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WHITEPAPER

Outlook 2026: The Agentic Telecommunications Enterprise

Introduction:
The Current State of Play

Telecommunications providers are entering 2026 under intense pressure to do more with less.

The weight of high costs, investment requirements, customer churn, and above all, intensified expectations. Customers demand always-on, seamless connectivity across home, mobile, and enterprise services – and when it's not delivered, they look elsewhere.

The scope of these challenges is vast and spans every layer of the telco ecosystem.

At the customer experience (CX) level, customers have a 'now' mentality and so expect issues to be diagnosed instantly, and resolved proactively and remotely by their provider. As home environments become more complex, driven by IoT proliferation, mesh Wi-Fi, and multiple connected devices, delivering consistent support has become significantly harder.

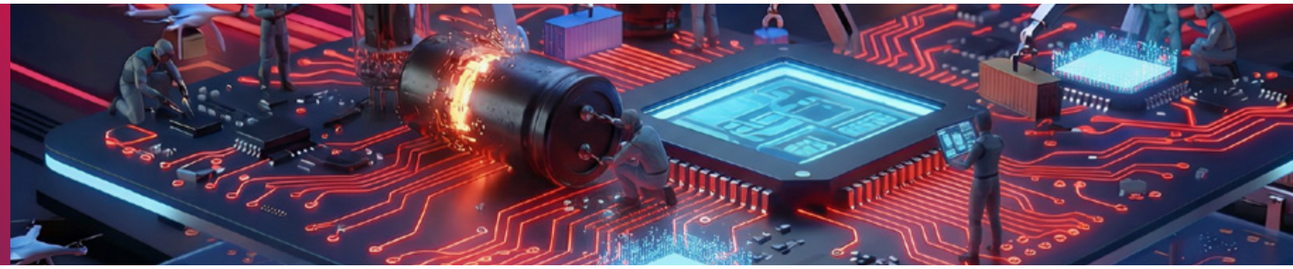
Operationally, there are multiple opportunities to leverage automation and AI to enable more efficient, proactive network operations. Yet progress is often constrained by fragmented telemetry. The ambition to move from reactive to proactive network maintenance is well understood, but uptime requirements and architectural complexity make change difficult to execute at scale.

These challenges also extend to customer service teams facing high call volumes related to Wi-Fi, billing, provisioning, and device-level issues. Streamlining these journeys is essential to meeting rising demand, but manual processes and disconnected tools limit how far traditional automation can go.

At the infrastructure level, fragmented Operations Support Systems/Business Support Systems (OSS/BSS) environments, outdated CRM layers, and inconsistent data flows continue to slow telco evolution. These constraints not only hinder operational efficiency, but also prevent AI from delivering meaningful improvements to service quality and network reliability.

In theory, many of these challenges should be solvable through AI. In practice, however, insight alone is no longer enough.

78% of organizations reported using AI in 2024, but as businesses across sectors have seen, AI is not a panacea for all business challenges.[1]

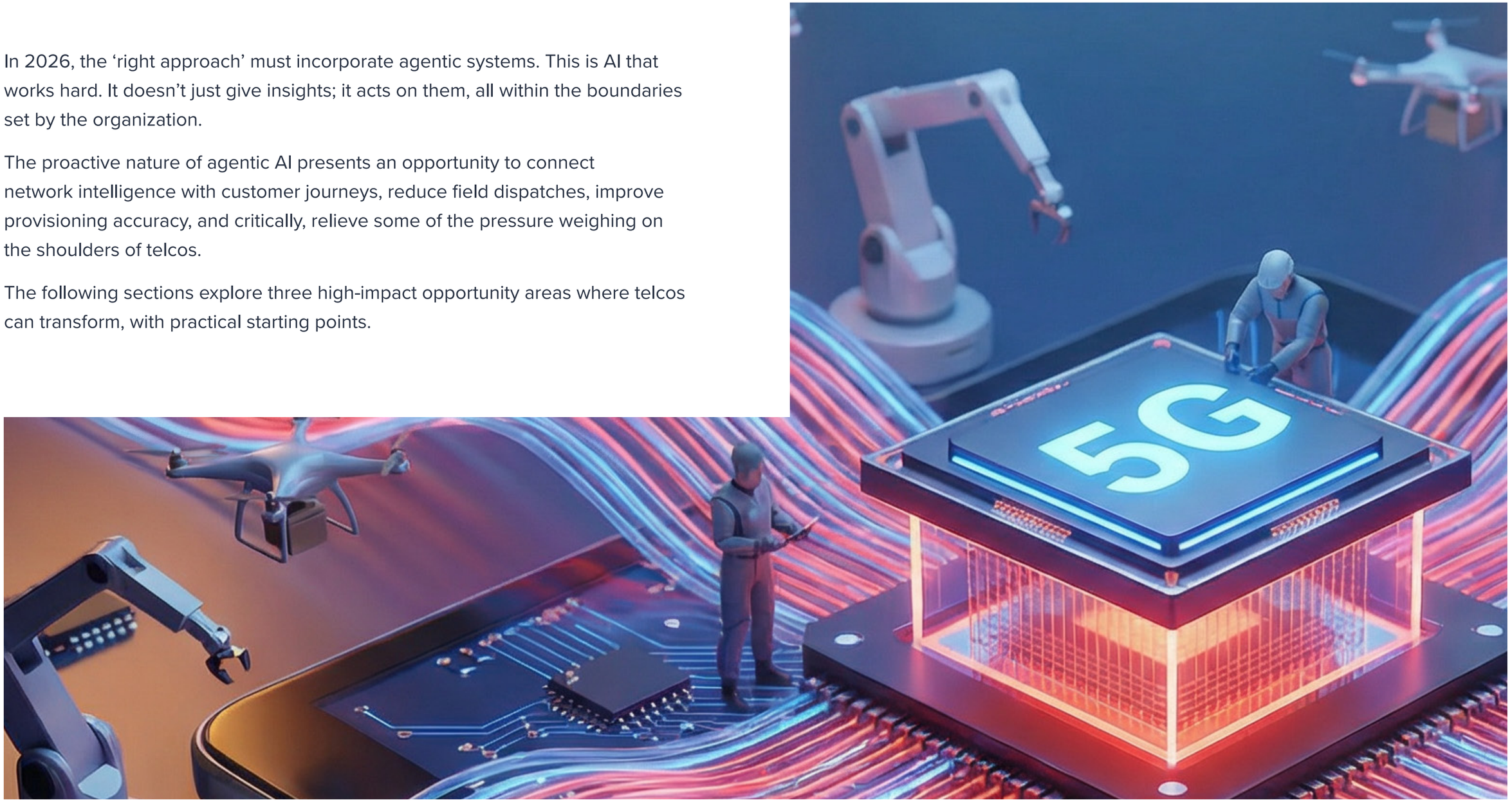


[1] https://hai.stanford.edu/ai-index/2025-ai-index-report

In 2026, the ‘right approach’ must incorporate agentic systems. This is AI that works hard. It doesn’t just give insights; it acts on them, all within the boundaries set by the organization.

The proactive nature of agentic AI presents an opportunity to connect network intelligence with customer journeys, reduce field dispatches, improve provisioning accuracy, and critically, relieve some of the pressure weighing on the shoulders of telcos.

The following sections explore three high-impact opportunity areas where telcos can transform, with practical starting points.



3 Agentic Opportunities for Telecommunications Enterprises

Opportunity 1:
Agentic Troubleshooting and Customer Issue Resolution

The Challenge

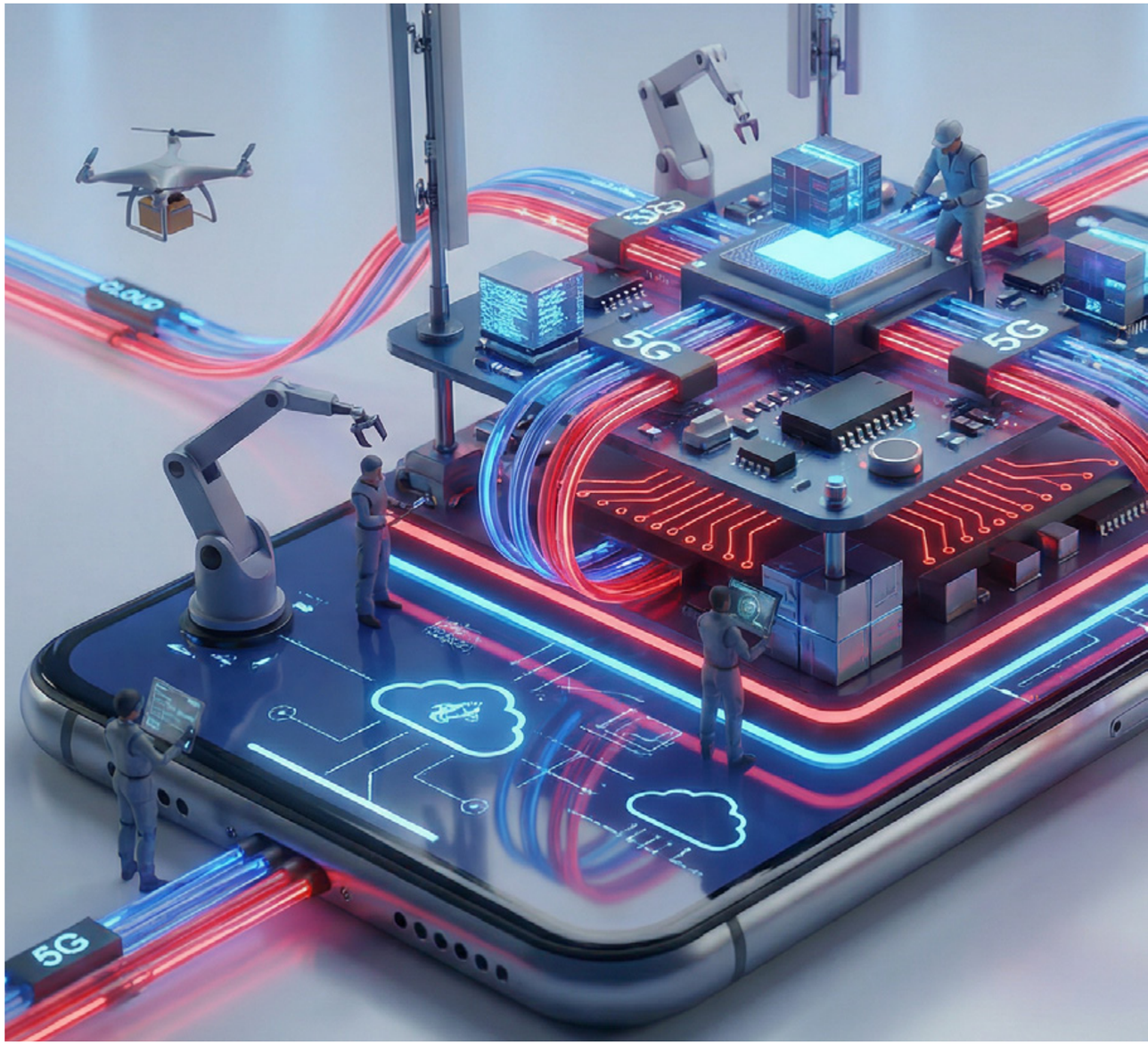
As the number of users and devices supported by each telco has grown exponentially, so too has the volume of troubleshooting requests and customer disputes.

Support centers are flooded with home network issues: Wi-Fi instability, device conflicts, modem resets, speed concerns, provisioning inconsistencies, and more. It is a long list of possible problems.

The complexity of home networks, which is only increasing, has a direct effect on troubleshooting success. Diagnostic paths vary widely between agents, driven by fragmented tools, incomplete knowledge bases, and unreliable access to network and device data.

The result is inconsistency and sub-optimal resolutions. Part of this means high truck-roll rates persist because many issues aren't correctly diagnosed remotely, escalating the cost of resolution.

Add to this the additional hot topic of customer dissatisfaction: billing disputes. Whether related to usage, plan changes, discounts, or prorations, the result is the same – operational overheads.



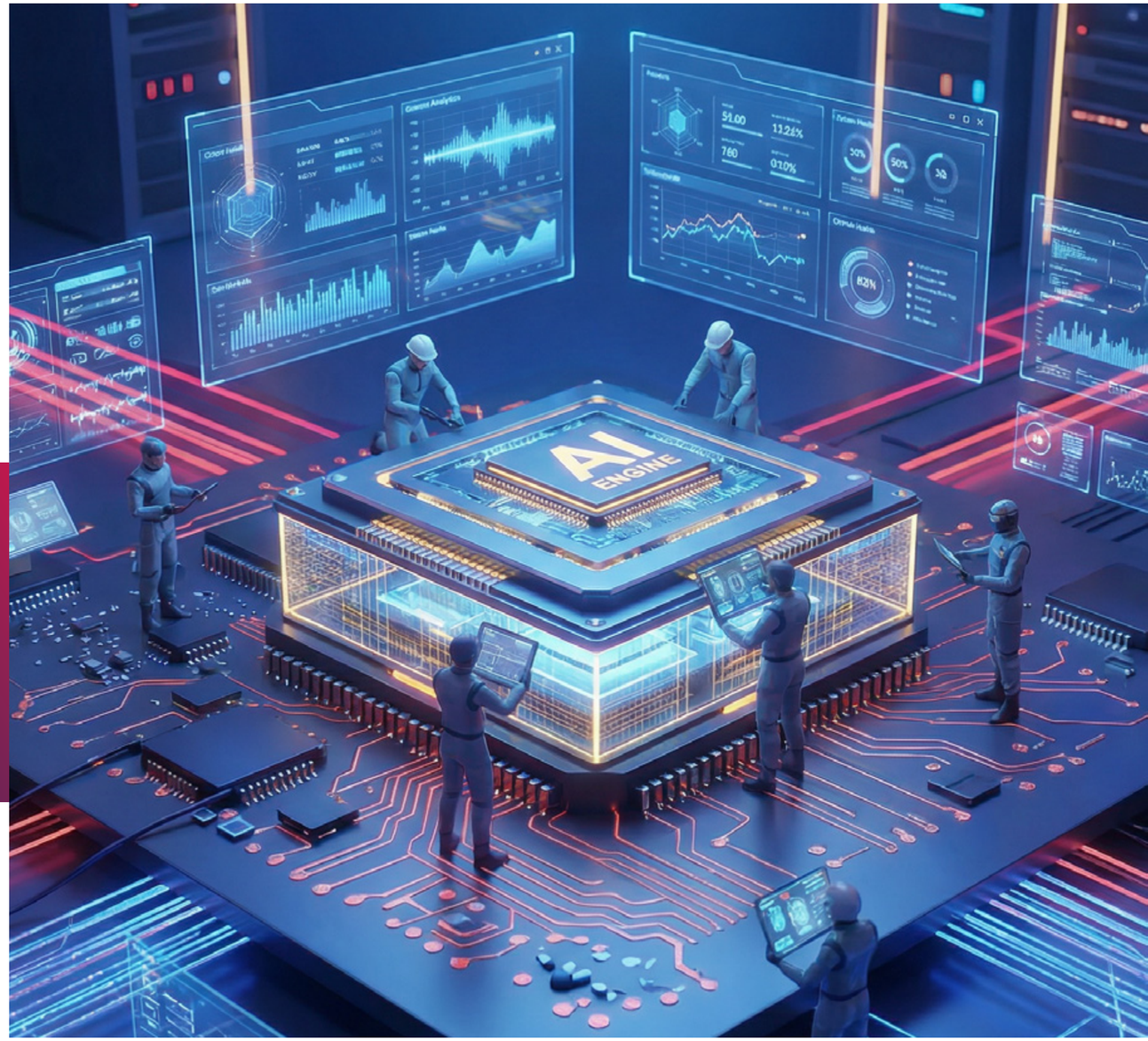
The Agentic AI Opportunity

Agentic AI changes the troubleshooting equation by enabling systems that do not simply guide agents or surface insights, but reason across domains and act autonomously.

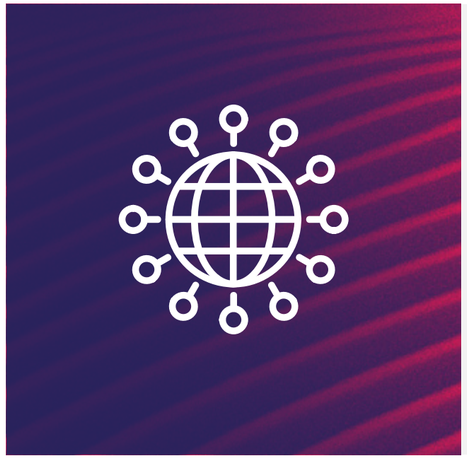
By combining network telemetry, device analytics, customer history, and behavioral patterns, agentic systems can continuously assess service health and intervene in real time. Rather than waiting for customers to report problems, agentic agents can identify emerging issues, execute diagnostics, and resolve common faults before human involvement is required.

> For a UK broadband provider, deploying LLM-led diagnostics for Wi-Fi and device-level issues resulted in a reduction in calls, with 32% deflected to the LLM. It also reduced the Average Handling Time through guided troubleshooting.

In customer interactions, agentic troubleshooting flows can autonomously resolve a wide range of broadband, mobile, and IoT issues across digital and assisted channels. Where complexity is high, intelligent triage ensures cases are routed – or proactively escalated – with full contextual insight, reducing handoffs and repeat interactions.



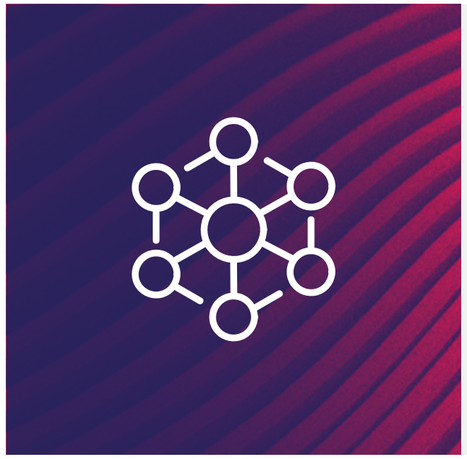
Practical Actions for Telecoms Leaders



Harmonize customer, network, and device-level data so agentic systems can reason end-to-end. Break down silos between OSS/BSS, CPE telemetry, CRM, and interaction history, and standardize diagnostic attributes (device type, firmware, line stats, service tier, recent changes). Apply a **data engineering framework** to convert fragmented data into governed diagnostic products that improve first-call resolution and reduce avoidable truck rolls.

Deploy agentic troubleshooting consistently across digital and assisted channels. Embed LLM-led diagnostics into self-service journeys and agent desktops so the same reasoning logic applies regardless of entry point, and escalations happen with full context. Use **AI-powered knowledge assistance** to enable faster resolution by guiding both customers and agents through dynamic, reasoning-based troubleshooting flows.

Establish safe remediation frameworks so agentic systems can act, not just advise. Define guardrails for autonomous actions such as remote resets, configuration updates, profile changes, and service adjustments, with confidence thresholds and human-approval paths for higher-risk cases. Implement a **digital quality assurance** approach to validate actions, maintain audit trails, and ensure remediation decisions remain transparent and controllable.



Integrate diagnostics with billing and provisioning to eliminate cross-domain escalations. Connect line tests, provisioning checks, plan changes, credits, and dispute workflows into a single orchestrated flow so issues are resolved in one motion rather than handed between teams. Evolve **applications** with billing and provisioning actions via APIs so agentic workflows can execute fixes end-to-end instead of creating downstream tickets.

Opportunity 2:
Agentic Network Health and Predictive Operations

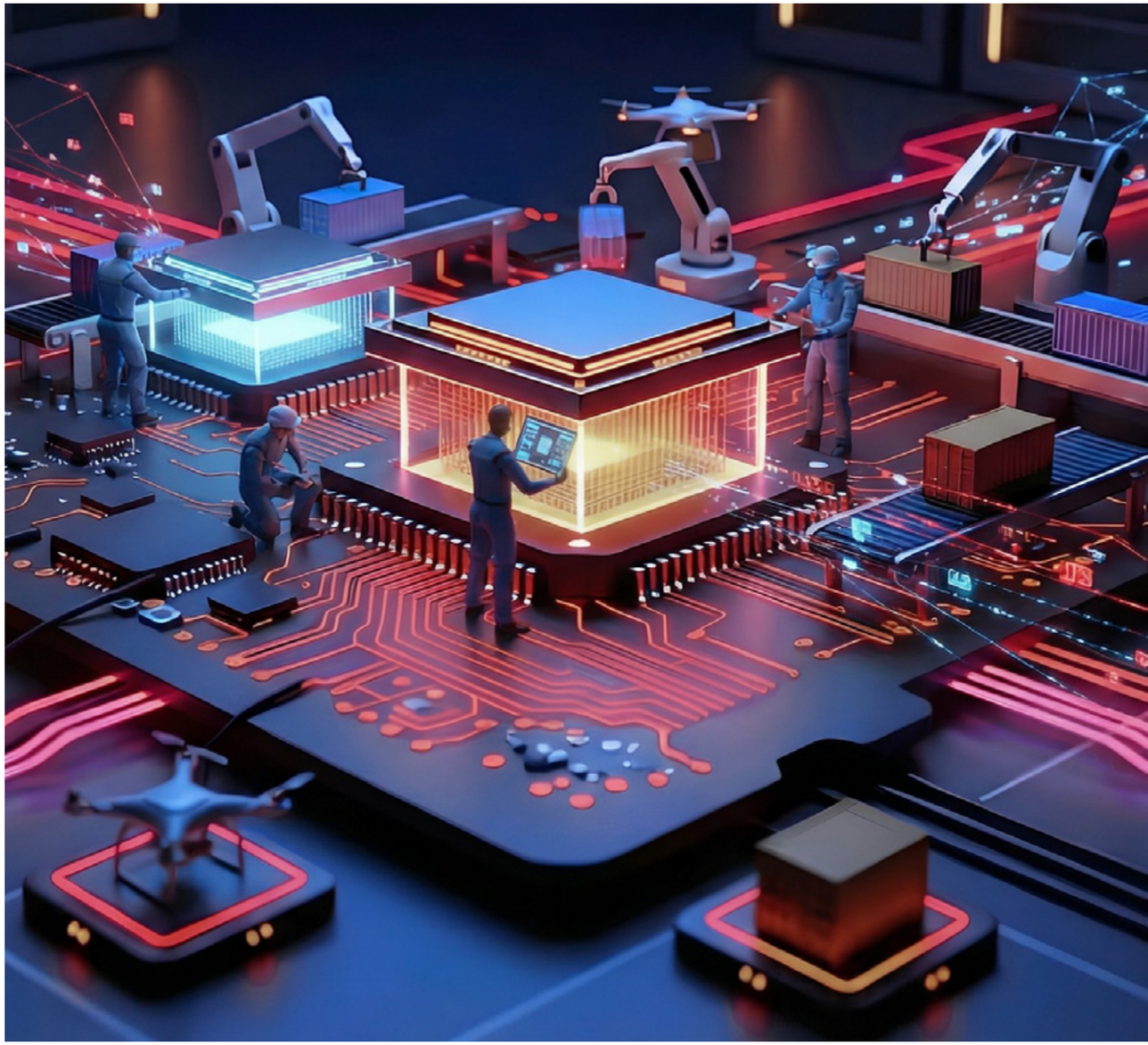
The Challenge

Telcos must deliver always-on services, yet the infrastructure supporting them is often fragmented, combining legacy and modern systems. These, more often than not, are forced to work together rather than being seamlessly compatible.

The lack of unity across systems is often prohibitively difficult to address retrospectively and, as such, results in numerous issues that are costly to manage.

Network operations remain reactive, with faults detected late through alarms or customer complaints. This is then reinforced by the limited exposure of telemetry from RAN, access, core, and CPE systems, which constrains predictive modeling.

Again, because root cause identification spans multiple systems and vendor technologies, the response times are often slow. Plus, SLA adherence and uptime targets make networks harder to maintain as 5G, fiber, and IoT traffic increase complexity.



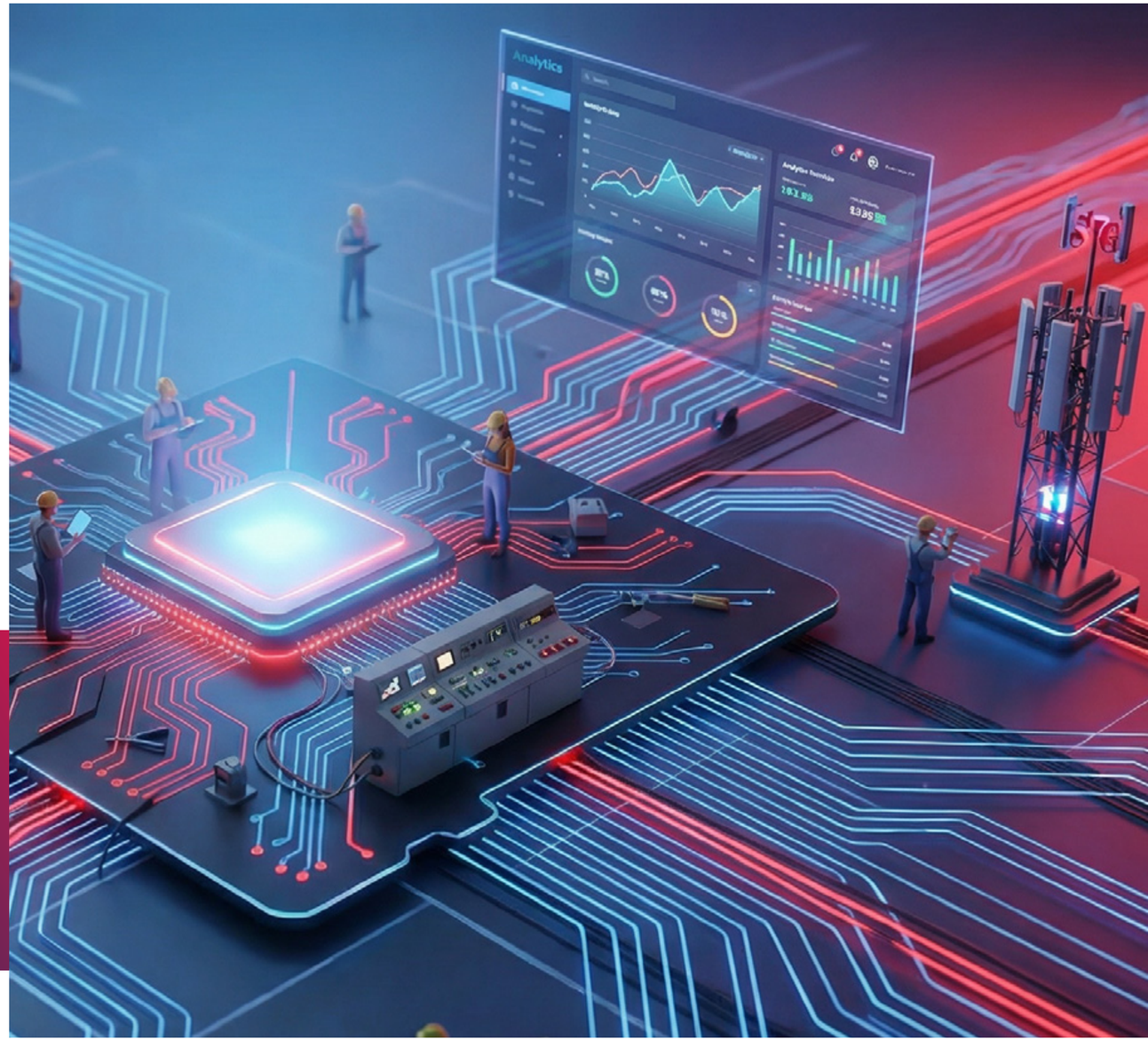
The Agentic AI Opportunity

Agentic AI enables a shift from reactive monitoring to continuous, autonomous network management.

By ingesting telemetry across network layers and correlating it with customer-impact and operational data, agentic systems can detect anomalies early, identify likely root causes, and recommend or execute remediation actions within defined guardrails. Rather than relying on static thresholds and isolated alerts, agentic systems reason dynamically as conditions change.

This allows networks to adapt in real time: rerouting traffic, adjusting profiles, resetting line conditions, or flagging targeted field interventions before customers are affected. When integrated with CX systems, network intelligence can also trigger proactive communications, reducing inbound contacts and improving trust.

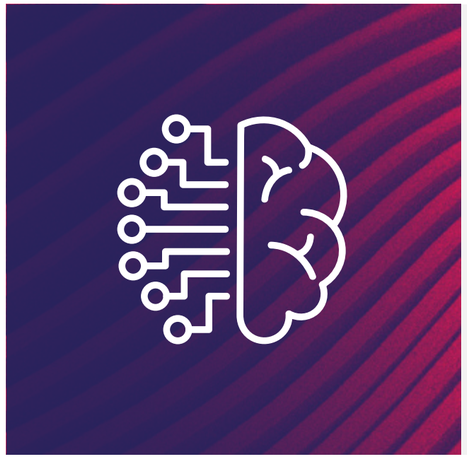
By deploying Sutherland's Digital Acceleration Center (DAC)[2], a telco customer transformed operations with outcomes including a 68% end-to-end automation across web and service applications and 78% of Level 1 IT incidents resolved autonomously.[3]



2 https://www.sutherlandglobal.com/services/digital-consulting/digital-acceleration-center
3 https://www.sutherlandglobal.com/insights/case-study/us-telecom-provider-achieves-regression-automation-and-cost-reduction-with-testing-coe

Practical Actions for Telecoms Leaders

Consolidate network telemetry across OSS/BSS, RAN, fiber, and CPE so agents can reason holistically. Break down vendor and domain silos by standardizing performance metrics, fault signals, and event data into a unified analytical layer. Apply the **data engineering** framework to design and operationalize real-time data pipelines that support cross-domain analytical reasoning and predictive detection.



Deploy agentic network health and predictive models using AI-driven **NetworkOps capabilities**. Run autonomous monitoring, anomaly detection, risk classification, and recommended remediation across network layers and scale pilot models via AI as a Service (AIaaS) so performance can be tested in live conditions without heavy upfront infrastructure investment.

Enable safe, autonomous remediation with governance and security best practices. Define confidence thresholds, rollback criteria, and escalation conditions so agentic systems can perform approved actions (traffic reroutes, reset workflows, test runs) securely. Incorporate **digital assurance** and **data and AI security** into automation pipelines to validate actions, protect sensitive network and customer data, and ensure compliance and operational resilience.

Integrate network health signals into service management and CX workflows. Expose degradation, congestion, and anomaly insights via APIs so agentic systems can trigger proactive customer communications, guided support, or field intervention before issues escalate.

Opportunity 3:
Agentic Provisioning, Field Enablement, and Retention Intelligence

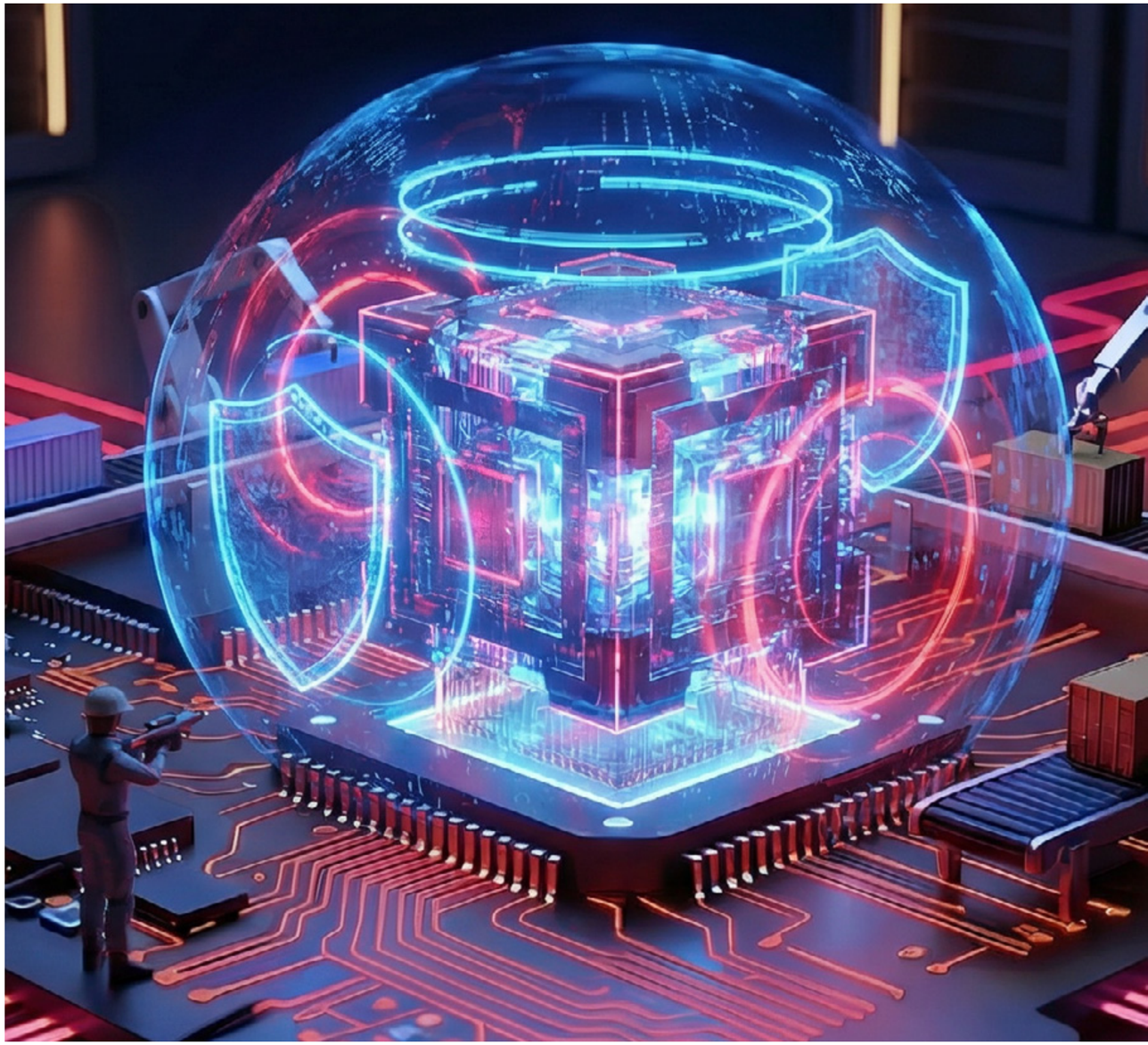
The Challenge

The structure of telcos at every level results in avoidable losses.

Provisioning workflows are fragmented across multiple services offered by even single telcos - broadband, fiber, mobile, and enterprise services – and the lack of a unified system is often a contributing factor to delays and activation errors.

At an operational level, field technicians depend on manual diagnostics, inconsistent tools, and limited access to real-time device analytics. The result is inefficiency that isn't sustainable in the current telco landscape.

Finally, at a customer level, aggressive price competition and unresolved quality of experience (QoE) issues are key contributors to high churn. There is the potential to address this with a proactive approach, but retention is often reactive, driven by contact center offers rather than behavioral insights, limiting its impact.

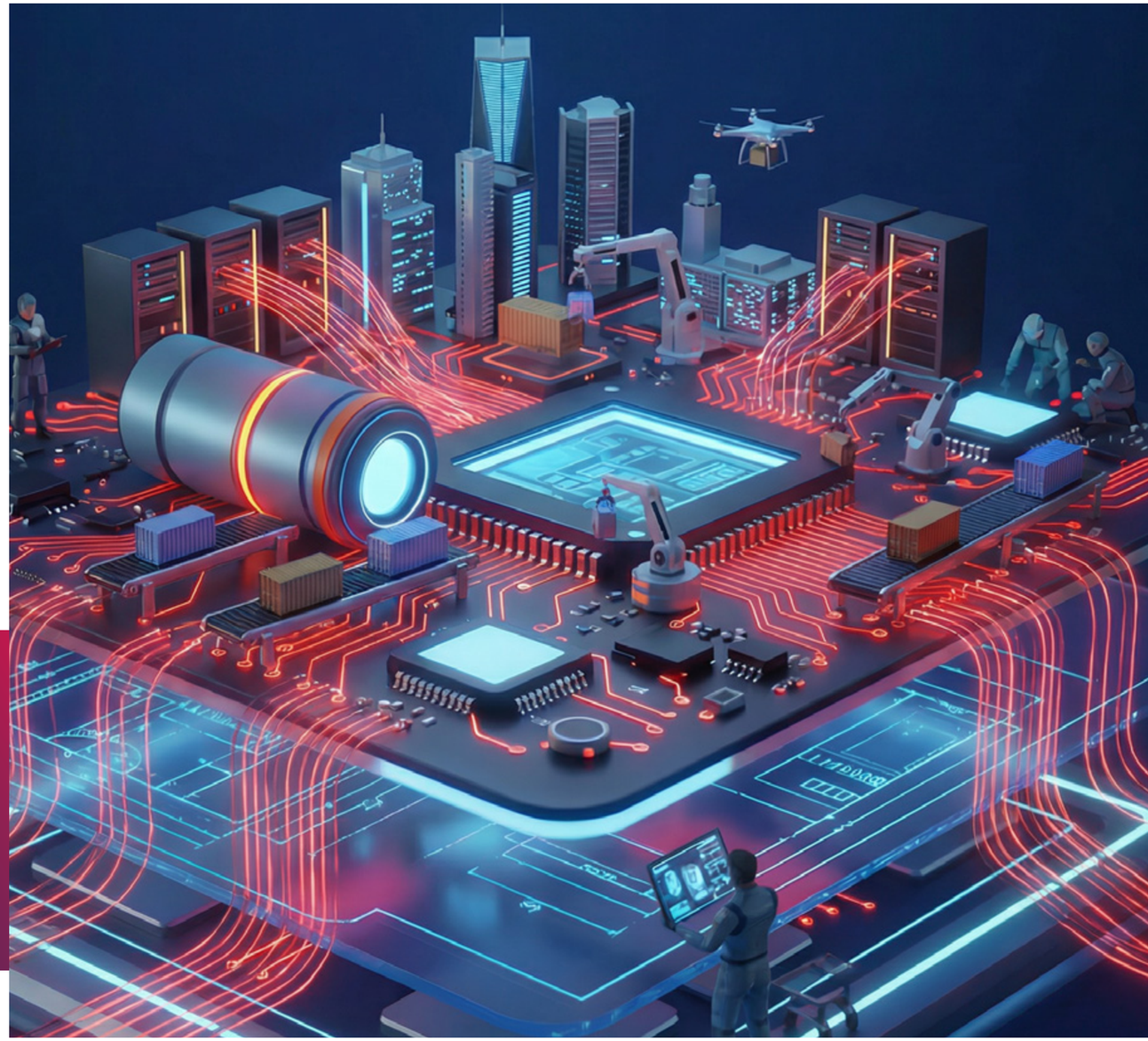


The Agentic AI Opportunity

Agentic systems can orchestrate end-to-end service delivery workflows, from intent to activation to ongoing maintenance. By connecting customer orders, provisioning systems, field service management, and real-time network telemetry, AI agents can autonomously validate orders, schedule field work, optimize dispatch routes, and preemptively trigger preventive maintenance.

This streamlines service delivery, cuts unnecessary truck rolls, and improves both technician utilization and customer satisfaction.

For a Tier-1 US telco, partnering with Sutherland led to a 28% reduction in truck rolls with AI-guided triage and remote fix workflows, along with increased First Call Resolution (FCR) through automated home network insights.

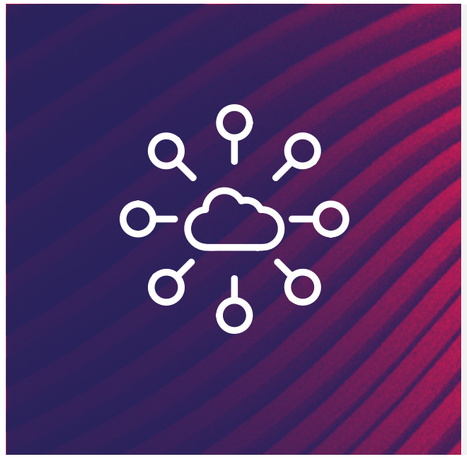


Practical Actions for Telecoms Leaders

Standardize provisioning rules and device profiles into machine-readable formats so agentic systems can execute activations accurately. Define consistent provisioning logic, configuration parameters, and device profiles across broadband, fiber, mobile, and enterprise services, and expose them via APIs rather than manual runbooks. Decompose legacy provisioning workflows into **agent-compatible services**, reducing activation errors and delays.

Integrate device and line telemetry into field-tech tools for real-time assisted troubleshooting. Ensure technicians have live access to signal quality, line conditions, configuration history, and recent remediation attempts at the point of service. Use the **data engineering** framework to unify Customer Premises Equipment (CPE), access network, and service telemetry, and surface insights through guided field experiences that reduce repeat visits and improve first-time fix rates.

Connect churn models to servicing and network-quality datasets to enable early detection and intervention. Move beyond reactive retention by linking behavioral signals, network performance, complaint history, and billing events into a single predictive view of churn risk.



Introduce agentic retention journeys across digital and agent-led channels. Embed agentic workflows that automatically trigger personalized offers, plan adjustments, service checks, or proactive outreach based on churn risk and experience quality. Integrate these journeys into self-service apps, virtual assistants, and contact center desktops with a **digital assurance** layer ensuring interventions remain compliant, explainable, and customer-appropriate.

The Road to the Agentic Telecoms Enterprise

No telco is immune to the need for AI. For a telco to even compete, let alone thrive in the current climate, it must embrace agentic systems to deliver always-on, seamless connectivity, at the scale customers expect. In every era of telecommunications transformation, the organizations that reimagined network operations gained a lasting advantage. It is no different now. The distinction is that innovation isn't a new product, channel, or pricing strategy. It's a new mode of operating, where intelligence becomes operational and adaptive across every process.

Agentic capability relies on the right foundational elements. Explore Outlook 2026: The Road to the Agentic Enterprise **for the fundamentals every organization needs.**

Telcos that thrive in 2026 and beyond will be the ones driving change, not reacting to it.

Becoming agentic does not require ripping out core platforms overnight. But it does need deliberate investment in the foundations that make autonomy safe and effective: unified data, modernized platforms, scalable infrastructure, and embedded governance. Telcos that strengthen these capabilities now will be positioned to expand autonomy incrementally: starting with high-impact use cases and compounding value over time.

Disruption is inevitable. Make it intentional.