Research Note

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Ericsson OSS/BSS Summit 2025

The Anatomy of Transformation

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Cover image by Robert Curran

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INTRODUCTION

Ericsson's OSS/BSS Summit is an opportunity for analysts to sit in as a the network equipment vendor's OSS and BSS customer base convenes as a community, and Ericsson has one of the largest and oldest in the business.

Ericsson is building on its "No Nonsense" OSS/BSS campaign, kicked off at DTW Copenhagen in June 2025. This is intended to give OSS/BSS portfolio greater standalone prominence and also in a style that appeals to simple, basic, common-sense positioning for OSS and BSS rather than relying on a technology or overly visionary pitch: *"Sell. Deliver. Get Paid."*

The agenda, set by a steering committee of CSPs (facilitated by Ericsson), means no product pitching and more tell-it-like-it-is sessions from telcos happy to share experiences and prompt dialog with OSS/BSS-minded peers. It also means for much less of the froth and hype that is a feature of most industry events. Optimism, yes. Over-exuberance, no. But a hefty reality-check too.

Our industry is learning like never before. Not least because so much of what we have to learn is being created outside of telecom. Some of that learning is technical, but much of it – perhaps even now the larger and harder part – is organizational, cultural even. The very concept of "support systems" is rapidly becoming outdated (we noted that few speakers had OSS or BSS in their job titles) as operators aspire to more horizontal, layered, end-to-end vision for how a telecom business should run.

This group of operators – 250+ in the room and no doubt many thousands of others back at base – is keen to run but knows it has to walk first. Questions about data (from processing to governance) featured strongly – foundational for any serious aspirations on Autonomous networks. Even as much as every understands and agrees on the essentials – intent, automation, closed loops, AI – questions of data are foundational.

Agentic AI got less airtime than at most events – it's only one piece of the overall transformation puzzle and presents new dependencies and unknowns. But that does not mean that Ericsson's OSS/BSS customers are not ambitious or optimistic. Instead, on this showing, they are measured in their expectations and plans.

Speakers and panelists and attendees came from across Ericsson's OSS/BSS customer base globally. In addition to speakers from **AT&T, BT, Deutsche Telekom, Orange, NBN, Swisscom, Telstra, Telia** and **Vodafone**, attendees were from **Entel PCS** (Chile), **stc**, **MTN** and **Telefonica** among others.

The buzz levels at the daytime conference and around the demo stations were sustained well into the evening – a sure sign that there is plenty of work still to do in OSS/BSS, and even more worth doing.

In this report, we provide our takeaways from two days of presentations – key themes, lessons learned, challenges, consensus established.

On the evidence of this event, Ericsson OSS/BSS customers are focusing on foundational changes – especially in data – that are necessary for realizing more autonomous networks.

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Agenda

Three themes framed the agenda for achieving a better-connected world and driving innovation:

1. **Autonomous Networks (AN):** managing the complexity of networks at scale and moving toward self-governance. AN represents a paradigm shift in how networks are operated and managed. The challenge is moving from isolated human control to systems that control themselves, based on intent.
2. **Data-Driven Intelligence:** While service providers have massive amounts of data, they often lack sufficient network topology and useful, quality data. The focus is on making this data actionable and useful for AI.
3. **Monetization and Security:** determining how to generate additional revenue from the network capabilities. The shift includes enabling better security and resilience for customers through these solutions.

The agenda is set not by Ericsson but by a steering committee of its customers who this year whittled down some 40+ submissions to around 25 sessions over two days. Here is a summary of the main topics addressed in CSP presentations (sometimes across several presentations):

CSP	Presentation Topics
BT	• Vision for OSS/BSS, from Gabriele Styf Sjoman (BT Group Head of Research and Network Architecture) • “Hyper-automation” within operations/OSS/BSS, with a focus on data management engineering to support AI • GitOps and automation of core network updates
AT&T	• Data management • Network Function test automation • IoT monetization at scale (Ericsson Core Commerce)
Telstra	• Autonomous networks • Data and knowledge architectures, semantic layer/”knowledge plane”, ontology
Deutsche Telekom	• Service Observability • Knowledge graphs • From silos to horizontal (OSS) architecture
NBN	• Data management, semantic knowledge graphs, ontology • Automated fault management
Orange	• Digital Twins and Data Federation • Automated, accelerated fault diagnosis and resolution
Swisscom	• RAN Service Management and Orchestration (SMO); closed loop automation; data and analytics • Towards autonomous networks • Trust in AI
Telia	• Security, Data Privacy, Regulation

The subject of **Digital Twins** featured in several presentations. Other topics were addressed in some good panel sessions, where **AWS** and **Google Cloud** also got some airtime.

In addition there were guest presentations from **McKinsey, Bain & Co,** and **Aduna**, the Ericsson Network APIs joint venture with a number of CSPs. A UK port operator (the **Port of Tyne**) presented a case study on their 250-acre-wide 5G deployment and the applications that rich and real-time data is making possible. While not particularly related to OSS/BSS, it reinforced the value of delivering data reliably and quickly across a complex and potentially dangerous environment.

Ericsson had a set of demo stations showing various components of its OSS/BSS portfolio:

Title	Description	Key offerings
Transforming data to enable AI	"Make your data more useful"	Ericsson Telco DataOps Platform (EDTP)
Accelerating AI industrialization	"Let AI solve real problems"	Ericsson AI Engine Ericsson CPQ/Guided Selling
Ignite Intelligent Transformation	"Stay ahead of your business'	Ericsson Intelligent IT Suite
Unlock revenue with evolved monetization	"Be easy to buy and get paid"	Ericsson Charging Evolved
Power autonomous networks with unified inventory	"Deliver as fast as you can sell"	Ericsson Active Inventory Ericsson Intelligent Automation Platform rApps
Intent-driven autonomous networks	"Sell – Deliver – Get paid"	Ericsson Service Orchesration and Assurance

Related OSS/BSS News

Ericsson made three OSS/BSS announcements in the same week, highlighting advancements in IoT, BSS modernization, and the pursuit of autonomous networks:

- **AT&T and Ericsson IoT Marketplace:** An advanced digital eCommerce platform designed to facilitate service innovation and the monetization of IoT services for industries such as transportation, manufacturing, and healthcare, at scale. The IoT Marketplace simplifies and streamlines the processes of selling, contracting, provisioning, and billing of IoT offerings, accelerating the order-to-cash process.

  The AT&T IoT Marketplace is powered by **Ericsson Core Commerce** (Digital Experience Platform, Catalog Manager, and Order Care), using a cloud-native microservices architecture and hosted on **Microsoft Azure Cloud infrastructure**.

- **T-Mobile - Next-Gen BSS for Intent-Driven Monetization:** a collaboration with T-Mobile for **intent-driven Business Support Systems (BSS)** redefining how services are delivered, personalized, and monetized in 5G and looking ahead to a 6G context. The enabler is **Ericsson Charging Evolved**, a

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next-generation platform that is focused on giving CSPs the agility to innovate in real-time and deliver **real-time, intelligent monetization at scale**.

Ericsson will also provide T-Mobile with the **stream connect capability** within its **Ericsson Telco DataOps Platform**. This platform's ability to ingest, process, and analyze streaming data in real-time, with native integration to data lakes, provides the foundation for innovation beyond customer experience and delivers AI-driven customer insights and analytics.

TM Forum’s Open Digital Architecture and Open APIs feature in both solutions.

- **Telstra and Ericsson Collaboration on Autonomous Networks:** a targeted and ambitious collaboration agreement to accelerate the industry's shift toward **autonomous networks**. The collaboration will focus on creating, validating, and industrializing business-driven use cases to illustrate the impact of autonomy, identify necessary foundations, and generate lessons for the broader industry.

  Key challenges to be addressed with Telstra include fragmented and siloed data, gaps between business intent and execution, complexity in multi-vendor and multi-domain environments, and the trustworthiness of AI models, as well as:

  - Advancing **intent translation frameworks** to bridge business goals and network actions.
  - Building a **knowledge plane** (an information layer using data, AI, and reasoning to monitor, analyze, and control the network intelligently) as the foundation of autonomous networks.
  - Integrating **trustworthy AI** to build confidence by making AI decision-making transparent and understandable.
  - Catalyzing industry transformation by validating outcomes and setting industry standards for collaboration and open sharing of results.

  The joint work will involve a Technology Lab for experimentation and design, and Proof Points to demonstrate and validate proposed solutions.

THE TRANSFORMATION OF OSS/BSS

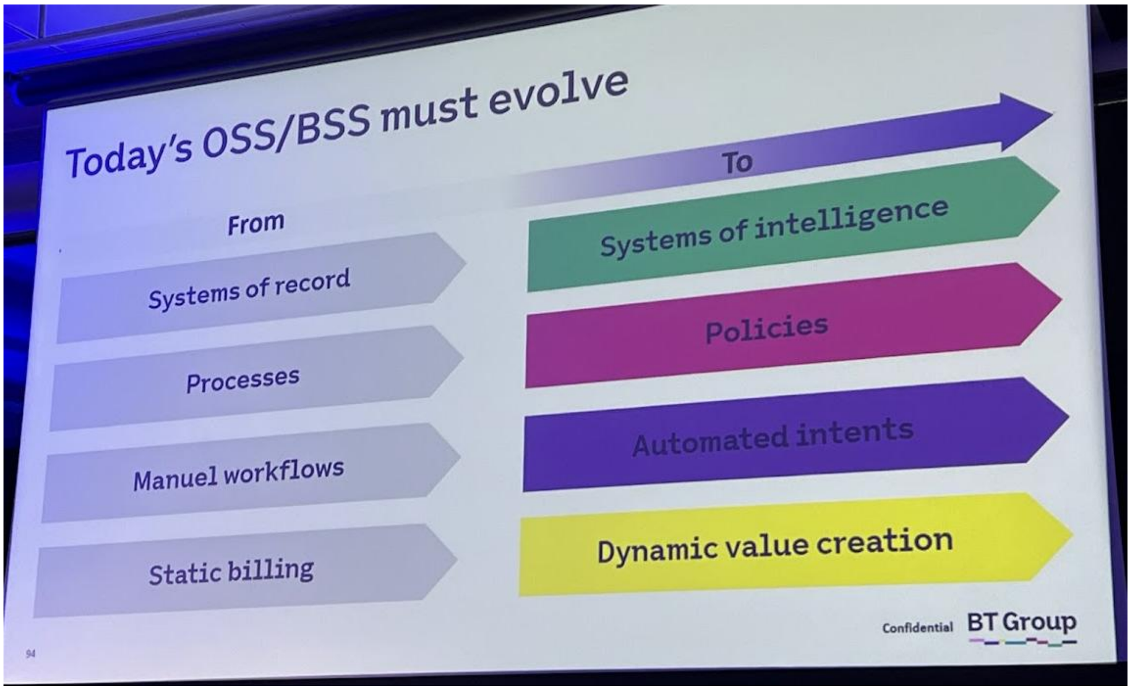
The opening session highlighted how network operations is undergoing a necessary revolution due to the increasing adoption and scaling of 5G, placing the industry at an inflection point regarding Operations Support Systems (OSS) and Business Support Systems (BSS).

Network features like speed and raw capacity are no longer providing telcos with room to differentiate. Instead, a more “digital” engagement – a proxy for fast, automated, intelligent, context-aware – is necessary, which only OSS and BSS (once transformed) can deliver.

OSS/BSS must transform from merely being an engine for efficiency to becoming an **engine for innovation**. Key aspects of this transformation include:

- **Intent-Driven Networks:** The ultimate vision is an **intent-driven network** that can translate business goals into specific network actions, allowing the network to manage itself.

- **Monetizing the "Long Tail":** Automation and network exposure are necessary to enable developers and enterprises to innovate on the network, creating a **"long tail"** of specialized services that can generate new value, a capability the industry has struggled with previously.
- **Collaboration and Openness:** To overcome the complexity of the path to autonomous networks—which includes fragmented data, multi-vendor environments, and the trustworthiness of AI models—the industry needs **collaboration, innovation, and openness**.



Picture: BT Group

State of Telecom

Bain & Co painted a stark picture of the state of telecom, with telcos facing the prospect of being left only with the unattractive business: low value, low growth and low margin. They cited a survey carried out for the TM Forum where the majority of telecom executives (a small number, just 22) "expected" to see a 30% reduction in opex by 2028 arising from the implementation of autonomous network operations. In the same survey, 91% - the highest – expected benefits in real-time issue detection and resolution.

Telcos can't afford to hire the people they need – so automation and reliance on partners are essential. Strong executive leadership is also required: Bain cautioned that localized benefits of automation and AI won't add up to significant savings. Only an enterprise-wide strategy will do. This advice runs somewhat counter to what we hear happening in most telcos, where the mantra is to start small and gradually expand, in the use of AI in particular. It's one of the challenges facing telcos: how to build a credible company-wide strategy when the supporting proof points remain small-scale (if available at all).

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DATA

Perhaps the dominant theme for this OSS/BSS community. Data size, complexity and growth continue to present a huge challenge. The potential for AI adds to the priority given to the establishment of clean, usable data.

Data volumes are massive, but the data is often inaccessible, locked behind **vertical tools** built around organizational silos, inconsistent (leading to trust issues), and not fast enough to be useful for real-time response. The drive for real-time data is a strong theme in many conversations.

Poor data quality and accessibility ("operating debt") remain significant issues. The focus must be on creating **reliable, useful, and secure data products** that semantic models can reference, rather than storing data in the models themselves. Telcos should expect that initial attempts to make use of data beyond the domain where it was created will reveal new issues with quality, consistency, completeness. Having all the data together is not the end; attempting to actively use the aggregated data will require further work on cleansing and organizing.

Operators have various approaches to defining a robust data management layer that supports AI and autonomous networks, which are some variation on the following:

1. **Simplicity and Uniformity:** A data management approach must be simple and uniform, aiming to minimize variability so teams do not have to deal with every minor data fluctuation.
2. **Openness and Security:** The data platform must be secure but open.
3. **Velocity and Reliability:** must provide fast processing and reliable, quality data. The system must ensure trusted data is "fast to see".

Early lessons on data have been learned: hiring data scientists is not sufficient. Telco domain knowledge is essential to make sense of data, let alone determine the appropriate courses of action.

We noted the number of operators who referenced the use of open-source tools for data analysis. **Iceberg** and **OpenSearch** are just two examples referenced in discussion. Even neo4j (a graph database engine) is partly opensource with chargeable support for enterprise-grade deployments.

AUTOMATION

This community is careful to distinguish between **automation** and **autonomous networks**. Several presentations demonstrated examples of successful automation of the software lifecycle (CI/CD, GitOps), test/validation processes or service assurance processes (root cause analysis). In these, AI (both in ML and Gen-AI) can play a part – but several speakers cautioned against assuming that LLMs are an appropriate fit (let alone effective) for every scenario. In many instances, good old rules-based logic works just the way people want it to. That said, vast volumes of data are already overwhelming operators, and the use of AI in making sense of data is a critical activity.

Across multiple presentations, there is consensus that achieving higher levels of automation now requires a combination of technical and organizational elements. Broadly:

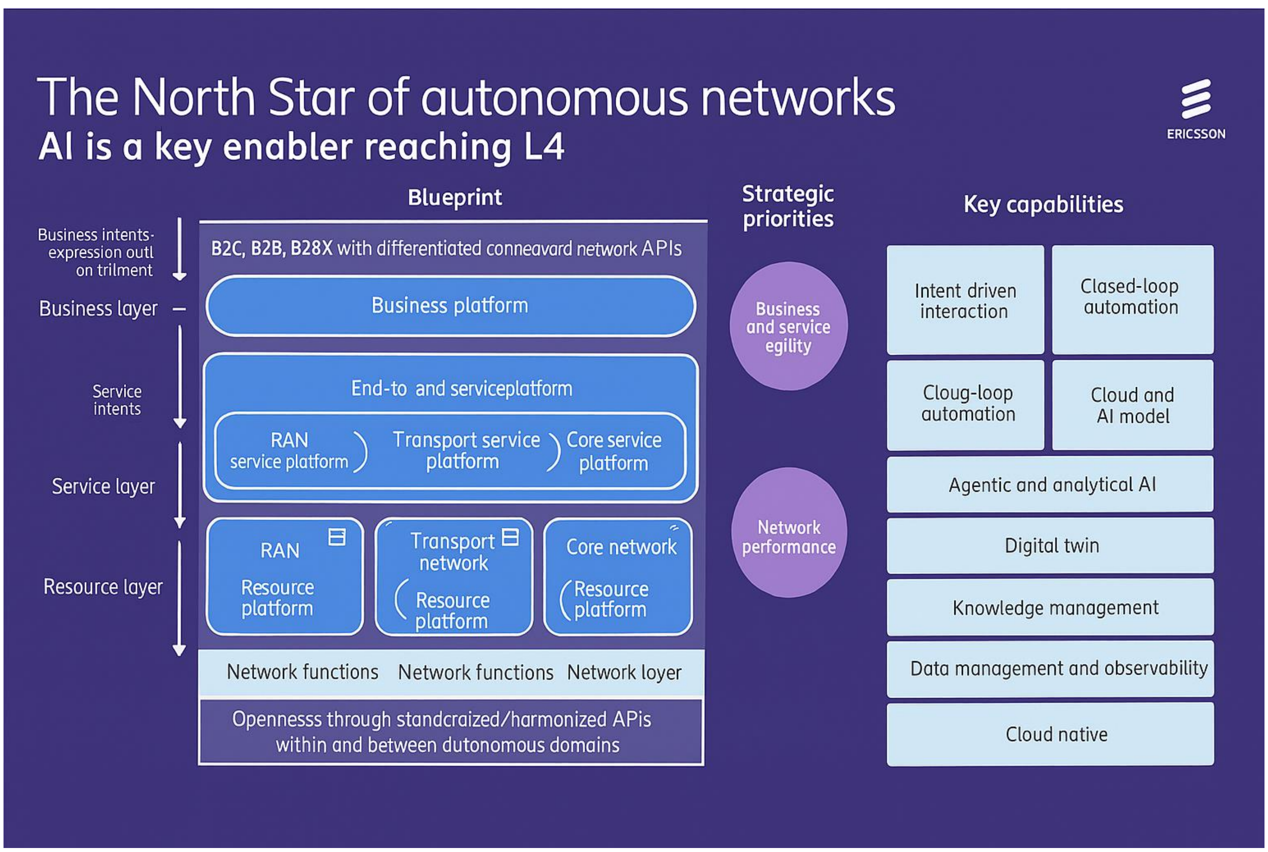
1. Executive desire and leadership and commitment

2. Technology – specifically, various forms of AI (but only where each is the right tool for the job)
3. Data – aggregated, cleaned, pooled, available, real-time
4. Operational and organizational changes – delayering of silos, more end-to-end responsibility, accountability; widespread upskilling on AI and data, automation.
5. Partnerships and ecosystems – there is no chance (and no need) for telcos to develop the capabilities they need on their own. The combination of hyperscale tooling in areas like AI/ML and LLMs also needs harnessed by the deep data and networks knowledge of telecom vendors and combined with the business and operational knowledge of telcos themselves.

AUTONOMOUS NETWORKS…EVENTUALLY

More than a dream, but less than a plan. Level 4 and 5 autonomy featured in several presentations, but mostly as a directional goal more than a near-term destination.

The question for many operators is where to start. Where to focus effort and attention. Then, how to scale. Regardless, humans are going to remain in the loop for quite some time to come, as trust in AI is established, and its limitations better understood.



Picture: Ericsson

Activity seems to be focusing primarily on various **fault management** scenarios (Ericsson referred to Fault Management as *the* use case for autonomous networks).

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Questions from the floor revealed uncertainty in the path forward, even if the destination is known. TMF has been promoting targeted Level 4 automation identifying some 60-70 candidate areas (such as Mobile Network Fault Management, or Core Network Fault Management) of which 22 are deemed “high value”. IP Fault Management is popular, with MTTR reductions of 40-50% being targeted.

NBN cautioned against “the tyranny of the use case”, where small and cheap implementations may increase in number, but which do not make the jump to more generalized scenarios. BT also tried to set expectations about AI: that operators should not expect AI to be as good as human engineers – at least, not yet. However, reliance on AI was “inevitable” in the longer term, and there will be a long period of building trust in AI to manage networks.

The recipe for autonomous networks is also now widely agreed on:

- Intent
- Orchestration (this can encompass both fulfilment and assurance loops)
- Real-time Inventory
- Closed loop automation
- Abstraction (the flipside of Intent)

KNOWLEDGE PLANE AND ONTOLOGY

The concept of a **knowledge plane** is foundational for intent-based networks. This information layer uses data, AI, and reasoning to monitor, analyze, and control the network intelligently.

Defining the network and its related concepts through an **ontology** or **semantic model** is crucial for providing context across network silos. This context is necessary for AI to translate signals into effective actions. Ontology – sometimes expressed as a Knowledge Graph – is a key consideration now, as operators look to create more coherent and automated enterprise-wide processes by leveraging today’s disparate data sources.

Developing a usable ontology is a key enabler of greater automation and the use of AI. Examples from Telstra and Deutsche Telekom are summarized later in this report.

Knowledge Graph Practical Use Case: Power Failure Diagnosis/Prediction

A concrete use case involves optimizing responses to **DSLAM (Digital Subscriber Line Access Multiplexer) power failures**. Previously, the response involved sending an expensive electrician due to uncertainty about the cause.

Using the Knowledge Graph, NBN modeled the relationship between services served by the DSLAM and information provided by power companies. The system can now **predict a circuit breaker trip** (as distinct from a more serious electrical failure) with about **85% accuracy**. If services have returned but power remains down, the system can automatically dispatch a lower-cost field technician, resulting in significant cost savings.

NBN’s semantic knowledge graph is in production, albeit at an early stage. It alluded to “challenges” in extracting data from network elements.

ORGANIZATIONAL CHANGE

All operators acknowledge the need for change beyond technology. Mindsets, organization structures, executive leadership.

Operators acknowledge the reality of inertia if not resistance to making changes to deeply ingrained operational habits stretching back decades. Key learnings:

- **Trust and Buy-in:** Cultural change involves addressing the fear that automation will eliminate jobs. Transformation requires **re-skilling** of domain experts to focus on more complex challenges.
- **Leadership:** Strong **senior sponsorship** and support are essential to mandate and drive the necessary cultural and process changes. Identifying key people willing to experiment and change, fostering a collaborative environment where designers and operations teams work closely together.

GEN-AI AND AGENTIC AI

Most presentations referenced the future potential of AI, both in ML and Gen-AI form, acknowledging that only relatively limited progress has been made so far. This is less to do with the technology aspects (which are developing rapidly) than the specifics of telecom data and the consequential organizational changes, both in skills required and changes to established working processes.

Gen-AI was frequently mentioned in relation to intent, as one means of turning an expressed intent into the process and actions or sub-intents required to fulfil it. BT has used GenAI successfully to quickly process existing configuration files to **dynamically generate a network topology – in a week**. GenAI is also used as a **semantic layer** to ensure consistent Key Performance Indicator (KPI) calculations across multiple tools, significantly increasing the velocity of system development.

By a show of hands, there is almost no in-production use of agentic AI in network operations by operators today. Various obstacles were discussed to scaling Agentic AI:

- **Guardrails, Governance, and Trust:** The biggest challenge involves the **unforeseen consequences of autonomous decision-making** by Agentic AI, which is adaptable and continuously learning. Regulation means an absolute need for **governance** and **guardrails** to ensure decisions comply with policies and regulations. Trust in autonomous systems must be built step-by-step.
- **Data Access and Quality:** Accessing and integrating the massive volume of data is difficult. Agents querying data at scale can lead to an overwhelming volume of queries, exposing issues with legacy systems not designed for machine-to-machine interactions. Data is often **unstructured** (e.g., reports, PDFs) and locked in silos.
- **Technical Foundations:** Successful deployment requires moving beyond traditional AI to **reflection-based architecture** and better **AI-human collaboration platforms** where agents learn from their actions and work alongside humans.
- **Cultural and Organizational Change:** Technology is not the main problem; **cultural and organizational resistance** is. Transforming the operational teams requires making them

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comfortable with change, ensuring they trust the automated solutions, and reskilling them from data processors to developers who focus on more complex tasks.

Despite the immaturity, sentiment regarding experiments with Agentic AI was generally **optimistic** although many are still in the process of "figuring it out". Panelists shared successful, but generally low-risk, initial deployments:

- **Vodafone Group** described a solution in production around **energy cost recovery**. This Agentic AI solution automatically ingests energy bills, compares them line-by-line against internal data sets, and detects anomalies. The use case is valuable because energy is a huge operational expense, and the manual comparison process was complex.
- **Ericsson's product configuration system** that helps product managers and marketers configure and publish new offerings using natural language. This multi-agent system reduced complex catalog engineering time from weeks to hours and reduced reliance on specialized teams.
- **Google** mentioned success working with **BT** using agents to augment and improve network access in the RAN domain.

Speakers advised finding "lighthouse projects" that have a clear value proposition and can be brought into production quickly to build credibility and secure future funding; though at the same time putting in place strategic foundations:

- Simplifying legacy systems, improving **data management governance**, and creating **reliable, useful, and secure data products**.
- **Knowledge Plane and Ontology:** providing the necessary context for agents to operate, unifying domains and ensuring interoperability (e.g., ensuring a BSS agent promoting a service doesn't conflict with an OSS agent pulling network resources in the opposite direction).
- **Human-in-the-Loop:** continuing to prioritize human oversight capability rather than immediately pursuing full autonomy (Level 4/5).
- **Collaboration:** between operators (with access to data, and to define desired business outcomes), hyperscale platform providers (with tooling and AI skillsets) and telecom domain specialist vendors (with deep network and operations understanding and context).
- **Scalable and modular platforms** that can easily integrate with existing OSS systems.
- **Prioritization:** a focus on **low-risk, high-impact use cases** (like fault detection or guided selling) to build confidence, while deferring high-complexity areas like **multi-agent orchestration** and deep integration into legacy systems for later phases.

One of the long-term goals is to reach an intent-driven network where Agentic AI translates business goals into specific configuration outputs. Vodafone expects to have agents in production by end of 2026 to deal with network incidents and fault resolution.

PARTNERSHIP

Here no less than elsewhere in the industry, there is an emphasis on combining the skills and knowledge, capabilities and data, from both service providers and their vendor partners. Knowledge of the behavior of telecom infrastructure and services, operational knowledge of preferences and policies, combined with the skills to work with large, complex, time-sensitive data, represents the most realistic way forward. The flattening of data means that operators want to move away from vertical, vendor-provided analytics tools into their own horizontal platforms and applications.

The involvement of hyperscalers was brief but instructive. Telcos are used to having considerable sway with vendors when it comes to customization, especially in software. That model does not scale for AWS and Google, and so where hyperscalers interface with telecom, they are looking for whole-industry requirements, not operator-specific needs.

MONETIZING NETWORK APIS – ADUNA UPDATE

Ericsson JV and network API aggregator **Aduna** provided an update on its progress. Still officially a startup, it nonetheless has made significant breakthroughs in commercial collaboration. Not only have 100 CSPs expressed interest in (or already are) participating, but some 80 customers and prospects are also in active discussion.

Examples of promising successes for Network APIs include **TikTok** using a number verification API to eliminate 3 minutes of onboarding wait time. Also, a German food retailer using network APIs to reveal (with user consent) the sort of data that will help brick-and-mortar retailers compete more intelligently with online retailers. A trial with a UK bank and regional telco is targeting a reduction in credit card fraud. These examples illustrate several key aspects of the network APIs opportunity:

1. The value is realized within someone else's business problem.
2. The most popular initial scenarios involve little or no significant bandwidth requirements. (The much-vaunted Quality on Demand capability may be valuable, but seems unlikely ever to be a high-volume use case)
3. Coverage is key: hence the importance of multi-operator API pooling such as Aduna. Such APIs are only really valuable where the application developer can be assured that 80%+ of a population are likely to be addressable. (One area being addressed is the extension of GSMA Open Gateway APIs to wifi networks – where mobile devices are actually connected most of the time).

TELSTRA & AUTONOMOUS NETWORKS

Telstra's shared its strategic vision and collaborative efforts to achieve Autonomous Networks, focusing heavily on solving foundational data and knowledge challenges to unlock new business value.

Telstra views the move toward AN Level 4 and Level 5 as a paradigm shift fundamentally changing how the network is planned, designed, constructed, and operated. The network must be predictable, self-monitoring, self-healing, and programmable. Mark Sanders referenced the Appledore Network

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Autonomy Chasm series of reports which highlights the significant gap between Levels 1-3 and 4-5 on the autonomy scale.

To accelerate this complex shift, Telstra is engaged in a targeted collaboration with Ericsson. This joint effort aims to create, validate, and industrialize business-driven use cases and address key barriers like fragmented data and the trustworthiness of AI models.

Key strategic focus areas of this collaboration include:

- Building a **knowledge plane** (an intelligent information layer).
- Integrating **trustworthy AI** to ensure decision-making is transparent and understandable.
- Advancing **intent translation frameworks** to bridge business goals with network actions.

The Foundational Role of the Knowledge Plane

Telstra believes that the missing component necessary for autonomous operation is the **knowledge component** or **Knowledge Plane**. This is defined as an information layer that uses data, AI, and reasoning to monitor, analyze, and control the network intelligently.

The Knowledge Plane is intended to achieve the following:

- Provide context and a shared understanding across diverse systems and agents.
- Organize and encode the **relationships of data** (knowledge), distinguishing it from mere raw data.
- Act as a single source of truth for the network, capable of modeling current, future, and past states, as well as related business processes.
- Provide the grounding necessary for **trustworthy AI** to reason and act with constraints.
- Support core functions like **orchestration**, **Digital Twins**, and **Agentic AI**.

This is a challenging development, marked by early successes followed by necessary double-backs due to gaps in foundations.

Data management issues are significant, including massive volumes of fragmented and siloed data (what Telstra calls "operating debt"). For example, Telstra generates about a billion alerts a day.

To address this, the strategy focuses on:

- Creating **reliable, useful, and secure data products** that the semantic models can reference, separating the definition of the data (ontology) from where the data is stored.
- Ensuring data ownership and accountability are shifted closer to where the data is generated.

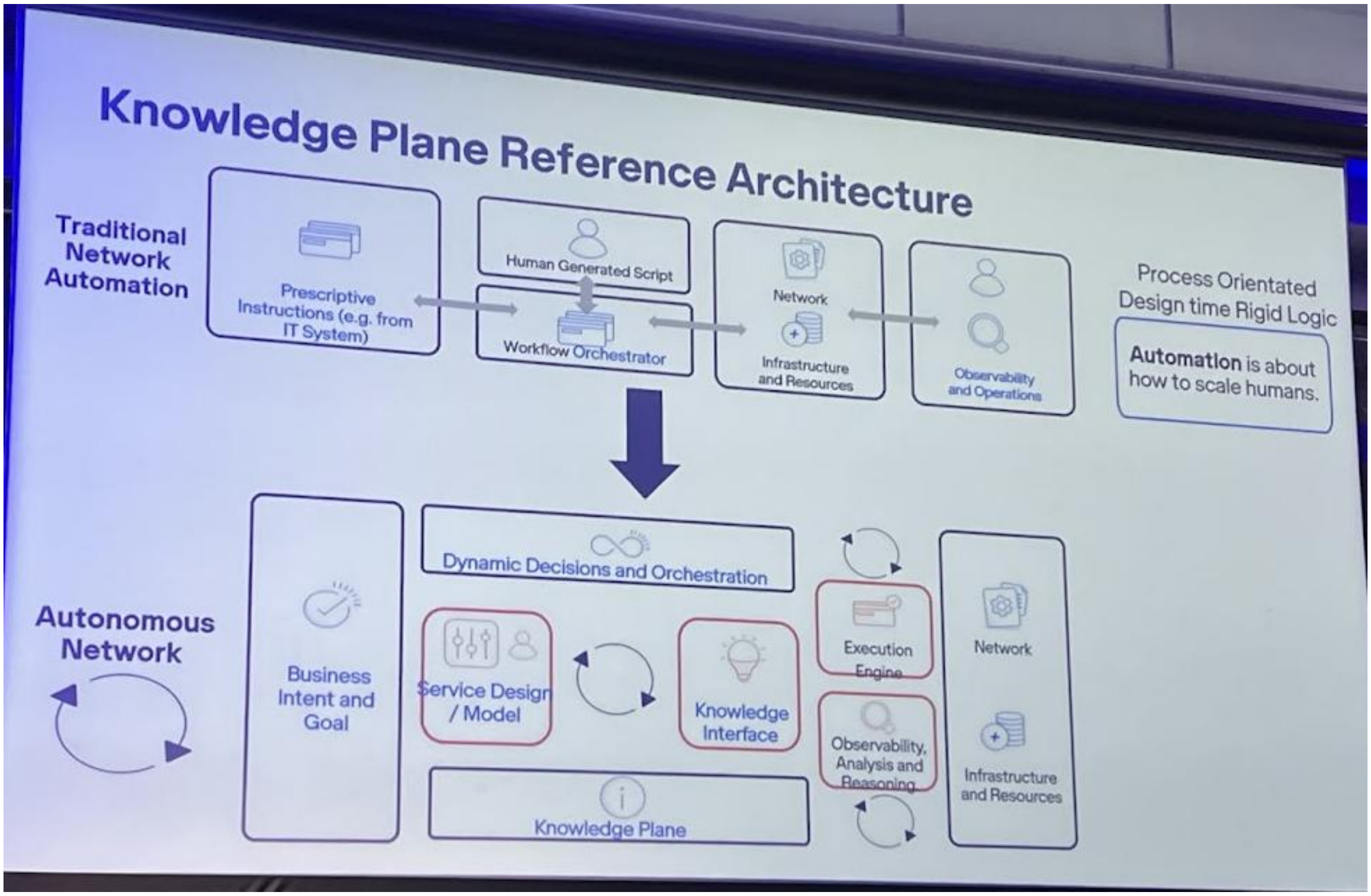
Telstra's overarching strategy is its **Connected Future 30**. This strategy emphasizes developing a **Network as a Product** (rather than a platform), which enables more dynamic offerings, different charging options, and new consumption models.

The business value derived from autonomy focuses on:

- Achieving **AI operations** to proactively detect and restore services faster.
- Enabling **smart capital planning** through better decision-making regarding infrastructure investment.

- Capturing new revenue streams by monetizing a **highly resilient, reliable, and optimized network**.
- Exposing network attributes to customers with the necessary control points to drive innovation.

Telstra recognizes that AI will require networks to adapt to unpredictable traffic peaks and the demands of "invisible subscribers" (AI agents) that value differentiated, context-aware performance.



Picture: Telstra

DEUTSCHE TELEKOM

Deutsche Telekom is aiming to reach high Autonomous Network (AN) levels, targeting **AN 4 or 5**. DT views this transformation as essential for maintaining its position as a leading service provider.

The need for change is driven by an architecture that historically relied on **vertical silos**:

- Each service had a complete identity responsible for its own hardware, application software, and management systems.
- DT has **more than 80 service chains** running, making resource maintenance extremely intensive.
- While these silos allowed individual teams to solve service-specific problems (e.g., a "voice guy" solving a problem), they were **not effective at a global scale** and hindered the extensive use of data and AI.

Instead, DT is shifting to a **horizontal architecture**. The key components of this new model include:

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- A centralized **OSS assurance and automation platform** provided from a single source.
- A converged **cloud infrastructure** that is **agnostic** to the underlying service applications.
- This approach enables massive **scaling** and optimization, allowing resources of the cloud infrastructure to be allocated between different services based on specific needs.

Picture: Deutsche Telekom

This change yields significant benefits, such as saving resources, particularly human workforce and tool licensing costs. For instance, DT was able to roll out new software on a platform serving over **20 million customers in minutes**, whereas the old process took months.

DT's transformation is codified in its "0/15/60" vision:

- **Zero outages** perceived by customers.
- If an outage occurs, it should take no longer than **15 minutes** to identify and qualify the incident.
- A maximum of **one hour** to resolve the issue.

A major hurdle is managing data complexity. While DT has common data ingest and common components, the data is scattered across multiple technology domains and is often insufficient for real-time problem-solving.

To address this, DT focuses on establishing a unifying observability layer:

- **Data Filtration (The Cube):** DT created **"the cube"** to act as a table of content, sorting out which data is relevant for each specific service chain. This is based on the input of a human **"Technical Service Owner"** who fully understands a service chain.

- **Single Observability System:** The goal is one system sitting above all data, providing a **system-based, real-time prioritization** of each service chain.
- **AI and Knowledge Graphs:** DT is experimenting with knowledge graphs for automatic service chain topology detection and root cause detection. However, they note that finding one system that provides a definitive breakthrough in this area remains a challenge.
- **Use Cases:** Initial use cases focus on service assurance, real-time root cause identification for incident management, and **change impact assessment** (checking what services might break before a change is executed).

The transition introduces new organizational challenges:

- **Troubleshooting Complexity:** Centralization made troubleshooting more difficult, as frontline workers now need more people to determine if a problem lies in the infrastructure, CNF, or automation framework.
- **Staff Empowerment:** A core requirement is empowering staff so they are not engaged in constant "firefighting," which prevents them from bringing in future topics and innovation.
- **Expertise Gap:** While DT has data analytics platforms, the external partners brought in often lack telecom domain knowledge. Integrating network-specific expertise with AI knowledge remains crucial.

For its International network (i.e. non-German), DT has developed its own AI/ML-based anomaly detection system using OpenSearch (an Apache 2.0-based open-source search and analytics suite for ingesting, analyzing and visualizing large volumes of data in real time). DT is heading towards an EMS-less architecture.

Conclusion: Getting There

The Ericsson OSS/BSS summit demonstrates the extent to which Ericsson can access and respond to the challenges and ambitions of a large global (mobile) customer base. It is clearly a major partner in helping progressive as well as less ambitious operators map the way forward to greater agility, efficiency and differentiation. Regardless of the pace, all operators must eventually transform their OSS and BSS in response to the extreme demands and opportunities they face. The anatomy of that transformation is becoming increasingly clear, even if the transformation itself remains challenging.

In OSS and BSS Ericsson is focusing in on strategic customer imperatives – dealing with data, enabling AI development, simplifying complexity - which are foundational to transformative outcomes, even if those outcomes may take a decade to deliver.

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