



WHITE PAPER



Infosys' Frontier Telco Operating Model Sets A New Paradigm For Telco Strategy

Dan Bieler, PAC
June 2026

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The creation and distribution of this white paper was supported by Infosys. For further information please visit www.pacanalyst.com.

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Moving Towards The AI-Native Telco

What will the world of telcos look like once they have fully embraced AI? Today, most telcos are deeply thinking of how, when, and where to leverage AI and what AI technologies to use across their operations. In a world where AI adoption is pervasive, telcos will look different from the providers we know today. It takes a "Frontier Telco" to develop a North Star mindset to operate effectively in an AI context, involving a comprehensive transformation of its technology, operations, culture, and business model.

However, as of now, siloed systems and fragmented data hold back telcos. Traditional telcos were built around functional depth, e.g., engineering, marketing, sales, service, IT, and networking, optimizing for expertise over integration. While this organizational model delivered scale and specialization, it entrenched fragmented execution. Over time, it produced complex, non-cohesive technology landscapes, inconsistent data architectures, and systemic interoperability gaps across core platforms. These constraints undermine telco performance because:

- **Structural silos severely constrain the impact of AI and enterprise-wide automation.** Even well-intentioned initiatives, like customer journey mapping, omnichannel design, and automation programs, consistently stall in execution. Fragmented systems, inconsistent data, and weak interoperability undermine cross-functional coordination, preventing scalable automation and limiting the realization of AI-driven value.
- **Fragmentation drives disjointed journeys, inefficiency, and degraded experiences.** Organizational silos create inconsistent experiences, trigger redundancies, inflate cost-to-serve, and break end-to-end accountability. These constraints directly inhibit AI deployment, which requires seamless data flow, integrated platforms, and synchronized execution across functions to deliver measurable business outcomes.

AI as the Catalyst for Integrated Value Systems

Agentic AI introduces autonomous systems that execute across workflows. For telco executives, this marks a structural inflection point. It shifts operations

from function-centric silos to integrated, intelligent operating layers that dismantle barriers, enable cross-domain orchestration, and materially improve speed, efficiency, and end-to-end value delivery. This shift delivers significant benefits, as:

- **AI-generated functionality is redefining how telcos design and operate.** AI agents dynamically generate and orchestrate capabilities, while underlying systems ensure stability, governance, and data persistence. This decoupling accelerates innovation and enables highly personalized, context-aware experiences unconstrained by legacy architectures. Strategy and investment shift to adaptive cycles, leveraging real-time performance and profitability data to drive continuous, value-based capital allocation and faster, more precise decision-making.
- **Value stream ownership replaces silos to enable end-to-end performance.** Telcos must reorganize around customer-centric value streams rather than functions, embedding AI across operational layers and aligning human and machine capabilities with outcomes. Value stream owners carry full life cycle accountability, commercial, operational, and experiential, driving tighter integration, faster decisions, and clearer ownership. Breaking silos becomes non-negotiable to ensure data continuity and orchestration. When executed well, this shift eliminates fragmentation, unlocks true end-to-end AI enablement, and materially improves agility, efficiency, and customer impact.
- **AI enables autonomous end-to-end execution across telco workflows.** AI detects and resolves the majority of operational issues in real time. It only escalates novel exceptions that continuously retrain workflows. This requires shared data foundations and standardized processes. Process design shifts from fragmented handoffs to integrated, closed-loop systems. Order-to-Cash becomes a fully orchestrated, AI-executed flow with seamless billing integration, while Assurance and Support evolve into predictive, self-healing feedback loops that enhance service quality and reduce operational cost. Moreover, product creation becomes very customer contextual.

The Value Spin Of Frontier Telcos

A frontier telco is a new organizational paradigm built around outcome-oriented teams. They are powered by autonomous platforms and governed for speed of innovation and adaptability. By embracing AI throughout the organization, the frontier telco captures and sustains value for the customer and itself more effectively. It turns intelligence into a sustainable competitive advantage. A frontier telco is defined by its ability to:

- **Turn customer goals into automatic, reliable network actions.** Frontier telcos use smart, software-driven systems to translate what customers want into the steps needed to run networks and IT services. Instead of people manually setting everything up, operators simply define the desired outcome, and the system handles the setup, checks performance, and keeps everything running smoothly. This reduces complexity and speeds up delivery. It also lets teams focus more on helping customers succeed while improving how decisions are made and how services are delivered through simple, responsive, and adaptive operations.
- **Drive customer value through empowered employees.** Frontier telcos anchor their entire strategy in creating meaningful customer outcomes; ensuring customer-centric thinking shapes every function, decision, and process. This

focus goes beyond service quality to include deeply understanding and anticipating customer needs. At the same time, frontier telcos treat the employee experience as essential, not secondary. Engaged and empowered teams are critical to delivering differentiated value. By aligning employee incentives, tools, and culture with customer success, frontier telcos create a reinforcing cycle where better employee experiences directly lead to stronger customer outcomes and a sustained competitive advantage.

- **Create value through autonomy, transparency, and accountability.** Frontier telcos shift from task-based to intent-based operations, replacing fragmented, human-heavy workflows with seamless human-agent orchestration and minimal handoffs. Network management evolves from passive monitoring to continuous issue detection and self-healing capabilities. Data moves from siloed systems to an agent-first model that prioritizes context over raw information. Commercially, they replace fixed bundles with adaptive, API-enabled networks that support dynamic products and provide forward-looking insights, enabling faster decisions, greater flexibility, and more responsive customer experiences.



The Rise Of The AI Operating Model

Infosys helps telcos navigate this journey to become frontier telcos. It focuses on improving experiences and business performance and speeding up quality innovation. The purpose of the frontier telco model is to offer a clear vision, a transformation pathway, and a strategic framework to guide organizations in reimagining value creation. The goal is to align around customer-centric AI deployment and transition toward AI-native operating models. The frontier telco model is rooted in observations of other frontier firms, i.e., organizations that already exhibit early characteristics of AI-native operating models. The frontier telco model serves as:

- **A conceptual framework for envisioning AI-enabled organizations.** The AI frontier model provides telco executives with a strategic blueprint for redesigning operating models for an AI-driven environment. It requires a fundamental rethink of value creation, operating structures, and technology deployment. It does so by forcing a shift from fragmented execution to integrated operations that focus on measurable business outcomes.
- **A mindset transformation tool for executives and key stakeholders.** This model is deliberately non-exhaustive, designed to catalyze executive dialogue and sharpen strategic focus. It does not prescribe a fixed solution; instead, it enables structured, outcome-oriented thinking on how AI reshapes operating models, investment priorities, and value creation across the enterprise.
- **A navigation aid from current-state operations toward AI-native enterprises.** The frontier telco model offers a structured blueprint for transitioning to AI-native enterprises. It defines a clear evolution path from functionally siloed organizations to integrated, AI-enabled operating models. Grounded in empirical observations of frontier firms, it provides telco executives with a forward-looking perspective on how value creation, operations, and decision-making will be reshaped in an AI-driven environment.

The Three Layers of the Frontier Telco Model

AI is a structural inflection point reshaping telco operating models. The rise of agentic AI, capable of autonomous execution and workflow orchestration, renders function-centric optimization obsolete. Telcos must pivot to integrated, value-driven models designed for end-to-end outcomes, embedding AI across

processes to enable real-time decisioning, seamless execution, and materially improved customer and operational performance.

Scaling AI requires a fundamental redesign across three aligned layers. Incremental change is insufficient; telcos must adopt a clean-slate, value-stream, and platform-based architecture. This model replaces siloed functions with three interconnected layers, each with a clear mandate, enabling enterprise-wide orchestration, data continuity, and outcome accountability across the full value life cycle:

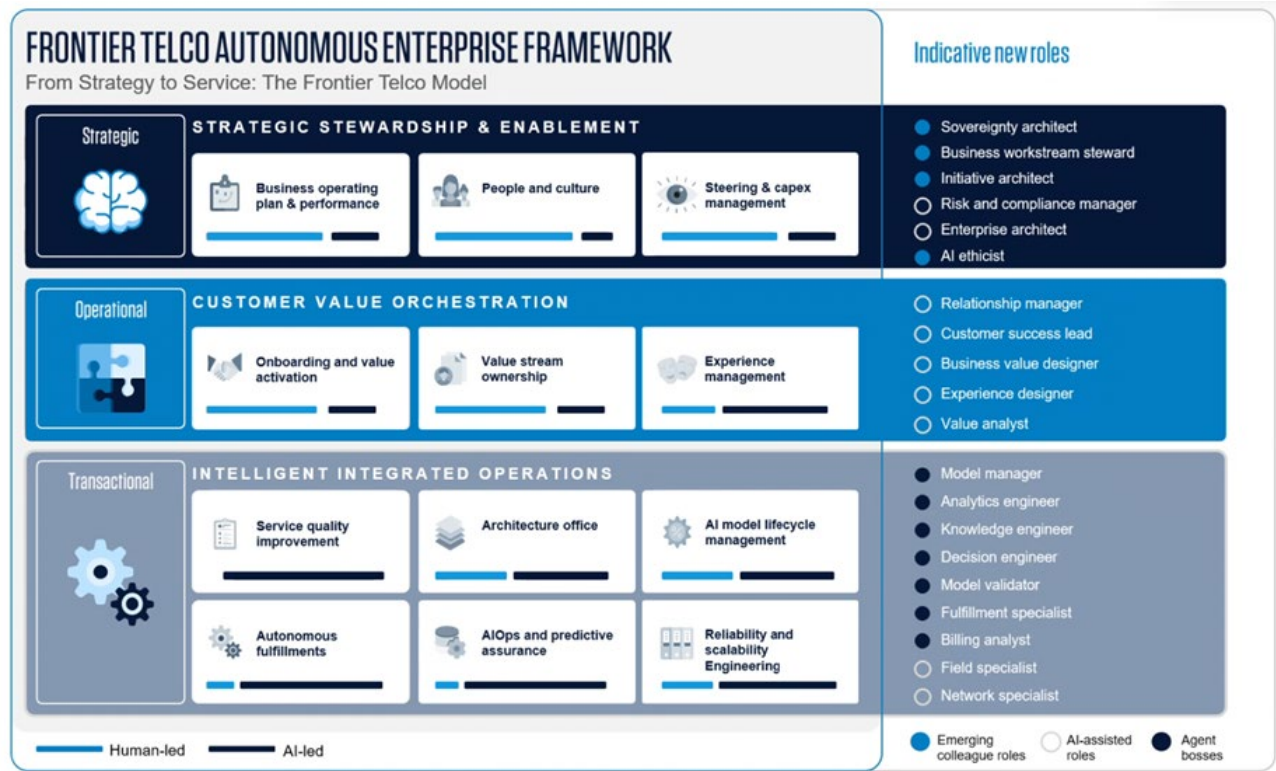
- **Intelligent integrated operations layer.** This layer operates as a coordinated network of automated factories, shifting human effort from manual execution to system architecture, model training, and exception governance. The Automated Service Fulfilment Platform Team designs and continuously optimizes zero-touch workflows, enabling AI agents to autonomously handle the vast majority of orders, changes, and provisioning tasks. Complementing this, the AI-Ops & Assurance Platform Team delivers predictive, self-healing capabilities by training advanced models and codifying remediation playbooks, allowing AI to detect and resolve incidents in real time. Anchoring both, the Unified Data & API Platform Team serves as the enterprise nervous system, orchestrating governed data products, standardized APIs, and semantic ontologies to ensure consistency, scalability, and operational intelligence.
- **Customer value orchestration layer.** The orchestration layer represents an AI-dominant yet human-governed domain where intelligent systems coordinate customer journeys and operational workflows at scale, while human judgment ensures quality, empathy, and contextual precision. AI-augmented utility teams deliver automated, resilient services across complex ecosystems, with AI agents executing the majority of workflows and escalating only exceptions. Emerging roles like agent bosses, foundation model life cycle managers, and knowledge engineers focus on supervision, optimization, and continuous learning. At its core, this layer is structured around persistent, cross-functional Customer Value Stream Teams aligned with segments such as Large Enterprise or Digital Native. These teams own end-to-end outcomes: the Value Stream Owner drives commercial strategy, the Value Designer tailors offerings using

AI insights, the Pricing & Value Analyst enables dynamic, outcome-based pricing, and the Customer Success Lead ensures adoption via AI-driven health monitoring. While engagement remains relationship-led, execution is AI-first, eliminating silos, accelerating delivery, and enabling a seamless, adaptive experience for both customers and colleagues.

- **Strategic stewardship and enablement layer.** At the executive layer, strategic direction remains human-led but is increasingly amplified by AI-generated intelligence. The Strategic Steering & Enablement layer evolves from static oversight to dynamic, data-driven orchestration of enterprise performance. Finance acts as a capital efficiency

steward, optimizing CapEx/OpEx allocation, funding automation at scale, and managing real-time value-stream P&Ls with a focus on return on incremental capital. The People & Capability function drives workforce transformation through reskilling, AI-native career pathways, and outcome-based incentives. Strategy & Governance operates at the system level, prioritizing platform investments, monitoring enterprise health through continuous data signals, and arbitrating cross-domain trade-offs. While execution below is predominantly AI-driven, this layer remains decisively human-led; small, high-leverage teams design the system, steer performance, and retain full accountability for strategic outcomes.

Figure 1: The frontier telco is rebuilt into three distinct but interconnected layers



Source: Infosys

Ten Steps To Build The Next-Gen Telco Operating Model

In order to move toward an AI-proof model, telcos need to:

- 1. Shift their focus from efficiency gains to strategic value creation.** As AI releases substantial employee capacity, organizations must intentionally redeploy talent toward higher-order impact. Priority areas include deepening human-to-human engagement, differentiating customer experiences, and advancing open innovation and product ideation. AI-assisted development further enables scalable customization, increasing both the relevance and diversity of offerings. This shift concentrates human interaction in high-value moments while expanding bespoke, context-aware solutions that strengthen competitive positioning and long-term growth.
- 2. Accelerate product innovation through AI-enabled diversity and modular platforms.** AI-assisted tools enable rapid development of bespoke, context-aware products, significantly increasing both the volume and variety of market offerings. Many telcos will simplify their products while opting for hyper-personalized products per customer as AI handles the workload and complexity of fulfilment and assurance. Products evolve from static solutions into adaptive, API-driven platforms where modular network and IT capabilities are dynamically orchestrated into tailored configurations. Within this architecture, AI agents act as force multipliers, automating fulfilment, anticipating and resolving operational issues, and maintaining high-quality, real-time data. Embedded analytic copilots continuously augment teams with actionable insights, collectively forming an intelligent, responsive ecosystem that enhances precision, accelerates innovation, and scales operational effectiveness.
- 3. Decouple intelligence from core systems to enable AI-driven agility.** Technology architecture is a decisive enabler of this transformation. Core platforms such as Salesforce, ServiceNow, and SAP remain essential as systems of record, safeguarding transactional integrity and historical data. However, intelligence is shifting upward into AI-driven orchestration layers that operate across the stack. This architectural pivot redefines SaaS as record-keeping infrastructure, while agentic layers, Model Context Protocol frameworks, and cross-system context sharing enable dynamic coordination, AI-generated functionality, and rapid application development at scale.
- 4. Integrate data orchestration to power intelligent, customer-centric AI operations.** Data remains a strategic asset in AI-native organizations, where transactional data (what happened) and contextual data (intent, preferences, situational signals) is unified within a customer orchestration layer. This convergence creates a high-fidelity, real-time data environment that enables advanced analytics, predictive modelling, and dynamic decision-making. As a result, organizations can deliver deeply personalized experiences, automate interactions seamlessly, and continuously refine operations. The tight integration of these data types strengthens insight generation, enhances responsiveness, and drives sustained differentiation in both customer experience and operational performance.
- 5. Commit to enterprise-wide, sustained AI transformation.** AI transformation is not a discrete IT initiative but a holistic shift spanning operating models, organizational structures, technology architectures, and cultural mindsets. Foundational changes typically require two to three years, with full adoption extending beyond that horizon. Meaningful progress demands at least partial transformation of core B2C or B2B stacks to enable deep AI integration. Organizations must act despite uncertainty, learning iteratively, adapting continuously, and building capabilities in parallel with execution while maintaining strong executive sponsorship to align priorities, mobilize resources, and sustain momentum.
- 6. Commit to enterprise-wide AI adoption and scale beyond isolated pilots.** The window for small-scale experimentation is closing as competitive advantage increasingly depends on the breadth and depth of AI integration. A “wait-and-see” approach is untenable; organizations must mobilize significant financial investment, build critical talent and skills, and maintain sustained executive focus. Moving beyond fragmented pilots requires a coordinated, top-down strategy that embeds AI across core functions and value chains. Even without a fully defined roadmap, organizations must act decisively, learning iteratively, adapting continuously, and scaling capabilities to secure long-term strategic positioning. This shift is a key ask of the executive

steering layer, as they continually evolve the organization.

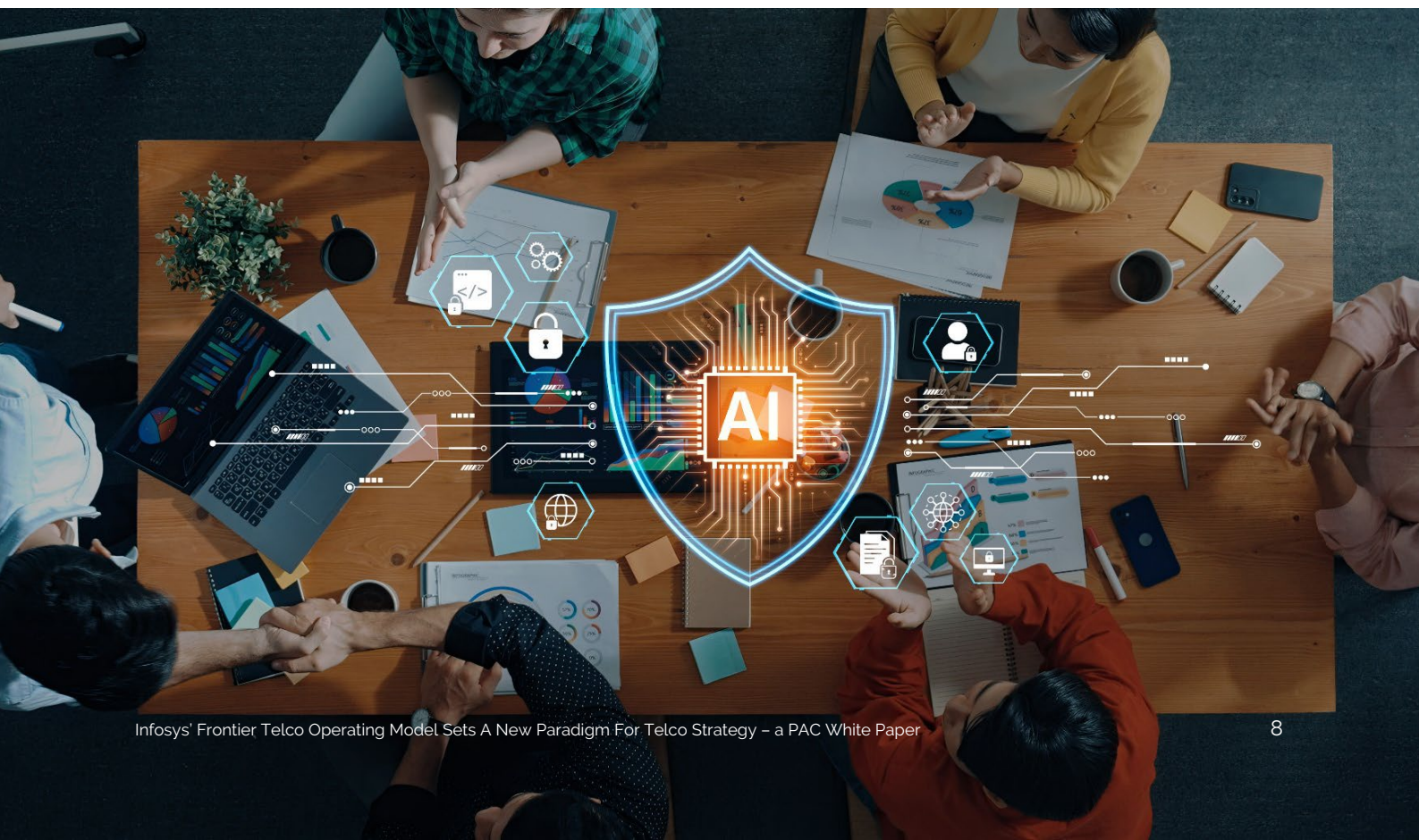
7. Actively engage and reskill the workforce to unlock AI transformation value. As AI automates routine work, organizations must deliberately redeploy employee capacity toward higher-value activities, such as enriching customer experiences, strengthening human-to-human interactions, and accelerating innovation. This shift increases the density of meaningful engagement at critical customer moments while improving overall efficiency. Success hinges on addressing transformation fatigue and resistance through clear career pathways, large-scale reskilling, and positioning AI as a growth enabler. A compelling employee value proposition centered on learning, opportunity, and purpose is essential to build trust, sustain engagement, and drive enterprise-wide adoption.

8. Build strong ecosystem partnerships to accelerate enterprise AI transformation. No organization can execute this shift in isolation; success depends on orchestrating capabilities across strategy consulting, technology implementation, and business process outsourcing. As these domains converge, organizations must actively engage with external partners to access specialized expertise, de-risk execution, and compress time-to-value. Ecosystem collaboration enables end-to-end transformation, from strategic design through

operational scaling. In complex sectors such as telecommunications, where capability breadth is critical, leveraging a coordinated partner network becomes a decisive factor in achieving sustainable, large-scale AI adoption and maintaining competitive advantage.

9. Prioritize human engagement to differentiate in an AI-driven market. As AI capabilities become increasingly commoditized, sustainable competitive advantage shifts away from technology alone toward the quality of human interaction, especially in customer-facing moments. Purely automated experiences erode differentiation, making it essential for organizations to position AI as an enabler of richer, more meaningful engagement rather than a replacement. By augmenting human empathy, judgment, and creativity, AI can elevate customer experiences while maintaining efficiency. Striking this balance, i.e., optimizing execution through AI while intensifying human connection in high-value interactions, becomes a critical lever for long-term differentiation and customer loyalty.

10. Drive AI transformation with adaptive execution. AI transformation requires clear top-down ownership, with CEOs defining ambition, priorities, and value focus. CIOs and CTOs translate this direction into scalable architectures and delivery. Success depends on iterative execution, continuous learning, and tight alignment between business strategy and technology implementation.



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Contact:

Dan Bieler
Principal Analyst
Consultant in Digital Strategy

d.bieler@pacanalyst.com

+49 176 6305 3144

PAC Germany

Holzstr. 26,
80469 Munich
Germany

www.pacanalyst.com

www.sitsi.pacanalyst.com