Cognitive Network Operations
Communications, Media & Technology

Awards & Recognition

To know more
Visit the Communications, Media & Technology page on tcs.com
Email: global.cmi@tcs.com
Blog: Next Gen CMI

About Tata Consultancy Services Ltd (TCS)
Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India’s largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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IT Services
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Hyper-connected environments offer telcos immense opportunities to enhance customer experience. Imagine a telecom network where voluminous data and rapidly flowing network streams are constantly converging to create a hive of insights. Network operators can leverage this information to improve value, reduce opex, and take better decisions around new services and products.

Tata Consultancy Services’ (TCS’) Cognitive Network Operations offering help telecom network operators monitor network health, predict possible failures, and maintain exceptional service quality at an optimal cost. This offering uses artificial intelligence (AI), machine learning (ML), and social media analytics to architect a customer-centric network experience. Through machine-driven micro-monitoring enabled by the Cognitive Network Operations Platform, telcos can focus on customer experience and superior service delivery.

Overview
Emerging connectivity environments offer immense potential in terms of data-driven network operations. The rise of social and mobile data, for instance, implies connectivity service providers must attune customer experience to the incoming feedback. However, mining this raw data for actionable insights and accurate decision making can be a challenge, especially in complex, multi-vendor network scenarios.

TCS helps communications service providers (CSPs) and telecom network operators leverage the power of AI and machine learning to learn from multi-channel data. This guides network quality transformation and new service introduction, improving customer experience, and thereby cementing customer loyalty, in a hyper-connected space.

TCS’ Cognitive Network Operations offering is designed to tackle the rising cost of network operations by improving the precision of handling network faults and reducing operational tasks. Quality of Experience (QoE) is redefined in sync with multi-channel customer feedback leading to higher net promoter scores (NPS) and sustained brand reputation even in the most competitive markets.

Our Solution
TCS’ Cognitive Network Operations is a turnkey solution to enable telcos to drive AI-ML and analytics-driven zero touch network operations. Key features include:

- **Single view of network**: Provide single and correlated display of alarm with service view, phenomenally reducing the monitoring and troubleshooting efforts and skill needs

- **Fault and Performance Prediction**: Provide predictive view of alarms and performance with probability, enabling shift left operations and combining reactive and predictive tickets for economical resolution

- **Heuristic Data Analysis**: Collects the fault configuration and performance data from the complete ecosystem of network functions (access, transport, core and application, and power) to derive a holistic view of user experience, service delivery, and business performance

- **Auto-ticketing of Network Faults**: Gets the feed from social media and contextualizes customer mentions to technically interpret the problem in network functions and issue an automatic ticket

- **Exhaustive Libraries for Faster and Precise Implementation**: Includes libraries of network faults and topologies to accelerate alarm grouping, correlation, root cause analysis and impact analysis features from an implementation perspective and make it adaptive to changes in production environment

- **Multitenancy**: Offers multitenancy support to enable enterprise instance of network operations centers – an extremely useful feature for mobile virtual network operator

Benefits
With TCS’ Cognitive Network Operations, telecom companies can achieve the following benefits:

- **Superior Customer Experience**: Decrease the number of incidents per user by analyzing social media feeds and deploying predictive rules for failure, thereby improving customer experience quality

- **Proactive Fault Detection**: Gain deeper insights into existing customer complaints and possible failures, predicting and preempting network issues

- **Efficient Resource Management**: Optimize the allocation of customer-facing resources by identifying future churn scenarios, latent service issues, and micro-incident possibilities

- **Lower Operational Costs**: Reduce opex by up to 30% by ensuring new products are aligned customer needs; identify key detractors providing low NPS, preventing revenue leakage from these users; improve the economics and efficiency network operations

The TCS Advantage
TCS brings the following differentiators to an engagement:

- **Domain Experience Meets Technical Expertise**: Our offering provides a unique combination of telecom networks, IT, and intelligent automation, allowing customers to gain from industry-proven models even in unfamiliar and disruptive markets.

- **End-to-end Delivery**: Backed by years of system integration experience, TCS eases transformation by helping integrate AI and machine learning components and social media capabilities into existing enterprise infrastructure.

- **Continuous Service Improvements**: Our agile approach complemented by TCS’ recognized leadership in analytics and automation helps keep our customers at the edge of technology innovation, continually upgrading infrastructure to meet new business challenges.

- **Alliances with Technology Companies**: TCS has forged strong partnerships with leading technology companies. This helps us offer superior network operations services to our clients the world over.
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