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# Manage business intent with agentic AI for enabling autonomous networks

Explore how Ericsson's business intent management drives intent-driven autonomous networks—using multi-agent AI to capture and fulfil both customer and business intents, and maximize outcomes.



# The path to autonomous networks: From manual operations to adaptive autonomy

Autonomous networks are the key strategic initiative for driving future communication systems as the increasing complexity and scale of modern telecommunications infrastructure require more efficient handling. Automating network, service, and business operations can reduce operational costs, improve service reliability, and accelerate the deployment of new services. It enables dynamic resource allocation, proactive maintenance, fewer outages, faster fault resolution, and consistent network performance, all of which are critical for supporting emerging technologies such as 5G, IoT, and edge computing. Autonomous networks are a key enabler for innovating and scaling efficiently to achieve business success.






Figure 1: The journey toward autonomous networks: from manual operations to adaptive autonomy

The telecom industry must accelerate its journey toward higher levels of autonomy and challenge traditional processes that hinder transformation. TM Forum's six autonomous levels, from 0 to 5, provide a structured framework for assessing the maturity and capabilities of networks and their gradual progression on the journey toward higher autonomy. Each step helps to steadily enhance operational efficiency, reduce costs, and improve service reliability (Figure 1).

Level 1 or 2 is commonplace today, and the ambition is to move to level 4 and 5, steadily increasing autonomy. According to the TM Forum 2025 survey, which polled 111 individuals across 82 companies globally, two-third (67 percent) of the respondents are currently at level 1 or 2. However, by 2030, 85 percent of respondents want to achieve level 4 (Figure 2). To turn this ambition into reality, the telecom industry must accelerate the pace of change and challenge long-standing processes that inhibit progress. At the same time, communications service providers (CSPs) must ensure that investments in automation yield a clear return on investment (ROI).

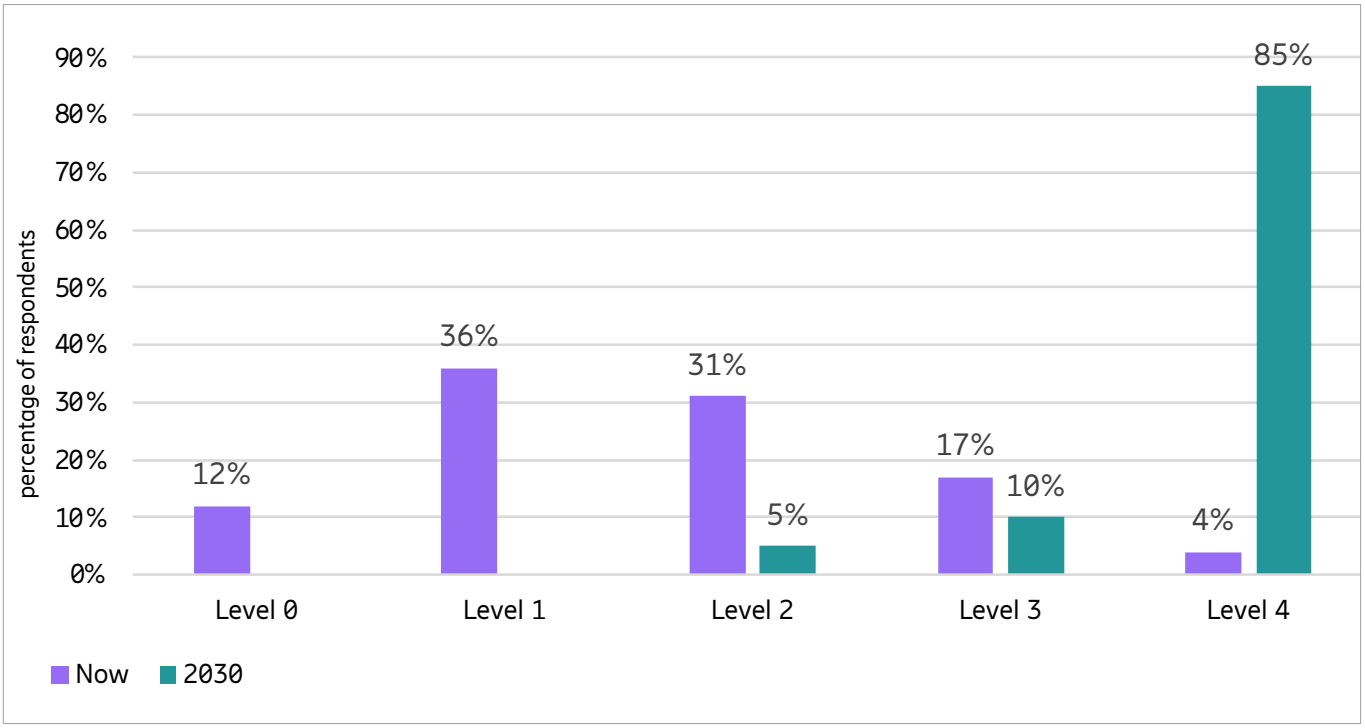


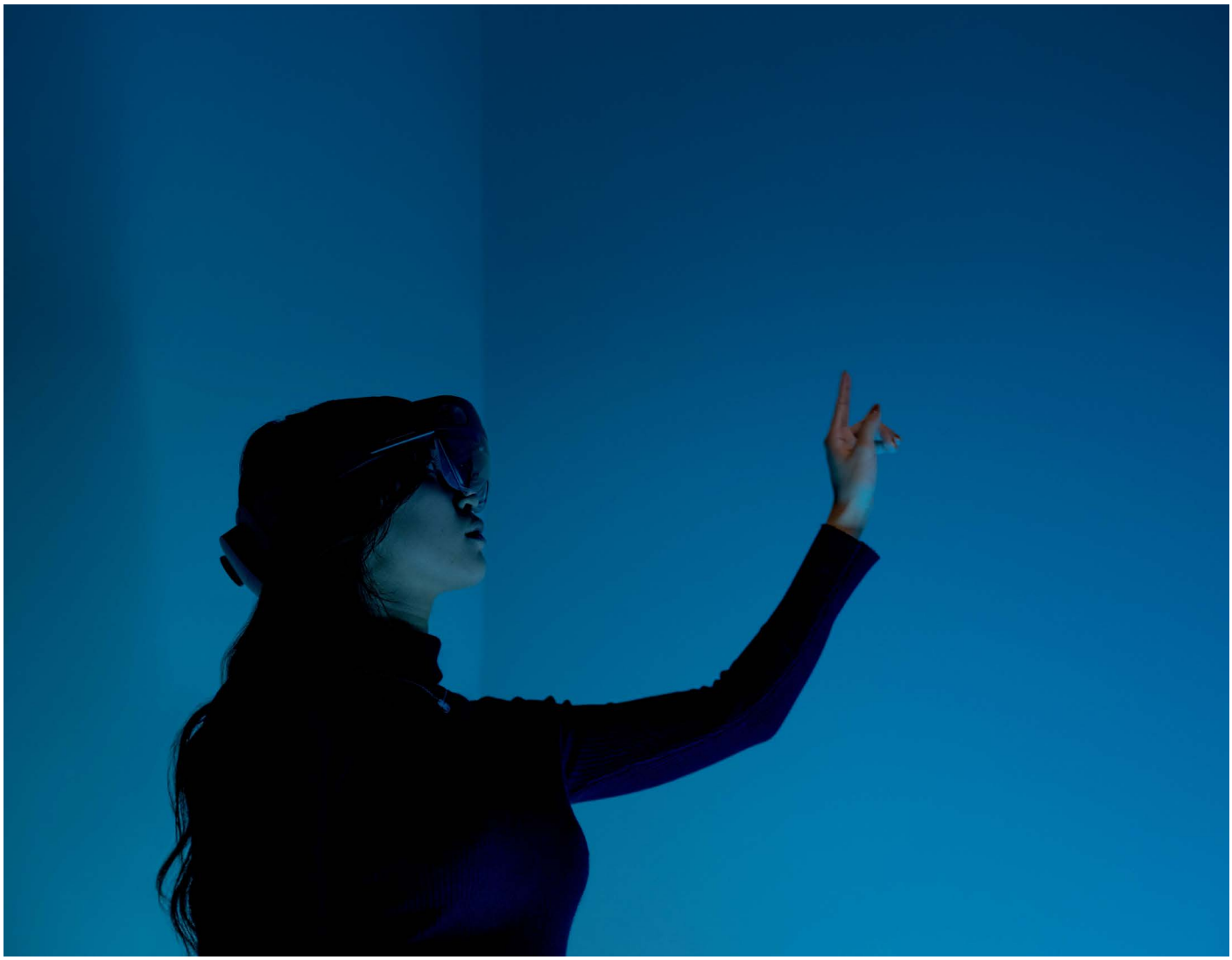

Figure 2: TM Forum survey showing autonomous network levels now and the goal for 2030

# Intent management unlocks level 4 autonomous networks

At level 4, intent management becomes crucial, as systems make autonomous decisions driven by intents. It plays a pivotal role in bridging the gap between human objectives and network operations.

Intent management is the process that lets you to define high-level business goals, or intents, without delving into the technical complexities of how these goals are achieved.

These intents, written in natural language, are then translated by the system into specific network configurations and actions with the help of artificial intelligence (AI). For instance, an intent might specify a need for increased bandwidth during peak hours, and the network would autonomously reallocate resources.



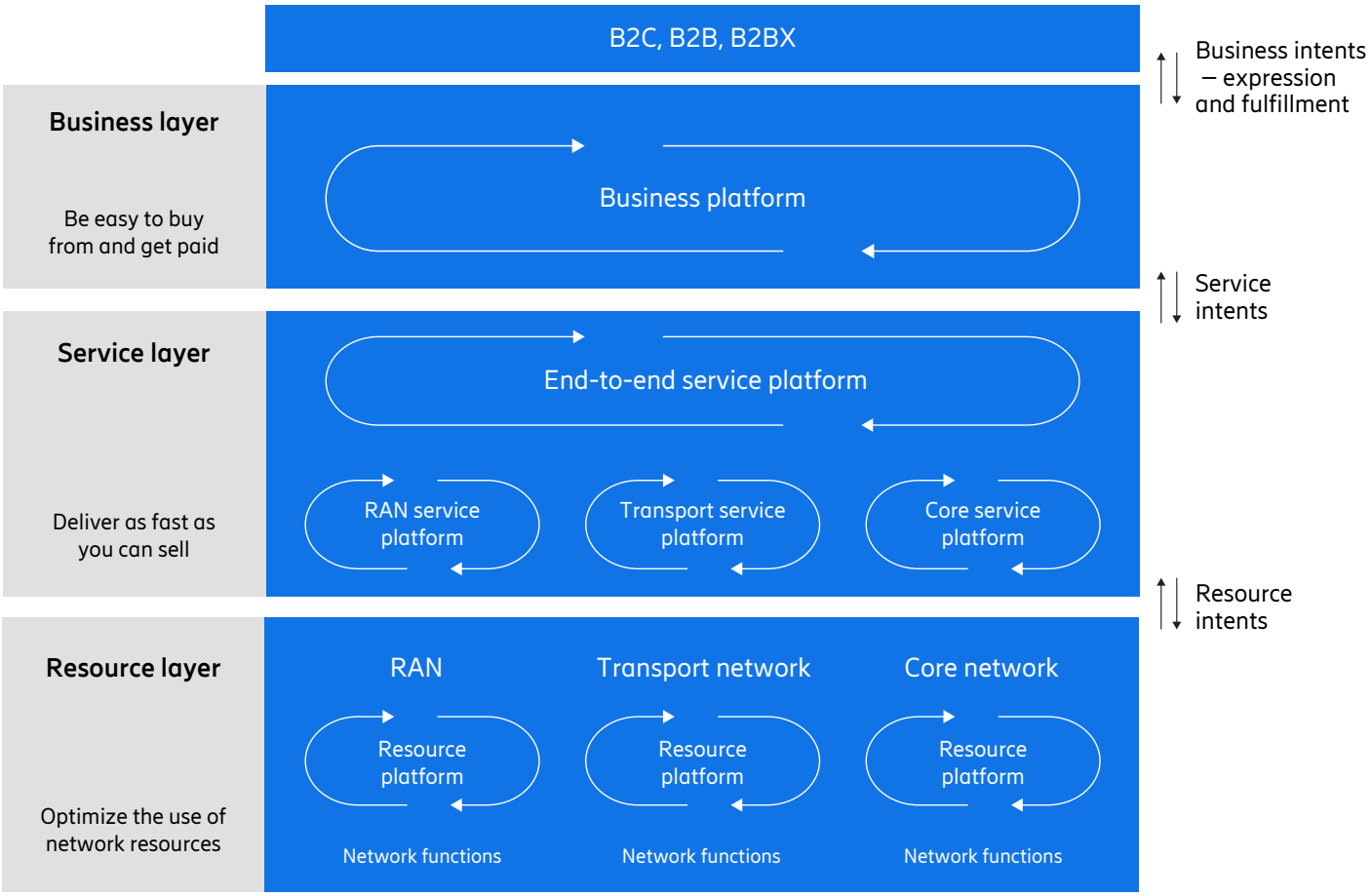



Figure 3: Decomposing business intent into actions

Translation of intent into actions happens through intent decomposition, which starts at the business layer, flows through the service layer, and ends at the resource layer (Figure 3).

- **Business layer:** The business layer is where high-level intents are defined. These intents are typically expressed in terms of business objectives or outcomes, for example, improving customer experience, reducing latency, increasing sales margin, or boosting bandwidth during peak hours. At this level, the objective is to translate business goals into more detailed service requirements. This requires understanding the business context and priorities to ensure that the network's operational goals align with the overall business strategy.
- **Service layer:** The service layer focuses on translating business intents into specific service-level requirements. This involves defining how the network should behave to meet the business objectives, such as setting parameters for service quality, availability, and performance. At this layer, intents are broken down into service-related actions. For example, if the business intent is to reduce latency for video streaming, the service layer might specify requirements for bandwidth allocation, traffic prioritization, or specific quality of service (QoS) metrics.
- **Resource layer:** The resource layer handles the actual resources required to implement the service-level requirements. These include network devices, computing resources, storage, and other physical or virtual components. At this level, service requirements are translated into specific configurations and actions on network elements. For example, it might involve configuring routers, switches, or virtual network functions (VNFs/CNFs) to allocate the necessary bandwidth or prioritize certain types of traffic.

Through intent decomposition across these layers, the network can be managed effectively and aligned with the business objectives. In essence, intent management empowers autonomous networks to translate business needs into technological actions intelligently and efficiently, making it a cornerstone of modern network design and operations.

# Manage and fulfill multiple business intents successfully

Intent can be defined by customers, both end users and enterprises, as well as by product managers or business executives at CSPs. For example, a customer's intent might be to obtain a high-quality product or a better service experience. For CSPs, the intent might be achieving business objectives such as increasing sales margins, delivering a better quality of experience (QoE) to VIP customers, lowering latency, or increasing bandwidth during peak hours. All these intents are captured and fulfilled at the business layer of the intent decomposition model shown in Figure 3. For a successful telecom business, it is essential to maximize business objectives while fulfilling customer needs, thereby meeting both CSP intent and customer intent simultaneously. Multi-agent AI solutions can help achieve this.

Ericsson has developed a multi-agentic business intent management system that captures and fulfills multiple intents from customers and CSPs. The business intent management system recommends and offers products that both meet customers' needs and achieve CSPs' business objectives, making it a win-win proposition. The ultimate objective is to make it easier to sell, deliver, and get paid for telecom services.

The business intent management system consists of a Gen-AI assistant or chatbot at the front end that helps enterprise customers and CSPs' business executives or product managers define their intent in natural language. An intent handler captures and translates these intents into actionable technical requirements and communicates them to the business intent management agent using TMF 921 intent management API (Figure 4).

The business intent management agent records and saves intents. Multiple business intents can be registered in the system, which can lead to conflicts. Hence, the Gen-AI assistant can ask the business executive or product manager to set priorities for intents. The intent priorities are also recorded by the business intent management agent.

Ericsson leverages Amazon Bedrock to develop a multi-agentic system for business intent management. Amazon Bedrock offers various capabilities such as action groups, knowledge bases, code-interpreter, memory management, and multi-agent collaboration - all with enterprise-grade security, guardrails, and observability. It enables developers to quickly create their own agents by selecting foundation models, providing instructions, connecting data sources, and specifying available actions.

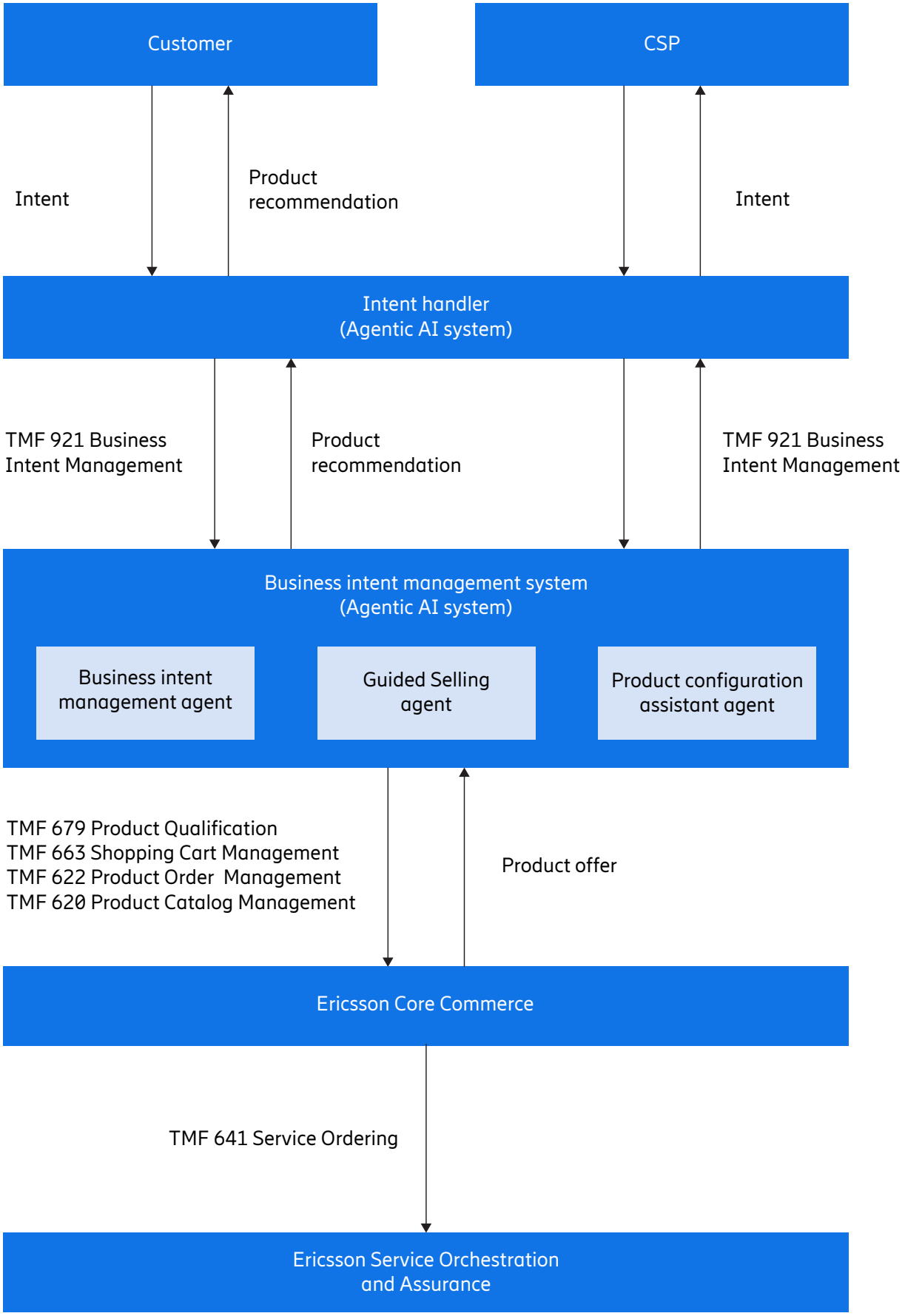



Figure 4: Functional view - Business intent management

# Business intent management in action

Let's illustrate with an example of a product manager at a CSP. During a sales review on the business portal, the product manager observes a decline in sales for surveillance products (Surveillance Ultra, Surveillance Premium, and Surveillance Super).

The Gen-AI assistant prompts the product manager to update business objectives to improve sales.

The product manager instructs the Gen-AI assistant to create two new business intents for the surveillance product. The product manager enters the first intent of an x-percent margin on sales of the surveillance product. The Gen-AI assistant asks additional questions to refine the intent, for example, which customer segment the margin intent should apply to.

The product manager then enters the second intent: providing a high quality of experience (QoE) for VIP. The Gen-AI assistant asks additional questions to describe the QoE intent, for example, five-nines availability (99.999 precent) for VIP customers.

The Gen-AI assistant also asks the product manager about intent priority. The product manager instructs that the QoE intent for VIP customer be prioritized over the margin intent.

All of these intents, filters, and priorities are captured and translated by the intent handler and recorded by the business intent management agent.



# Make intelligent and intuitive sales

The business intent management system leverages AI to recommend products that meet both customer intent and CSP's business intent, thus enabling an intelligent sale. Let's illustrate with the purchase experience of a VIP enterprise customer who wants to buy a 4K surveillance product (Figure 4).

The VIP enterprise customer logs into the CSP's customer portal. A Gen-AI assistant welcomes the customers and asks how it can help. The VIP customer expresses his willingness to buy a 4K surveillance pack with high QoE (for example, five-nines availability). The intent handler captures the customer intent, translated it to actionable technical requirements, and communicates it to the business intent management system.

A guided-selling agent is invoked, which communicates with Ericsson Core Commerce to select and recommend surveillance products that meets customer needs. The business intent management agent runs the business intents and filters to choose and recommends the surveillance products that meet the CSP's business intents of margin and QoE. This means only those surveillance products are recommended that satisfy the customer's needs while aligning to the CSP's business objectives, making it an intelligent sale.

If there are no products that matches all the business intent, the business intent management system, through the Gen-AI assistant, can ask the product manager for permission to create a new product offer to meet the customer's request. If the product manager agrees, the product configuration agent is invoked to create a new product offer and configure it in the product catalog. The newly created product offer is then recommended to the customer for purchase, ensuring that both customer needs and the CSP's business objectives are met.



# The future is AI-driven

Various AI agents – the business intent management agent, the guided-selling agent, and the product-configuration agent – work together to create an agentic AI system that offers the right product to consumers at the right time while achieving CSPs' business objectives. Ericsson's business intent management system accelerates the journey toward intent-driven autonomous networks and brings CSPs a step closer to level 4 autonomous networks. AWS's generative AI capabilities enable a multi-agentic architecture for autonomous management of business objectives. The combination of Ericsson's deep OSS/BSS knowledge and innovative AI applications, together with AWS's generative AI capabilities supports intent-based autonomous networks, driving agility, efficiency, improved customer experience, and increased revenue.

Discover more details in the demonstration for business intent management system.



# Further reading:

AI-powered telecom data and analytics solutions

Core Commerce: Drive new business models

Telco IT AI Apps

Maximize OSS/BSS impact with AI and Gen-AI

Ericsson accelerates AI innovation and industrialization for OSS/BSS

Transforming OSS/BSS with multi-agent AI

Benefits of a front-end agnostic CPQ for CSPs

Accelerate AI innovation with Ericsson Telco Agentic AI Studio

Generative AI for better network insights

Transform invoice anomaly detection with AI smart encoders

Driving AI-enhanced business growth

Ericsson and AWS accelerating OSS/BSS digital transformation

OSS/BSS evolution for successful 5G monetization

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