

## GenAI-powered cognitive toolkit for network and service management – Phase III

Helping CSPs deliver Private 5G services over Fixed Wireless Access (FWA) for industries requiring high-speed connectivity in remote locations.



### The solution:

This Catalyst is revolutionizing the ability for CSPs to deliver Private 5G services over Fixed Wireless Access (FWA) for industries requiring high-speed connectivity in geographically remote locations. Their solution allows CSPs and enterprises to centralize AI models for managing the services, to reduce operational costs, and enhance scalability.



### Addressing the challenge:

The solution is a modular AI framework built on five key components:

1. **Agentic AI Mesh** – A network of autonomous agents, each handling a specific domain, collaborating through APIs and a shared Temporal Knowledge Graph (TKG) for coordinated, cross-domain decisions.
2. **Temporal Knowledge Graph** – A structured, time-aware memory that enables agents to reason contextually, learn from history, and provide explainable decisions.
3. **Intent Orchestration Layer** – Translates business goals into technical policies via natural language, empowering non-technical users to launch autonomous workflows aligned with value streams.
4. **Policy-Governed Execution** – Ensures AI actions are compliant and traceable through TM Forum APIs, with built-in governance and human override.
5. **Value Stream-Based Automation** – Automation decisions are driven by real-time business impact (e.g., SLAs, revenue, sustainability), not static rules.

This creates an explainable, closed-loop, intent-driven AI system for scalable, autonomous service and network management.



The transition from process-based to value stream Autonomous Network Operations, as envisaged in our Catalyst, enabled by an agentic AI mesh, advanced knowledge management, and a Gen AI PaaS model, significantly enhances value for CSPs from today's piecemeal ANO implementations. Operationally, it drives efficiency through automation and cost optimization. From a value stream perspective, it aligns innovations with customer needs, fostering revenue growth and superior outcomes.

**Irshad Deen**

Deputy Chief Innovation Office



### Business impact:

Enables up to **25% OPEX savings** and **85% faster fault resolution** through AI-driven, closed-loop, value stream-based automation.

#### Champions:



#### Participants:

