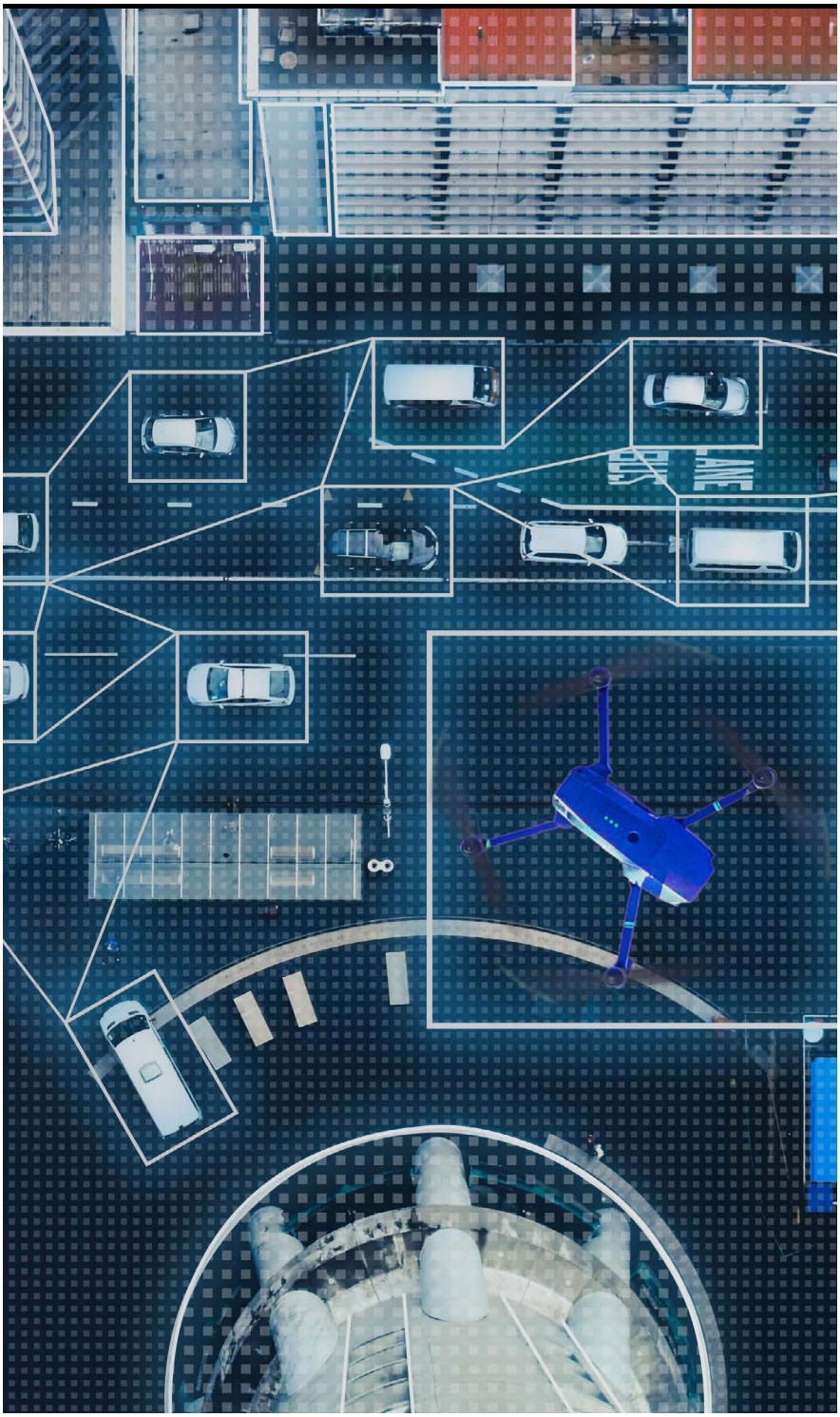
Foundation for autonomous networks at scale

Scaling autonomous use cases across the core network should start with the right foundation. Declarative management with GitOps enables intelligent agents to monitor network conditions, identify required changes, and apply them securely and consistently. These capabilities power autonomous core Network use cases such as anomaly detection, predictive capacity, preventive network healing, and automated service configuration.

Combining agent-driven operations with GitOps enables configuration changes to be defined, reviewed, approved, and automatically applied across relevant network functions. This creates a consolidated and traceable approach to managing continuous change.

Let's make this tangible with a use case. Preventive network healing shifts core network operations from fixing problems after they occur to preventing them before they impact customers. Powered by AI, the network continuously watches its own health, spots the earliest signs of trouble, and applies the right corrective change — rebalancing traffic, adjusting capacity, correcting drift, or safely restarting an unhealthy element before service is affected.

GitOps is what makes each of these actions safe and trustworthy. Because the network's healthy state is version-controlled as the single source of truth, every healing action is applied consistently, fully recorded, and automatically reconciled — and if an outcome is not as intended, it can be rolled back in an instant. What once took hours of manual troubleshooting now happens automatically in the background, with full visibility and auditability built in. Fewer disruptions, lower costs, and a resilient core moving steadily toward zero outages.



How to get started

Ericsson Intelligent core supports the evolution from cloud-native operations to autonomous core networks, helping CSPs improve efficiency and resilience while unlocking new opportunities for business growth. The journey begins by building the foundation through cloud-native transformation, in-service operations, and CI/CD automation.

The next phase advances the cloud operating model by introducing GitOps-based core Network lifecycle management and declarative management for CNFs. This enables consistent, version-controlled, and traceable changes across network functions and resources, reducing complexity and accelerating operations. The final phase is to scale autonomous operations through CNF-native interfaces and AI-driven applications. These capabilities can detect conditions, recommend actions, and continuously reconcile the network with its intended state. As a result, CSPs can operate more efficiently, introduce new services faster, and create the flexibility needed to capture new revenue opportunities.

Cloud Operating Model → AN with GitOps

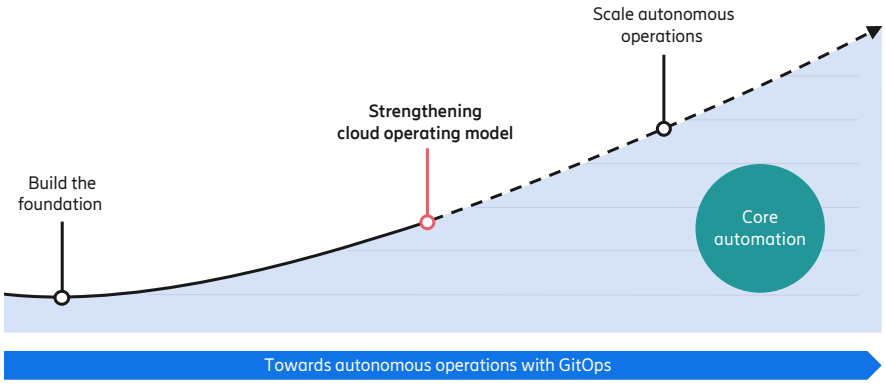


Figure 1: Evolve with GitOps

About Ericsson

Ericsson's high-performing networks provide connectivity for billions of people every day. For nearly 150 years, we've been pioneers in creating technology for communication. We offer mobile communication and connectivity solutions for service providers and enterprises. Together with our customers and partners, we make the digital world of tomorrow a reality.
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