

Nokia Managed Services

Actively accompanying your journey to the 5G promised land

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As Communication Service Providers (CSPs) update their network architectures, the level of intricacy has surged. This is evident in the growing array of services requiring management and monitoring. The adoption of cloud technologies necessitates comprehensive automation for seamless operation. Additionally, the advent of 5G significantly heightens expectations, with services evolving towards greater dynamism and responsiveness.

At Nokia Managed Services, we possess a distinctive capability to support customers in their transformation journey. Through a commitment to ongoing enhancement and the delivery of clearly defined outcomes throughout the project lifecycle, we guide our clients in making informed investment decisions.

The right mix of profitable managed services solutions for investment and growth in CSP and enterprise segments.



Accelerate digital transformation and 5G monetization

Manage network complexity

New QoE-driven operations paradigm

Drive network intelligence



#1

Operational maturity comes step by step

Operations Transformation offers a collaborative approach, working hand in hand with operators to effectively leverage automation and drive outcome-oriented, time-sensitive, and business-focused transformation endeavours.

Our objective is to meticulously assess operational shortcomings and propose automation solutions to modernize and revamp our clients' operations.

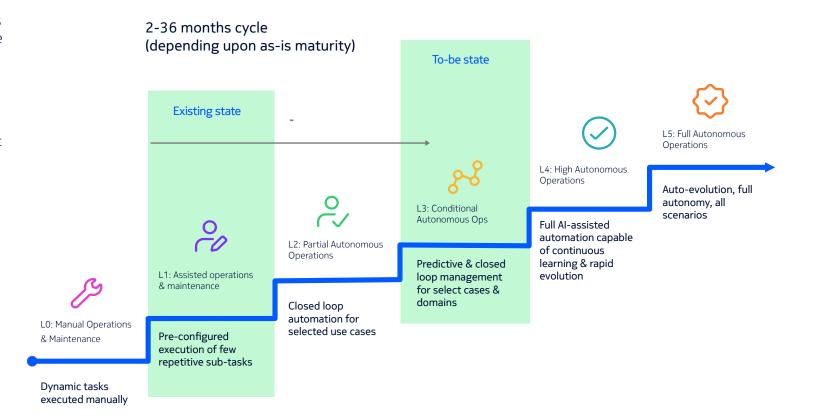
Utilizing our Automation Maturity Assessment framework, we pinpoint the initial state of our clients and chart a clear path towards their desired future state.

Customer transformation is intricately linked to automation Key Performance Indicators (KPIs), which our operations teams diligently monitor to achieve the business and financial objectives set by the CSP.

Autonomous Operations ensures seamless services without wait times, manual intervention, or complications. To achieve this, CSPs must address cloud complexity, data diversity, and automation inertia.

This necessitates partnering with a provider proficient in AIOPs-driven cross-domain operations, closed-loop automation, Telco cloud observability, network optimization, security, and energy efficiency.

Such transformation demands CSPs to revamp their business approach, and Nokia Managed Services, with its expertise, is poised to guide this evolution.



Based on TM Forum Autonomous Network Levels

A platform for 5G transformation

Nokia Managed Services offers more than a mere outsourcing model for expanding headcount. It presents a comprehensive platform for operational transformation. Tailor our experts' assistance to your specific needs by selecting the areas you require the most support in. Below are just a few examples of how we can assist you:



OSS Consolidation



- APIs supporting proprietary interfaces
- Reduced operational complexity

Alarm & Incident Resolution



- Significant reduction in alarm ratio and fully automated trouble ticketing
- Closed loop automation with extreme auto-recovery resolution

Automated Change Request Execution



- Streamlined change execution through low-code and RPA-driven templates
- Minimized errors with automated pre- and post-checks

Field & Energy Optimization



- Minimize carbon footprint with reduced CO2 emissions
- Optimized field operations costs

Service & CX Monitoring & Management



- Improved subscriber perception
- Faster service impact analysis

Focused Optimization



- Guaranteed performance for critical service needs
- Multi-vendor
 E2E
 optimization

Network Benchmarking



- Comprehensive competitor analysis
 - Analysis of Quality of Experience (QoE) gaps

Transformation powered by connected intelligence

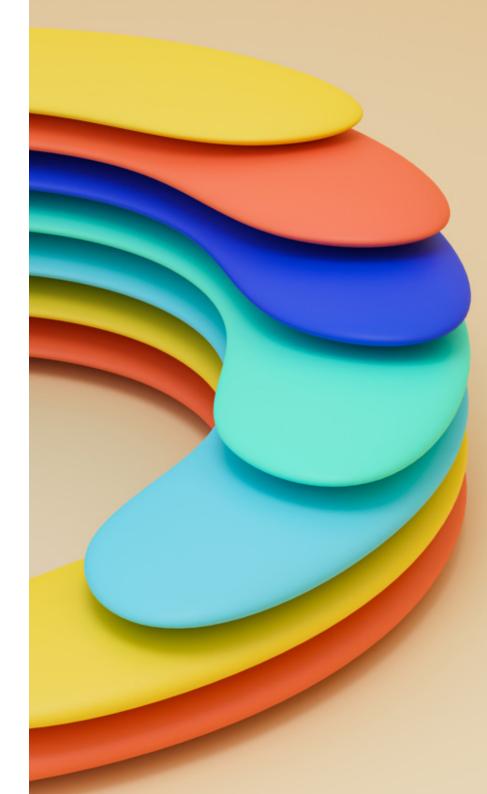
Canopy serves as the backbone of our Managed Services operations, leveraging cloud-native architecture and microservices.

It employs robotic process automation (RPA) and low-code solutions to streamline workflows, while harnessing machine learning to predict network issues and proactively address them. This enables seamless integration with various tools and facilitates automation of operational processes.

Furthermore, Canopy excels in network optimization through advanced machine learning algorithms. By anticipating and mitigating potential issues, it ensures optimal network performance and reliability, transcending traditional operational boundaries.

As an adaptable platform, Canopy seamlessly operates across diverse technology and vendor environments, whether on public or private cloud infrastructures. Its versatility is complemented by a robust ecosystem of partners, facilitating the rapid development and enhancement of Al-driven cognitive services.

Our managed services are delivered remotely from our extensive global and local delivery centers. With over 10,000 experts supporting 200+ customers in 55 countries, remote delivery optimizes resource utilization and enhances service quality, ensuring swift and efficient support tailored to our clients' needs.



Utilizing the Canopy enabler framework for automated managed services delivery

Canopy Platform Open APIs Gen Al Low Code Studio **DIY Reporting** Performance & Config & Inventory Managed Security ML-based Alarm and ML-driven Health check Network Topology & Mobile backhaul Field Route Auto-detection. Node Pattern Intelligent MOP Optimization automation Inventory analysis auditing for Management Detection configuration anomalies Network status Automated ML-driven MTTR ML-driven similar consistency check optimization estimation for ML-based KPI and · Change coordinator incident tickets module (MUSA) field dispatch alarm correlation for Auto-remediation RCA detection for RCA optimisation found in Sleeping cell Change configuration detection Parameter & implementation Network fault configuration audit ML-driven 3rd anomalies · Unified alarm assistant prediction and party dispatch suppression incident RCA probability PM Analysis · Change deployment prediction supervisor Al Analytics Hub Microservices & Automation Engine Low-code Automation Data Storage 010110 Logs **Probes** Cloud Traces 101100 Telemetry 010111 Predictive and proactive Extreme automation, ML & Gen Al Comprehensive & unified platform decision-making Low code capabilities for Cloud-native overlay platform Open platform faster automation

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MS Transformation Framework to generate value proposition



Insights (25%+)

- Network behavior
- AI/ML analytics for performance
- Customer experience linked to network changes
- Equipment/vendor/domain
- performance insights
- Interdependencies relationships



Risks (20%+)

- **Anomaly Detection**
- Design defects, resiliency checks, audits
- Security vulnerabilities
- Process flaws

Managed Services **Transformation**

Framework, expert-driven agnostic, precise outcome-based, microservices continuous, long term



Performance (20%+)

- Unleashing network potential
- Multi-vendor/multi-domain E2E optimization & tuning
- Closed-loop automation
- Correlation, triaging, ticketing, RPA



CAPEX/OPEX (15%+)

- **Energy savings**
- **OSS** simplification
- Lifecycle management

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About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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