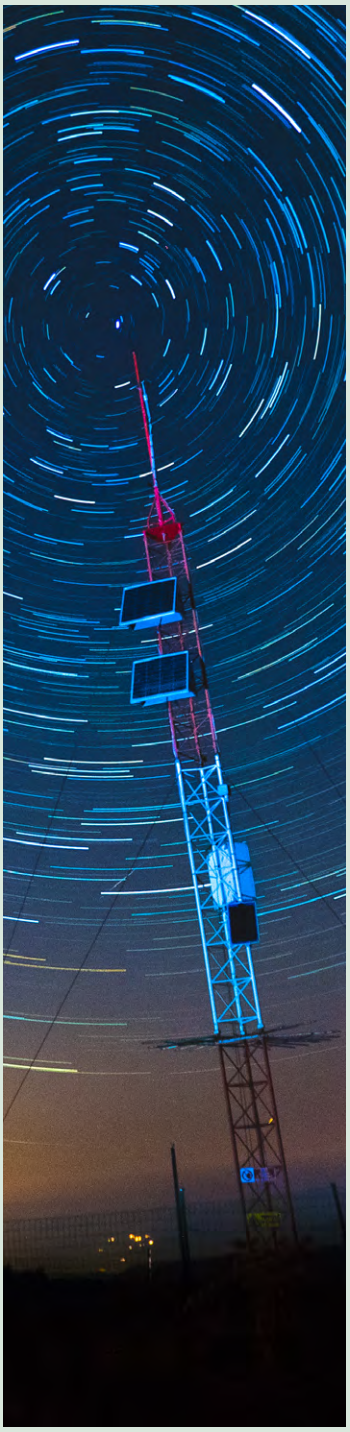
WHITE PAPER



MAKING AI REAL FOR TELCOS

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Telecommunications providers generate vast amounts of data; from real-time network data, device usage by users, billing data, as well as geo-location data - making them uniquely positioned to benefit from AI.

Many industries have been actively exploring the potential of AI. Recent findings indicate that 19% of enterprise AI initiatives have successfully met most or all of their business objectives, while 32% have delivered partial value, highlighting both the promise and the challenges of AI adoption at scale. Reference: Infosys AI Business Value Radar *https://www.infosys.com/iki/research/ai-business-value-radar2025.html*

The growing success of AI experimentation signals a pivotal shift for organizations—from piloting isolated use cases to operationalizing AI at scale. Enterprises are now increasingly focused on moving beyond experimentation to delivering proven, scalable AI solutions that generate tangible business value and support broader transformational objectives.

For telecommunications organizations, AI presents a significant opportunity to enhance customer experience, optimize network performance, drive operational efficiencies, and unlock new revenue streams. However, despite this potential, most telcos have yet to realize these benefits at scale.

The Business Impact of Failing to Scale AI Experiments for Telcos

Challenge	Customer Experience	Marketing	Products & Services	Employee Experience	Organisational Efficiency	Network Operations
1. Fragmented Execution	Customers receive generic or inconsistent services across channels (mobile app, contact centre, retail stores).	Campaigns ignore signals from support channels or network usage data, resulting in poor targeting or missed timing.	Plans and bundles are not tailored based on actual usage or network conditions.	Field Agents, Frontline Staff and Contact Centre Agents use inconsistent AI tools; and surface varying customer insights.	Duplicated AI models and analytics across business units resulting in constraints that prevent scaling.	Predictive tools used only in isolated domains; no end-to-end incident prevention.
2. Data & Operating Model Silos	Poor customer insights because churn models lack input from network outages/data, care tickets, or billing history resulting in inaccurate predictions.	Unable to run cross-channel or usage-triggered campaigns due to lack of integrated network data.	Hard to design adaptive services that respond to actual usage or location-based demand analysis.	Employees lack a 360-degree view of the customer that includes a network view. AI insights are not embedded in daily tools such as Business Support Systems (BSS).	Siloed data pipelines prevent reuse of AI solutions to scale up proven models across functions or regions.	Fault prediction, traffic analysis, and capacity planning tools lack cross-system data such as customer complaints or usage trends leading to reactive planning.
3. Workforce Under-Preparedness	Frontline staff and Agents do not trust AI-driven next-best actions resulting in lengthy Average Handling Times and inconsistent CX.	Lack of training results in marketing teams avoiding AI targeting tools and revert to inefficient and less accurate manual segmentation.	Product teams don't leverage AI insights from usage data, or case data to refine offerings or pricing.	Field Agents and Internal Staff are unclear on how AI-generated insights fir their day-to-day and results in low adoption.	Staff are not aligned on AI expectations and are confused with accountability and decision rights.	Lack of trust in AI-generated actions or insights because of a lack of understanding on the logic behind the solutions leads to manual processes.

Figure 1 - Business Impact Areas

Why AI in Telco is Stalling

1. Fragmented Execution

AI initiatives in many telecommunications organizations have been implemented in silos—resulting in disconnected use cases that fail to deliver enterprise-wide value. For example:

- *A chatbot in customer service may not leverage network usage data to personalize interactions.*
- *A churn prediction model may not be integrated into daily workflows used by service agents.*

This fragmented approach stems from viewing AI as an "add-on" rather than a core enterprise capability. As a result, telcos miss opportunities to drive efficiency, enhance customer experience, and unlock new revenue streams.

The Solution

To overcome this challenge, we recommend the following:

- Establish an AI Center of Excellence (CoE) or AI Council

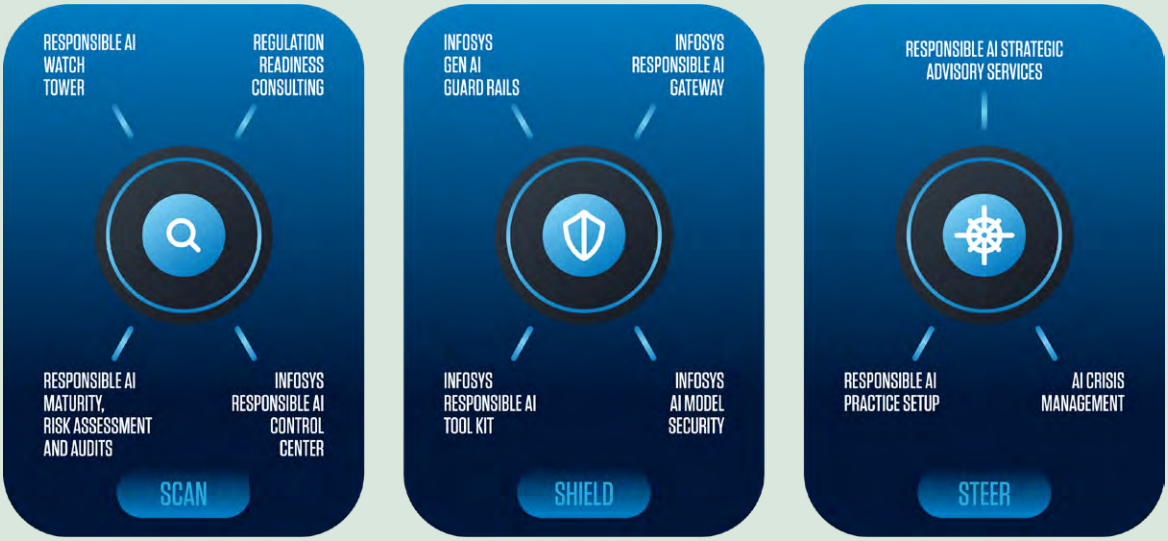
  A centralized governance body can:

  - *Align AI initiatives across business units*
  - *Promote reuse of models and data pipelines*
  - *Enforce standards and best practices*
  - *Accelerate time-to-value*
  - *Adopt a Responsible AI Framework*

Embedding ethical and regulatory considerations into AI implementation is critical.

The Infosys AI3S Suite—Scan, Shield, and Steer—provides a comprehensive framework to:

- *Assess AI readiness and risks*
- *Ensure compliance and ethical use*
- *Guide strategic AI adoption across the enterprise*



Source: *https://www.infosys.com/services/data-ai-topaz/offerings/responsible-ai-overview.html*

2. Misalignment of Data and Operating Models

Realizing tangible value from AI use cases requires a robust foundation in both data architecture and operating models. Achieving this often necessitates a comprehensive transformation—restructuring data architectures, integrating fragmented systems, and reengineering workflows from end to end.

Key challenges include:

- *Legacy systems that are difficult to integrate*
- *Persistent data silos that hinder seamless data flow*
- *Inconsistent data quality across disparate sources*

Success becomes more attainable once substantial changes to both data and operating models are implemented. However, executing such transformation at scale demands coordinated planning and enterprise-wide alignment—an area where few telecommunications companies have succeeded.

The Solution

- *Adopt a Data-Enabled Operating Model: Prioritize interoperability, real-time data access, and leverage cloud-native infrastructure to ensure scalability and agility.*
- *Invest in Data Product Architecture: Enable secure, scalable, and governed data sharing across business units by treating data as a product.*
- *Establish an AI Governance Framework: Integrate data governance within a broader AI governance model to support the rapid, data-driven decision-making required for successful transformation initiatives.*

3. Workforce Under-Preparedness

To improve project success rates, telecommunications companies must ensure their workforce is fully prepared for AI adoption. Low levels of engagement and readiness significantly increase the risk of failure.

When employees are only partially trained or engaged, AI adoption stalls, and trust in AI tools diminishes. This often leads to resistance to change, slowing down transformation programs and delaying business outcomes.

The Solution

To address workforce under-preparedness, organisations should adopt a structured, inclusive approach that blends education, collaboration, and cultural transformation:

- **Launch AI Literacy Programs:** Provide all employees with foundational AI knowledge, complemented by hands-on technical training through interactive labs and real-world use cases.
- **Foster a Culture of Innovation:** Encourage employees to explore how AI can address challenges across the business. Use these insights to empower domain experts to co-create AI solutions in partnership with technical teams.
- **Promote Cross-Functional Collaboration:** Break down silos by enabling interdisciplinary teams to work together on AI initiatives, ensuring solutions are practical, scalable, and aligned with business needs.

We are at a turning point

The telecommunications industry stands at a pivotal moment. With intensifying cost pressures, rapidly maturing technologies, and the growing viability of AI use cases, the path forward is clear: **AI transformation across your operating model, data, people, and governance is the key to unlocking sustainable value.**

Our team partners with telcos to:

Benchmark the current state of AI readiness and maturity	**Prioritise high-impact use cases** that align with strategic goals	**Co-create a scalable roadmap** to accelerate transformation

We assess where you are on your AI journey and define a clear, actionable path forward. From **Predictive AI** to **Generative AI** and the emerging frontier of **Agentic AI**, the opportunities to move beyond experimentation and deliver measurable business outcomes have never been greater.

Let's make AI real—together.

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