



# The CSP CIO imperative to Reinvent IT for the AI era

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Executive briefing: CIO Leadership for  
Communications Service Providers is at  
a critical juncture


# Executive summary

Communications Service Providers (CSPs) stand at a critical juncture. The industry is being reshaped by forces that demand both strategic reinvention and operational excellence. The CIO's role is no longer confined to running IT efficiently; it is about enabling the business to thrive in a world of accelerating change.



CSPs are operating in an environment where speed, adaptability, and control define their ability to differentiate. Incremental IT change is no longer viable, today's imperative is for IT reinvention. Competitive pressure, cost constraints, geopolitical complexity, and the acceleration of AI are forcing a fundamental rethink of how IT supports business growth.

This executive briefing document brings together insights from our recent [Reinventing IT in the AI era survey](#), and CIO perspectives from CSPs including Orange, Axiata and Swisscom to help CIOs strategize, plan and build strong foundations for AI innovation.

Our research points to a shared conclusion: IT must become an enabler of speed, not a bottleneck. CIOs recognise that AI is transforming how CSPs operate, that legacy infrastructure complexity constrains innovation, and architecture and software engineering are now leadership priorities. And reinventing IT must be a continuous process, happening every day rather than through one-off programs.



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## Why do CIOs need to act now?

We are in the midst of an industry evolution:

- **Hyper-competition and commoditization:** Traditional connectivity revenues are flat; new entrants are well positioned to leverage agile, digital-native models.
- **Customer expectations:** Personalized, digital-first experiences are now expected
- **Technology disruption:** AI is a transformative force, with a significant impact on how CSPs operate
- **Ecosystem monetization:** Growth lies in B2B2X, vertical adjacencies such as fintech, satellite and API-driven partnerships.
- **Increasing impact of cost and complexity:** Legacy IT and associated technical debt and fragmented architectures are hindering agility.
- **Cybersecurity and compliance:** Increasing cyber threats demand Zero Trust and AI-driven resilience.

# The challenges facing CIOs today

On one hand, CIOs must pursue long-term transformation, modernizing legacy stacks, adopting modular architectures and embedding standards for interoperability to future-proof the enterprise. These initiatives are essential for agility, scalability, and ecosystem integration.

On the other hand, the business demands on the IT organisation are intensifying:

- **Be faster:** reduce time-to-market for new services from months to weeks. According to Orange Group CIO, Koen Vermeulen, speed and agility are imperatives for survival. This view is supported by Ahmed El Sayed, Group CIO of Vodafone, where the primary objective of their Re-Invent Transformation is to dramatically increase the agility and responsiveness of IT.
- **Be Efficient:** optimise IT spend and eliminate waste while funding innovation, including AI initiatives. Charles Molapsisi, Group CIO of MTN highlights the importance of IT contributing directly to commercial outcomes.
- **Be safer:** strengthen cyber resilience and regulatory compliance in an era of rising threats. This remains a top priority for all CIOs – supported by the Reinvent IT for the AI Era survey report, published by TM Forum.
- **Be smarter:** harness AI and data to autonomous operations, personalize experiences, and unlock new revenue streams. AI is a central, cross-cutting priority for CIOs. Chen Hong, the CIO of SingTel highlights the importance of leveraging AI to CX transformation.

Balancing these priorities is the CIO's greatest challenge: how to align technology and industry trends with CSP strategy, ensuring that every investment serves both the near-term need for competitive strength and the long-term vision for transformation.

The competitive landscape is unforgiving. Traditional connectivity revenues are flat, while digital-native players and hyperscalers move at unprecedented speed. Customers expect seamless, personalized experiences. Our recent [survey](#) highlights that customer experience transformation remains the most important single strategic goal of CSP's IT organizations'.

Meanwhile, internal complexity persists. Legacy OSS/BSS systems slow innovation and inflate costs. Skills gaps in AI, cloud, and cybersecurity threaten execution. Koen Vermeulen [highlights](#) the challenges presented by legacy infrastructure, with systems created 10 years ago or more, which are difficult to change. Governance frameworks lag behind the pace of change, increasing risk and inefficiency.

# Geopolitical and regional challenges

CSPs face growing geopolitical pressure around technology sovereignty, regulation, increasing cyber threats and global dependency. CIOs increasingly recognize that resilience requires deliberate architectural choices. IT systems must be simplified, reducing risk and freeing investment for strategic differentiation and providing the agility to innovate quickly. Swisscom CTIO Mark Düsener [notes](#) the importance of simplifying IT in order to reduce complexity, and that adaptability and the ability to react quickly are key today and in the upcoming era.

## Changing technology landscape

Digital capabilities are now the baseline. Yet CIOs consistently highlight that simplification, integration, and delivery speed challenges remain. Insights from a recent TM Forum [survey](#) highlight frustration that digital ambition often outpaces execution capability, placing renewed focus on IT reinvention rather than incremental digitization. And one size does not fit all, as [described](#) by Axiata Group CIO Anthony Rodrigo, who illustrates how architectural flexibility is a key requirement for IT. Each organization faces its own unique challenges, and needs an architecture that meets their needs wherever they are in their journey. One size does not fit all.

# The impact of AI: from automation to orchestration


Leveraging emerging technologies, including AI, is not optional; they are the foundation for new business models such as B2B2X, fintech adjacencies, and network API monetization. From our [survey](#), 45% of respondents indicated that they believe AI 'will result in a fundamental rethink of the restructuring of business processes'.

AI is no longer viewed as simply offering increased productivity. CIOs increasingly describe the need for AI orchestration of intelligence across the enterprise. [Koen Vermeulen](#) highlights how we will see fundamental changes in the way people interact with applications, with intelligent agents acting on behalf of users. Software development rules are being rewritten, and code is being delivered much faster.


These insights reinforce the fact that new opportunities require invention, not simply the addition of AI to existing processes. While some core activities will remain manual or semi-automated, AI enables CSPs to rethink go-to-market models, partner engagement, and platform capabilities when IT foundations allow safe scaling.

However, as [Mark Düsener](#) states, AI solutions need to have access to controlled, curated data. Without access to accurate data, AI solutions will fail.

At the same time, there is now increasing pressure for CIOs to be able to identify the return on their investment in AI, including cost savings. It is important that they are in a position to identify their impact on increased revenues as well. The CIO role is [described](#) as to show what is feasible, in a safe and controlled manner. And to keep [raising the bar](#) every day.



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## Complex legacy infrastructure: the real constraint

Legacy OSS/BSS environments remain the biggest drag on speed and cost efficiency. Many core systems were designed more than a decade ago and not optimized for flexibility. Layered fixes have increased the fragility and complexity of these systems. And frequently the individuals who have maintained and extended these systems in the past have moved on from their organizations, resulting in systems that are increasing complex and difficult to integrate and upgrade.

CIOs point to the [importance of taking a pragmatic approach](#) to this challenge: using AI to identify weak points in code and architecture, enabling controlled updates and addressing one part of the system at a time, rather than wholesale replacement. This strategy depends on being able to implement clean APIs and governed interaction points between new and old sections. Without these, AI simply increases complexity and technical debt, instead of reducing it. New opportunities [need invention](#), not just the addition of AI to existing processes.

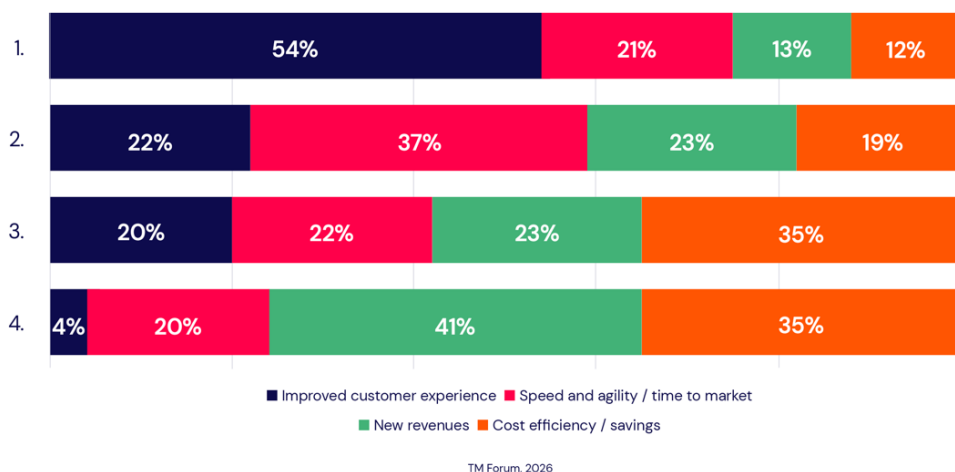
# The CIO's role: from IT leader to business catalyst

The CIO role is shifting decisively. Speed is essential for survival, and CIOs are expected to demonstrate what is feasible while maintaining operational control and trust.

This responsibility extends into driving commercial impact: highlighting responsibility for accelerating go-to-market, enabling service bundling, and delivering new solutions through their ecosystems with zero-touch partnering. The CIO is now central to organizational growth strategy, requiring strong executive partnership and confident leadership in architectural direction.

Our recent survey asked respondents to rank key CIO objectives for digital transformation. The highest ranking by a margin were customer experience transformation followed by speed and agility.

## Rank these digital transformation business goals in order of importance



This is backed up in our conversations with CIOs. Below is a summary of key objectives gleaned from these discussions:

- Customer experience transformation, moving from static segmentation to dynamic, AI-powered personalization.
- Faster time to market and increased agility, with a shift to agile frameworks and automated testing and deployment.
- Ecosystem and adjacency plays, such as Fintech, IoT and satellite communications, using B2B2X models to unlock new revenue streams and reduce dependency on core connectivity. Zero touch partnering is imperative to enable faster partnering.
- Network API monetization; CSPs are under pressure to monetize services beyond connectivity, and ensure that APIs can be called by agents.
- IT modernization and technical debt reduction, replacing monolithic stacks with componentized solutions. Non differentiating IT systems should be standardized fully and centralized.
- AI enablement across architectures: AI accelerates higher service performance, scale, personalized offers and autonomous operations.

# ODA, providing the foundation for IT reinvention

The insights from our survey, and our conversations with CIOs, highlight strong recognition of TM Forum Open Digital Architecture (ODA) as a practical enabler of reinvention. Importantly, the insights gained reinforce the fact that one size does not fit all. ODA has therefore been designed to meet the needs of CSPs regardless of size, business focus or geography, and wherever they are in their transformation journey. Its flexible, modular architecture helps CSPs move faster by supporting composable capabilities that can be assembled, adapted and scaled as business priorities evolve.

## ODA in the era of AI

It is increasingly clear that AI cannot scale without strong foundations. An agentic layer placed on top of fragmented legacy infrastructure is not a viable answer. ODA provides the architectural discipline needed to embed AI into the operating model itself, with governed data, standard interfaces and interoperable components that allow automation and intelligence to be introduced safely, consistently and at scale.

ODA gives CSPs the foundation they need to implement AI within rather than on top of their IT systems by combining a modular operating model, standardized data models and interoperable Open APIs with a practical path to achieving their objectives. This makes it easier to support zero-touch partnering, accelerate the creation of new joint services and solutions, and expose capabilities through reusable building blocks that simplify integration across internal teams, suppliers and ecosystem partners.

## Improving customer experience: an example of use of ODA

Customer experience improvement has been highlighted as a key area of focus throughout our discussions and research. Using this as an example, this section illustrates how ODA helps to achieve this objective.

ODA provides the architectural blueprint needed to break down siloed CRM, billing, service and network systems into reusable components connected through Open APIs, making it easier to create a unified customer data platform and orchestrate customer journeys consistently across channels. And TM Forum components already support the AI protocol MCP to communicate with external AI-enabled systems, while certification and conformance programs help validate interoperability across components and suppliers. This gives CSPs greater confidence to adopt composable solutions, reduce integration risk and speed the rollout of new partner-led and AI-enabled services.

TM Forum's Customer Management APIs establish a common way to expose and update customer information, and the AI-Native Blueprint provides a common, industry-aligned foundation for CSPs to safely and effectively adopt AI at scale. Together, these assets help CSPs move from fragmented, static interactions to intelligent, event-driven customer engagement that improves loyalty, increases self-service adoption and reduces churn.



AI cannot scale without strong foundations



# Workforce transformation and continuous reinvention

Skills shortages, cultural habits, and delivery pressure are increasingly constraining transformation. CIOs agree that waiting for AI tools to become perfect is no longer viable. People need to be encouraged to move out of their comfort zone, and develop new skills.

ODA assets such as the ODA Canvas, standardised components, Open APIs and reference implementations combined with business assurance assets support workforce transformation. They give teams a common operating model for new business processes and modular, cloud-native solutions, reducing reliance on bespoke integration. And they help organisations shift to cross-functional product teams with shared business, architecture, automation and governance practices, while also accelerating reskilling in areas including business process management, DevSecOps, delivery and operations. In this way, ODA supports not only technology modernisation but also a more agile, collaborative and continuously improving workforce.

Guidance from CIOs is pragmatic: start with an API-first strategy, anchor transformation around defined programmes, and treat ODA as a toolkit.

## The way forward

### Summary of key takeaways

- Reinventing IT is urgent, continuous, and leadership-led
- Open Digital Architecture is more important than ever as the foundation for AI-scale transformation
- AI magnifies both strengths and weaknesses—architecture and governance matter

### Actionable recommendations for CIOs

- Make speed and time-to-market strategic KPIs
- Lead with API-first, outcome-driven transformation programmes
- Use AI to modernise legacy systems incrementally and safely
- Standardize aggressively where IT does not differentiate

### Call to action

Reinventing IT cannot be achieved in isolation. CIOs are encouraged to engage actively in TM Forum projects to ensure their organizations have a voice and influence in shaping the architectures, APIs, and standards that will define the AI era.