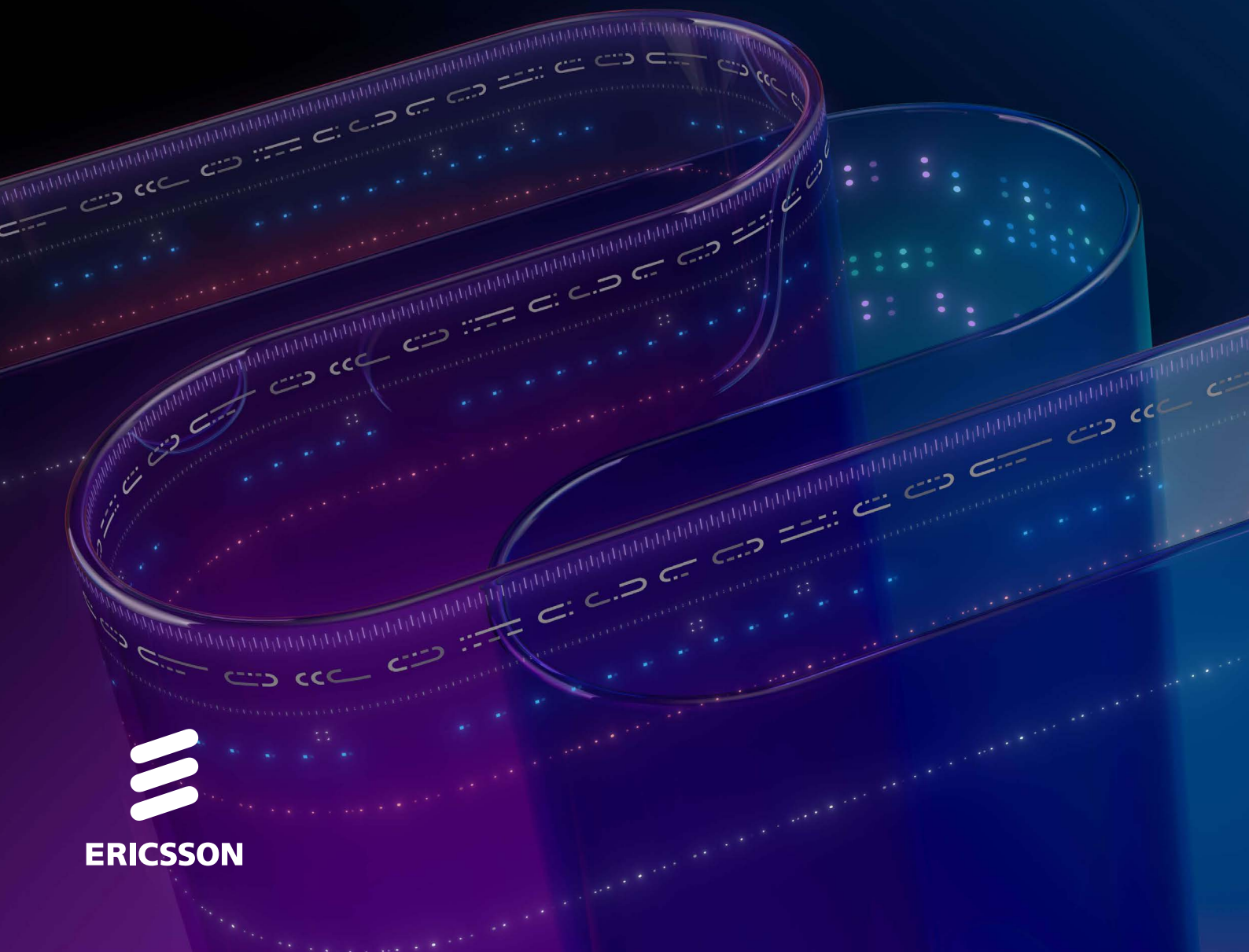
How managed services power ANOps to drive CSPs' digital transformation



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Introduction

Sam Keys-Toyer is Head of Business & Portfolio Development - Managed Services Networks at Ericsson. He joined the managed services business in 2005 and has overseen how it has evolved from traditional outsourcing of functions to forging long partnerships that bring about digital transformation that achieves business outcomes.

Autonomous network operations (ANOps) are a keystone of communication service providers' (CSPs') ongoing digital transformations. Sam Keys-Toyer, Head of Business & Portfolio Development - Managed Services Networks at Ericsson, says, "Traditional outsourcing that focused on labour arbitrage and scale to cut cost worked well when networks were simpler. Now they are now so complex that ANOps are imperative, not optional.

"The number one objective is to implement ANOps to achieve the outcomes that are most important to our customers – and they change over time. The shift to ANOps is about business transformation and adapting to real-world conditions."

Imperative not optional

Ericsson recognised this when it launched the Ericsson Operations Engine in 2019. "We reimagined managed services from the ground up, rethinking the process, skills, organisation and technology needed to drive transformation and high performance outcomes. Now we've got a cloud based, AI- and automation-driven model," Keys-Toyer states. "We operate lots of different networks around the world and we apply our AI and automation to our own operations so we know, first hand, what works and what doesn't. When we talk about autonomous transformation, it's not theory, it's practice."

Measurable outcomes

Importantly, the platform's performance can be measured accurately to establish how well it is delivering on each CSP customer's individual priorities and pain points, which vary greatly. Keys-Toyer cites examples of reducing field visits by 47% for one CSP and improving network availability by 18% for another using automation to redesign fault management processes. In both cases, greater efficiency resulted in better experience for the CSPs' customers at less cost.

AI-powered traffic balancing reduced customers' complaints to a CSP by 32% through automated responses to unusual traffic patterns. Ericsson's energy solution saves an average of 8% beyond the most basic 'sleep' mode in off-peak hours mechanism without impacting users' experience. It was the first use case to be awarded TM Forum Level 4 certification.

For another managed services' customer, Ericsson deployed an intent-based process that cut mean time to repair by 54% and boosted user throughput to 300Mbps. Intent-based processes are autonomous once the intent for them is set. This was TM Forum's second certified AN Level 4 use case.

Ongoing alignment

These are snapshots of specific achievements within what are typically long, multi-faceted partnerships. Contracts are normally between three and seven years. "Our job is to understand the customer's business objectives and create a partnership, based on trust and collaboration, to achieve their outcomes. Then at the point when contracts are renewed, we have demonstrated we are adapting to their changing needs," Keys-Toyer says. Ericsson has partnered some of its CSP customers for more than 15 years.

Overall, Ericsson typically reduces CSPs' operating costs by between 20% and 30%, depending on the starting point. On average, it also shrinks transformation programme timelines by about 18 months and at the same time, CSPs avoid substantial investments in modernising OSSs and infrastructure, not to mention the risk – up to 70% of OSS modernisation projects fail. Over five years, that can equate to saving tens of millions.

Generating new revenues

Operators want to offer new services as well as improve existing ones. Many are looking at moving from best-effort mobile services to guaranteed SLAs for individuals and enterprises consuming differentiated connectivity. Normally This can mean a certain level of service for a short period in a certain location. "You can't scale people to handle all those extra layers of services, it needs to be machine based, and that means you need the right environment in place. So ANOps are really important," says Keys-Toyer.

The Ericsson platform supports differentiated connectivity which allows CSPs to work on new services and offers while Ericsson configures their performance parameters and assurance. This drives return on investment in terms of savings and growth. In one instance, an intent-based solution enables Ericsson to manage 18 different services on one network, increasing SLA compliance from 70% to 100% by dynamically and automatically managing resource allocation between services.

"There's a long way to go, but we have globally verified and certified examples of what we can do. Our engagement with TM Forum and the work we do there to influence how [differentiated connectivity] moves forward is part of the development strategy for our business," he adds.

Culture and organisation

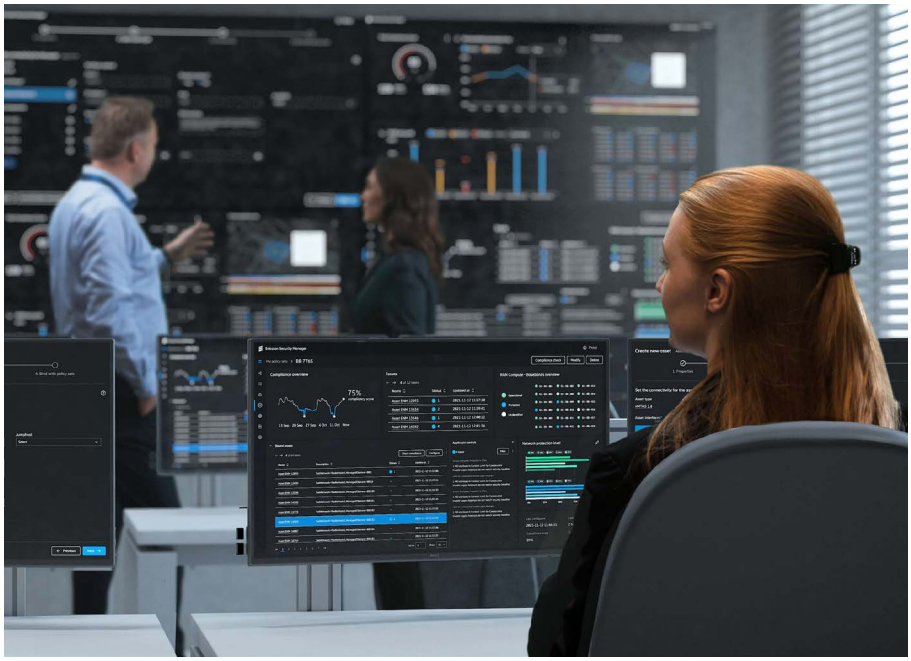
As Keys-Toyer noted, digital transformation does not only concern technology. About 60% of the transformation effort typically involves people and organisation. He explains, "We've learned that moving from human-led to system-led operations requires redefining roles, upskilling teams, and reshaping leadership behaviours. Our model maps how each process and technology change impacts people, then builds structured workstreams for communication, education and team formation."

As countless failed transformations have proved, unless the workforce is engaged and prepared, the technical transformation will not succeed. Keys-Toyer says Ericsson's managed services "blend human expertise with the machine precision of automation and AI to deliver proactive and increasingly autonomous operations," he adds.

The transforming power of process

"Perhaps our biggest differentiator regarding transformation is our process experience because processes deliver the outcomes we are contracted to achieve – and the execution of processes determines how good the outcome is," he says.

"In every case we look at the customer's process when we onboard them and migrate them to the defined processes we have built over time, based upon our experience and applied techniques like automation and machine learning, machine reasoning agents, large language models, all the various other things to make that make that process more efficient and accurate."



Applying automation

A key part of Ericsson's approach is figuring out where and how to introduce cognitive technology. "We apply AI by looking at where we can create most value, which usually starts with automation, using basic machine learning for analysis and predictions," Keys-Toyer says.

The next step is becoming predictive instead of reactive. He says, "We might choose a smaller process to prove out the technique but once that's done, we're probably going to look at where the main volume of work is in network operations to have the biggest impact. That's typically in managing change and faults" (see examples above).

These processes are usually mature or at least an operator's network operations teams have a lot of knowledge around them. "You must at least replicate the best human driven outcome when you apply AI, remembering that transformation is always done process by process, with a clear understanding of the desired outcome the business needs ," comments Keys-Toyer.

Despite predictive capabilities, operators' teams will still have many decisions, but now all the supporting process is automated or driven by AI they need to make them faster but accurately so the next stage is to introduce machine reasoning through large language models (LLMs) to make common decisions, most of which are about managing conflict and compromise, Keys-Toyer says. Here running what-if scenarios using a digital twin can be useful to understand the impact an action might have — intended and otherwise.

Ericsson is now working and experimenting with agents which are "a machine-based replication of the packages of skills we need to execute our process. Transformation is all about finding the right technique to replace or augment humans who had task ownership in those processes. It does not mean that when you introduce a new technique, you remove the old one, because they complement each other. A process is executed through different tasks that need different skills."

Right capabilities and environment

The other part of the transformation "is to ensure we can manage services the CSP wants to offer on the network and put in place the right capabilities to assure it," Keys-Toyer says. For example, a customer might want to expand into a particular type of consumer or enterprise market with a certain service that relies on differentiated connectivity, as mentioned above, for applications like outside broadcast or public safety.

This means creating on-demand services that are not necessarily ubiquitous on the whole network and therefore brings intent-based operations into play, which Ericsson has pioneered (see TM Forum Level 4 certification above).

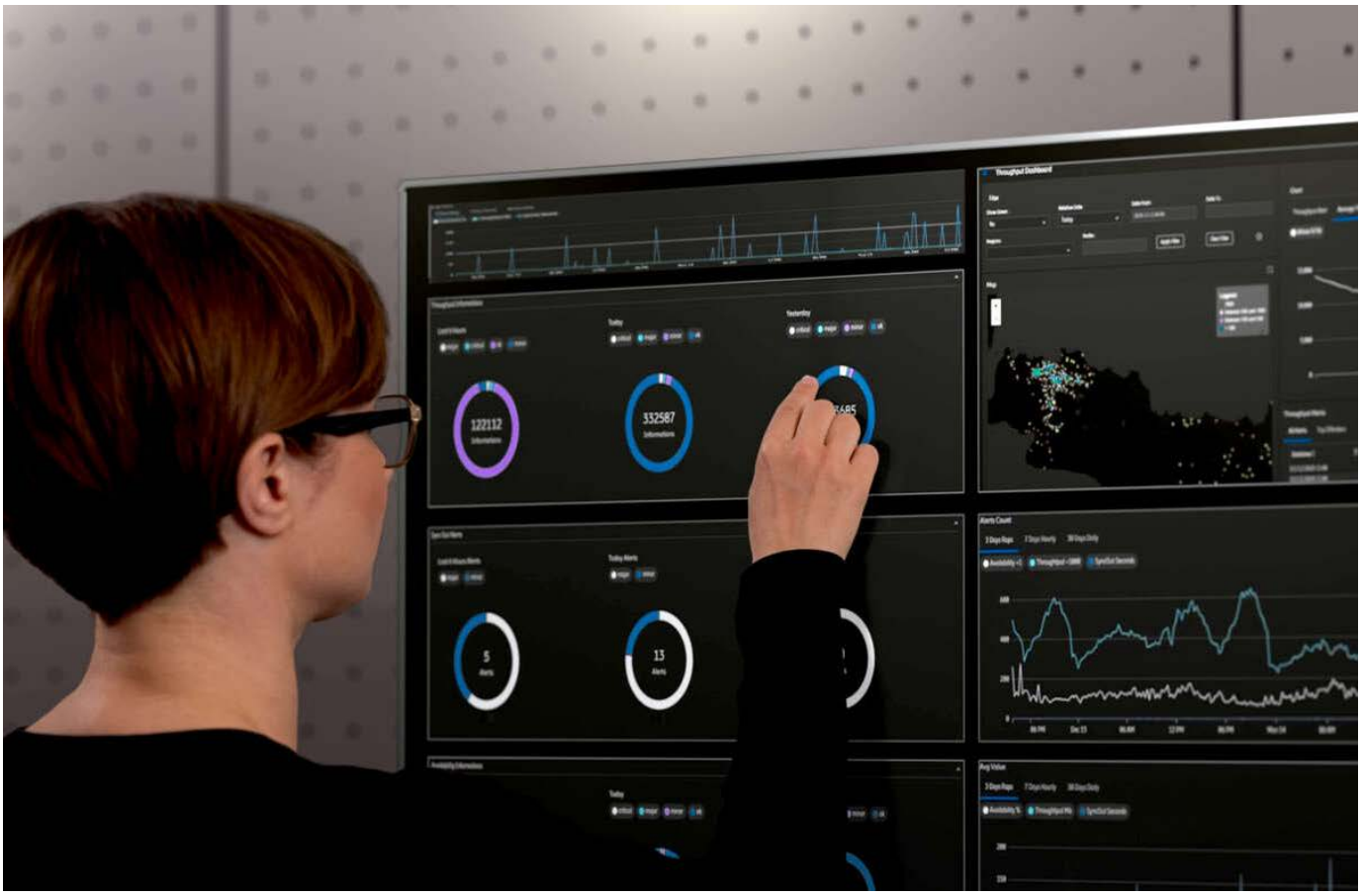
The question of data

While developing the Ericsson Operations Engine, Ericsson developed its data model and data strategy. "We understood we needed to copy data from the customer's network to process it, but ensure it stays exactly the same when we bring it into our environment — stored in exactly the same way with all the security and permissions boundaries intact," explains Keys-Toyer.

Ericsson achieves this through a large, standardised data set based on a data catalogue with integral governance and security. He elaborates, "This means a human engineer can find the data to execute tasks and so can a system of agents, or an LLM. This is a big advantage for CSPs using our managed services because many do not have a centralised data strategy but we can apply ours to their data."

Keys-Toyer concludes, "Autonomy doesn't replace people — it empowers them to focus on what matters most. Ericsson is turning managed services into the engine to realise ANOps, blending AI, automation and expertise to deliver networks that can adapt to changing needs and deliver business value.

"The future is intelligent, adaptive, and autonomous, under human curation — and it's happening now."



About Ericsson

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