

Whitepaper

Digital Service Enablement Platform

*How CSPs can **Unlock Spectrum of Possibilities** to **Grow** using Next Gen Digital Service Enablement Platform*

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Executive Summary

The telecom industry is navigating rising operational complexity, continued 5G investments, plateauing revenue growth, and increasing demand for digital customer experiences. In today's evolving digital landscape, CSPs are at an inflection point with opportunities to unlock business, human, and technology spectrum through the Grow, Empower, and Transform pillars.

79%

CSPs believe in offering services beyond connectivity as well ⁸.

>30%

CSPs believe legacy OSS/BSS are major blockers to new services ¹⁴.

This whitepaper introduces Tech Mahindra's perspective on the Digital Service Enablement Platform as a strategic framework for CSPs to scale digital services, accelerate business growth, and unlock new revenue opportunities. It also outlines the business and operating model changes, as well as approaches to enterprise IT and network transformation, supported by Tech Mahindra's Connected Enterprises and Ecosystem Play with AI@Core.

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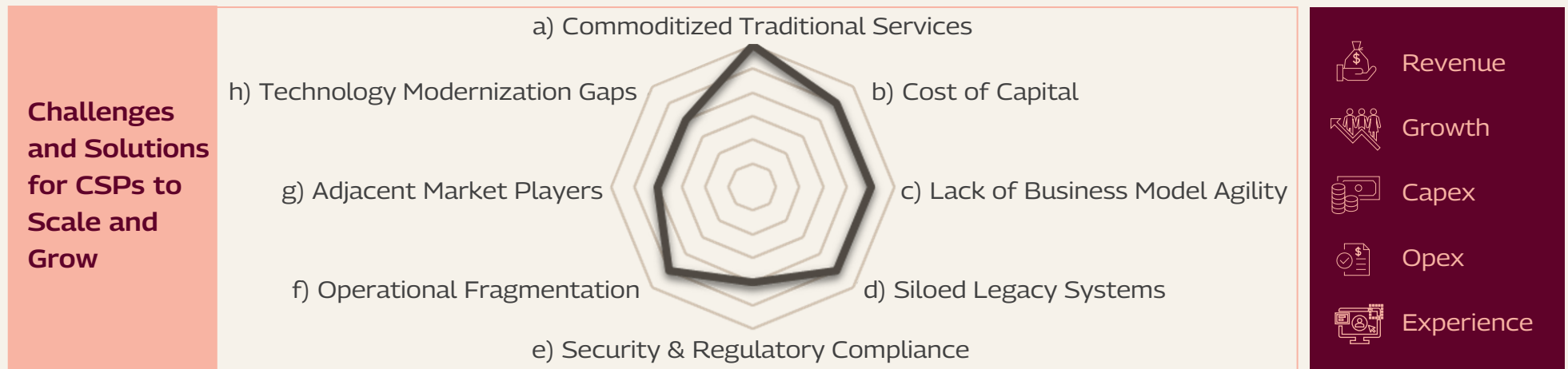
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An Outside-In Perspective



Challenges and Solutions for CSPs to Scale and Grow

CSPs are facing revenue decline from traditional services, rising network investments, and operational costs, especially with 5G, and growing expectations for hyper-personalized customer experiences. Yet emerging AI capabilities and 5G-enabled service innovations offer a sliver of hope as they unlock a spectrum of possibilities for CSPs to expand and scale beyond connectivity and drive business growth.



Challenges	Solution	Impacts
Highly competitive market and low margins for connectivity.	Portfolio shift to non-core services - IOT, Cloud, APIs etc.	 
High Investment on 5G networks, Fibre, MEC etc.	Monetizing Network Assets	 
Lack of right partnerships & inability to build solution ecosystem.	Agile business models with right partnerships	
Lack of IT & Network openness & expensive integrations.	TMF ODA aligned enterprise IT architecture.	
Impacting cross-border scale	Sovereign cloud & divestment from fragmented markets.	  
Fragmented operational structure and manual processes.	Redesign operating model and governance.	
Hyperscalers, OTTs, MVNOs etc. are disruptive threats.	Ecosystem enablement and marketplace experience.	 
Growing need for digital first self-service customer experience.	Conversational, Agentic Self Service.	 

Figure 1: Key growth challenges and transformation priorities for CSPs expanding beyond connectivity

According to a McKinsey survey, 80% of enterprise decision-makers view operators as partners in products and services, not just network providers CSPs worldwide are expanding their portfolios (vertically and horizontally) through solutions, platforms, and economic partnerships across 5G, NaaS, APIs, cloud, and emerging AI to support growth.

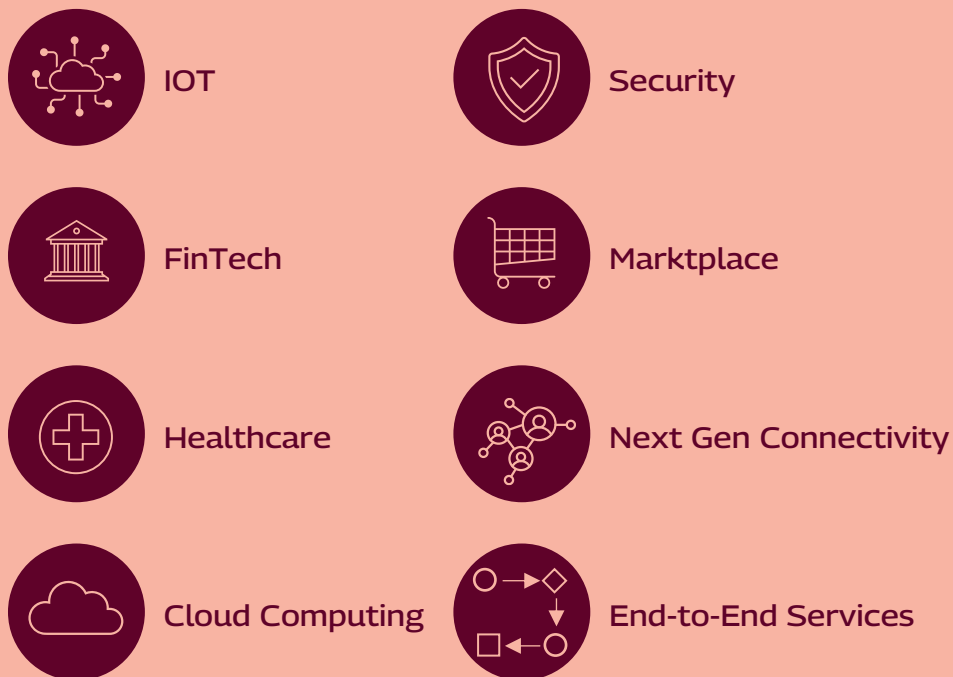
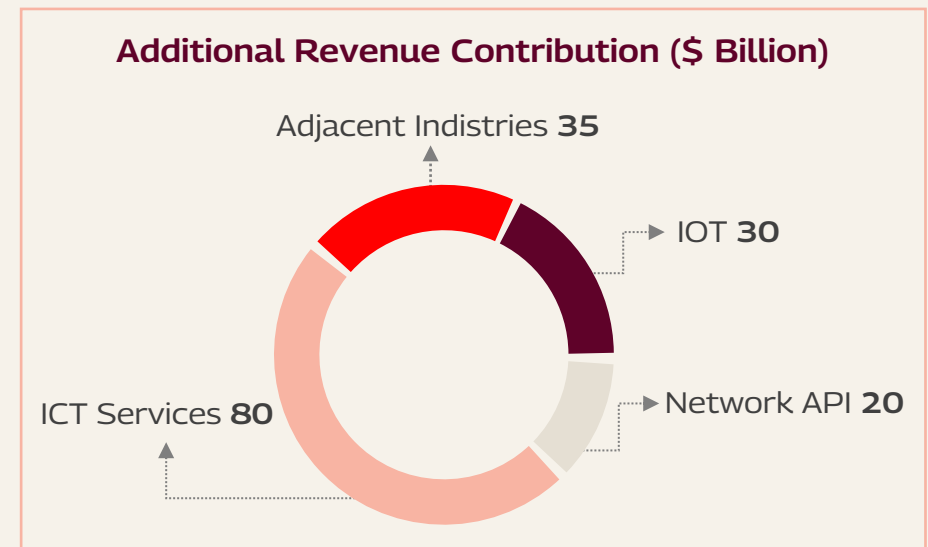


Figure 2: Digital service areas driving CSP growth

Industry forecasts indicate significant revenue potential from digital and adjacent services over the next few years. Areas such as ICT services, network APIs, IoT, and ecosystem-led offerings emerge as key drivers of CSP revenue diversification and EBITDA growth by 2028. .



\$165 Billion

CSPs are expected to unlock additionally by 2028 beyond connectivity

20-25%

Expected EBITDA for beyond connectivity services

Figure 3: Revenue Potential from Digital Services by 2028



CSP Strategies for Growth and Digital Service Enablement Platform as a Driver

CSPs across the globe are looking to grow to increase valuation, improve EBITA, and diversify revenue through digital services delivered at speed and scale.

A digital service enablement platform assists them to deliver personalized, on-demand digital experiences, while enabling new business models such as B2B2X, API marketplaces, NaaS, and MVNX platforms. Digital platforms are also being used to launch industry-specific services, expand fintech and enterprise offerings, monetize network APIs, and accelerate marketplace-led growth models. Together, these capabilities help create differentiated services, strengthen ecosystem partnerships, and support long-term business growth.



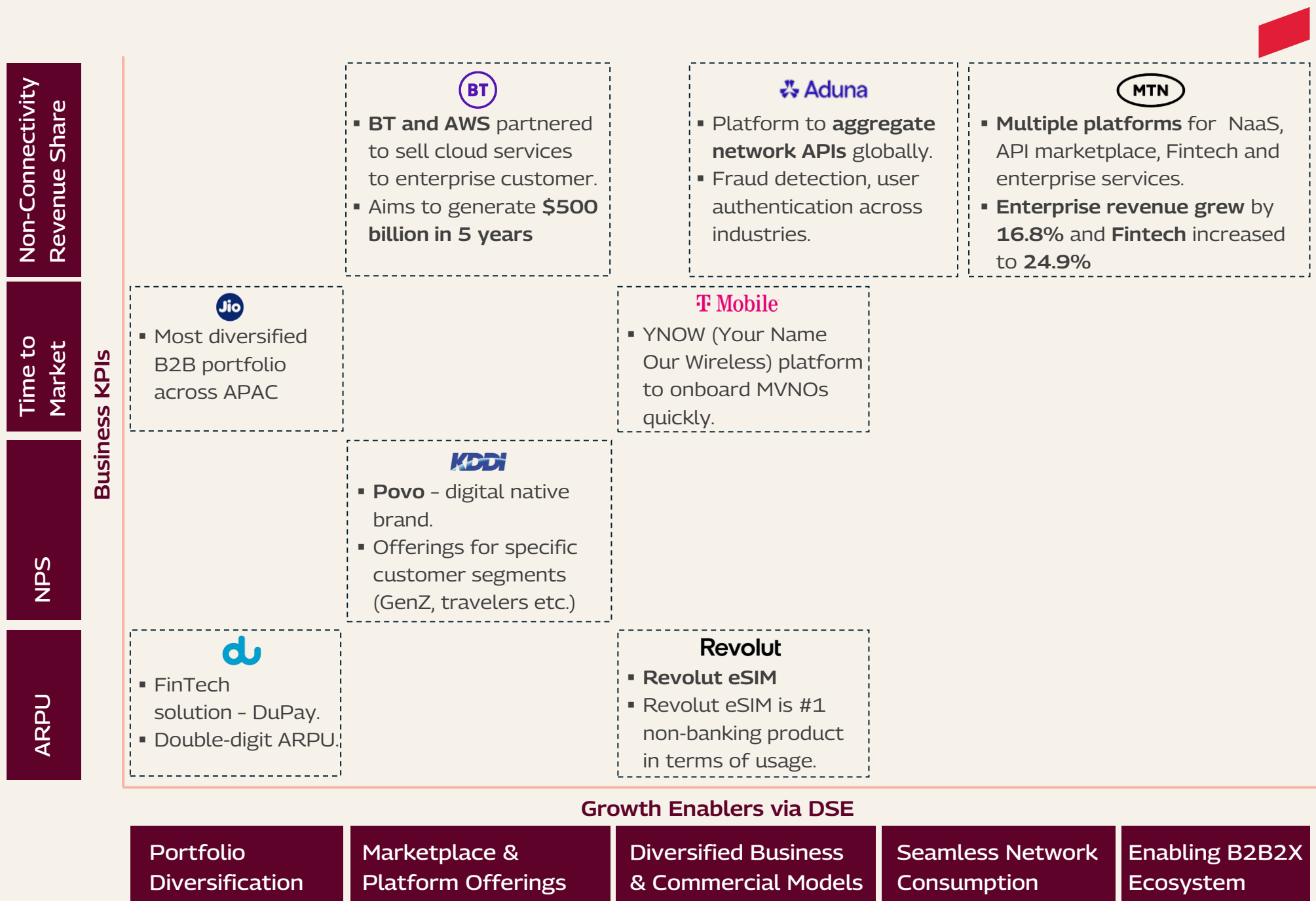


Figure 4: Demonstrates how different CSPs unlock a spectrum of possibilities with growth as a strategic business imperative

New Business and Operating Model

To unlock business potential, CSPs are reshaping their business and operating models as value shifts to ecosystem-driven services. This shift is driving them to adopt ecosystem-focused roles such as incubators, brokers, enablers, and DigiCos that can support digital offerings across ICT, cloud, thin-MVNO brands, and cross-industry solutions.

The highest growth trajectory emerges when these growth models scale into full DigiCo operations, delivering differentiated services beyond core telco offerings, a common digital service enablement platform, and a converged service portfolio.

Framework for DSE Platform



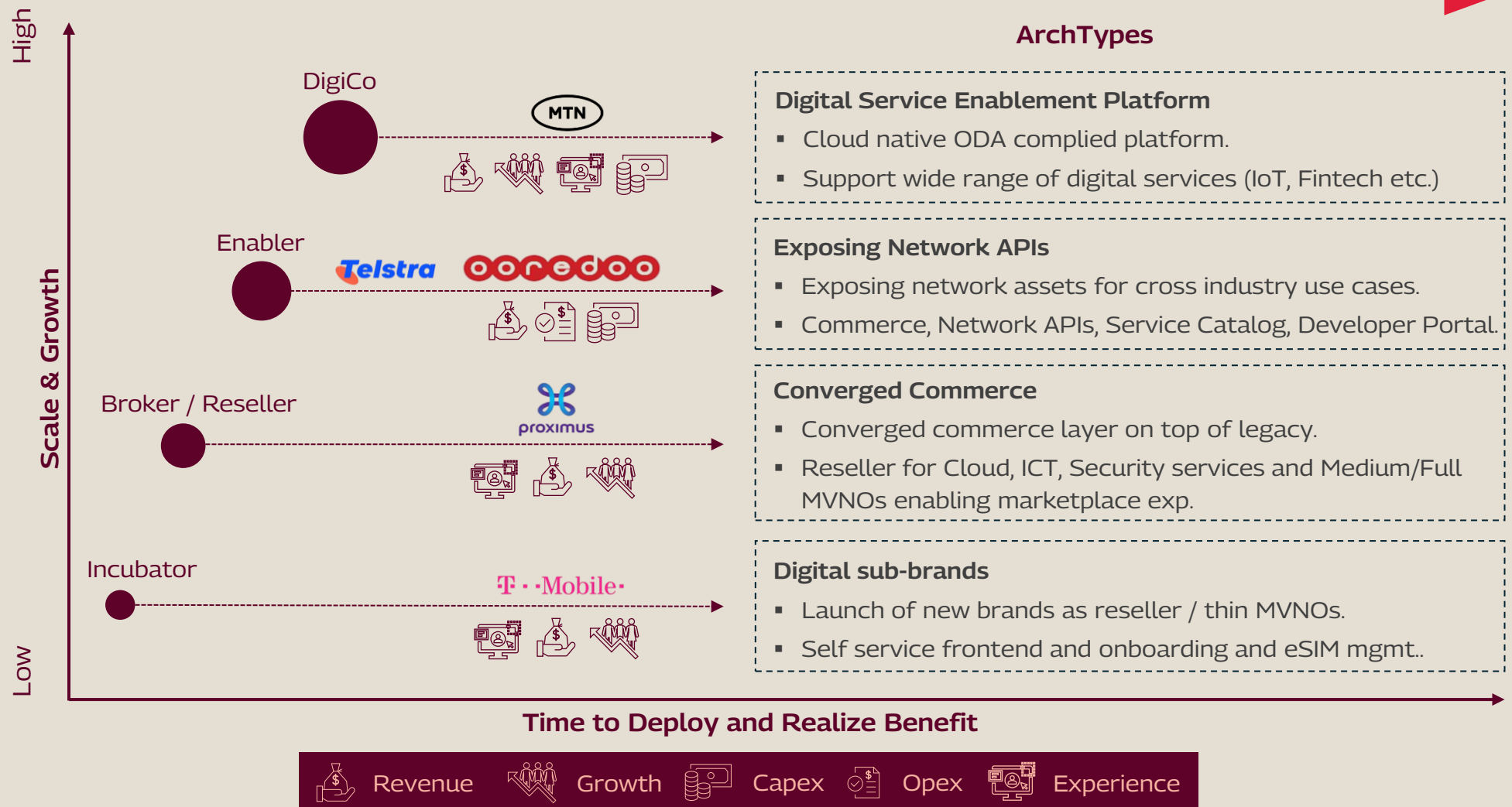


Figure 5: Growth Trajectories and Digital Service Enablement Archetypes

The operating model should be built on agility, automation, and a platform-centric approach, led by shared ecosystem partnerships. It must leverage agile cross-functional teams, automated CI/CD pipelines, and AI-driven operations with autonomous networks to accelerate digital service delivery. Building the right digital talent will remain critical to sustain this model.



Enterprise IT and Network Enablers

As part of the 'grow' pillar, in addition to the business and operating model changes, the operators can also transform Enterprise IT and enable autonomous networks with TechM's Connected Enterprise framework and ecosystem-led, AI-enabled activities.

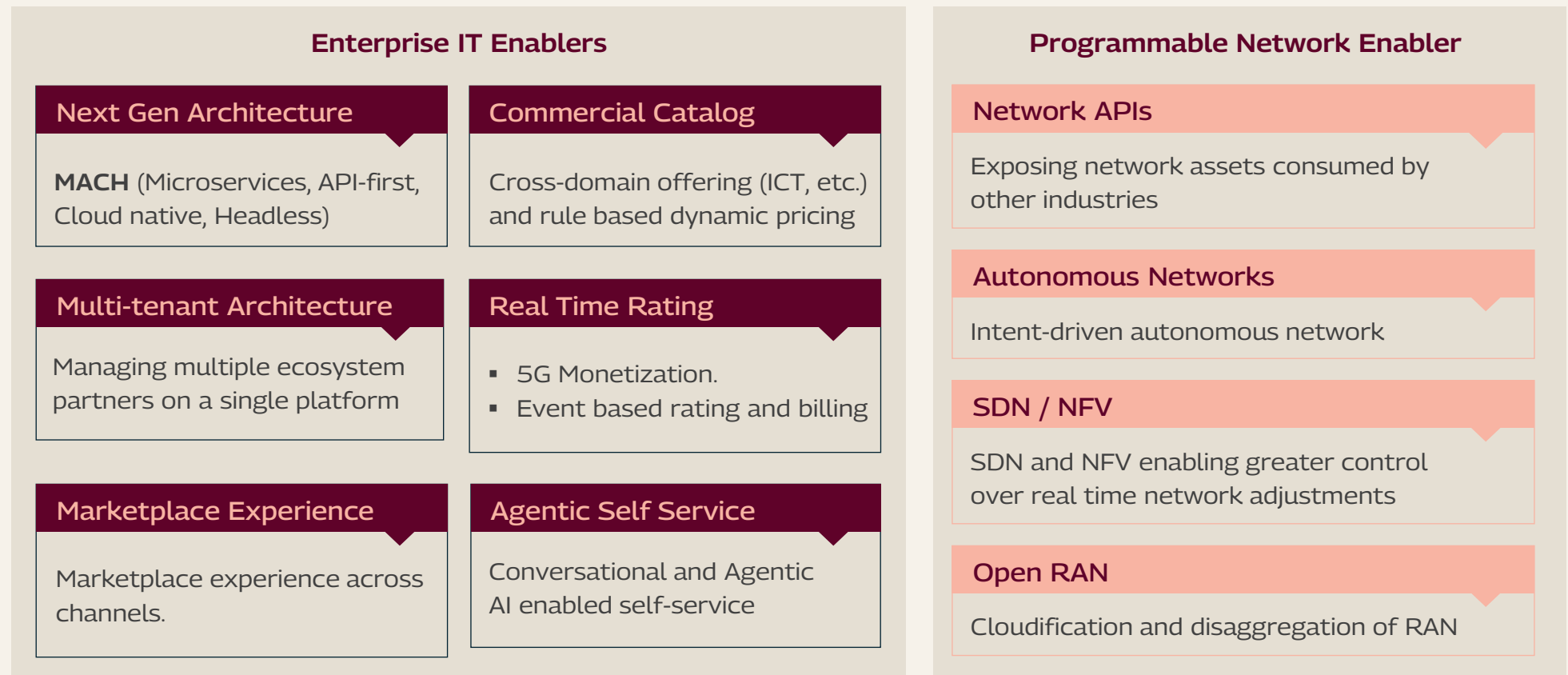


Figure 6: Key Enterprise IT and Programmable Network Enablers

Depending on the current enterprise IT landscape, maturity level, and application readiness, these capabilities can either be introduced as new components or integrated with existing deployments to support DSE requirements.



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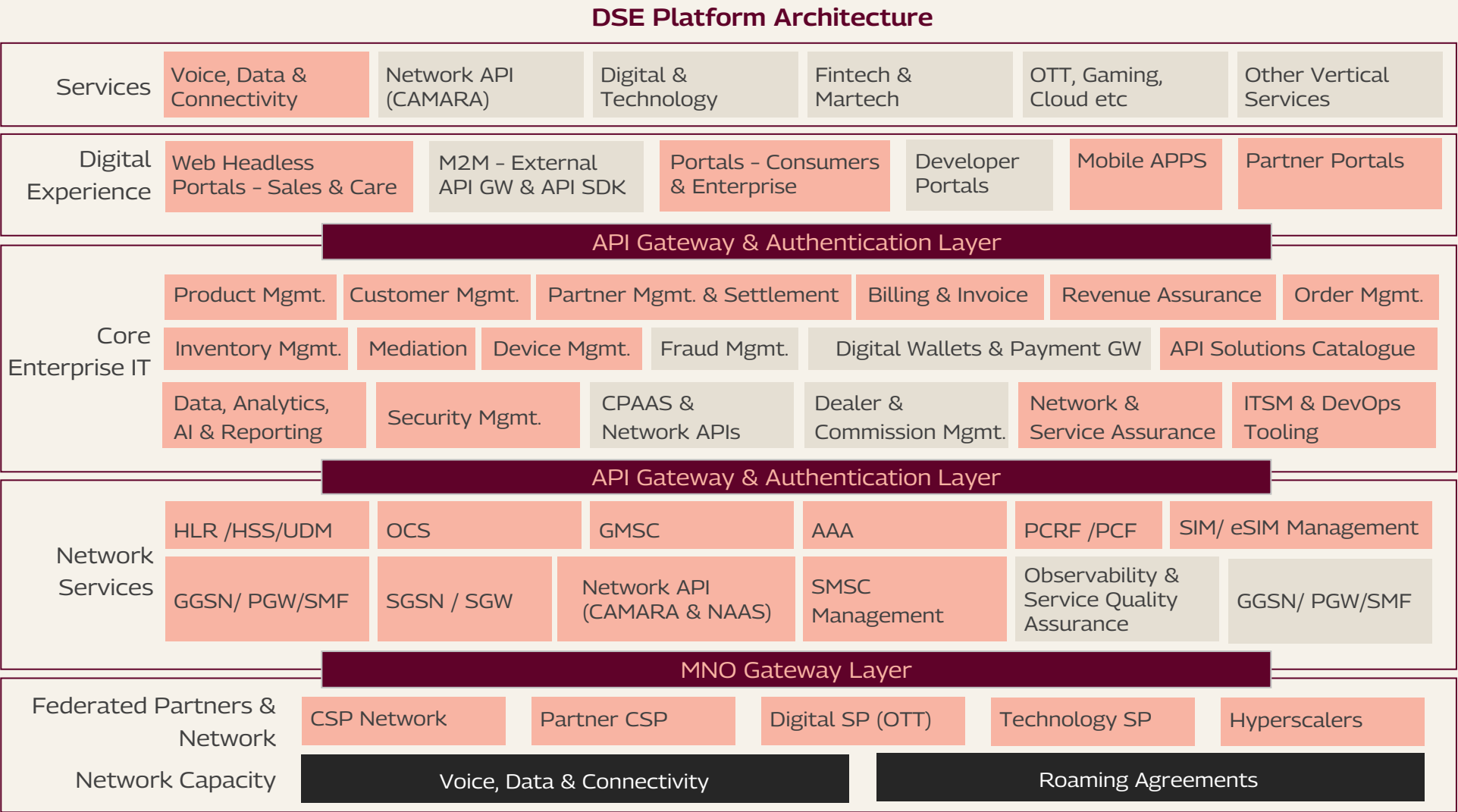


Figure 7: High-Level Architecture of the Digital Service Enablement Platform

Phase I & II Scope Phase III Scope



Key Considerations

- **Services:** Different digital services apart from traditional services that CSPs intend to add in the portfolio
- **Digital Experience:** Headless channels supporting conversational & agentic interactions for CSP and partners along with developer portal to consume network APIs.
- **OSS/BSS:** TMF ODA complied cloud native and multi-tenant OSS BSS components required to sell, activate, use and monitor these services.
- **Network Services:** Programmable network to provide differentiated connectivity and enabling 5G use cases across industries.
- **Federated Partners & Network:** Different players enabling the whole CSP ecosystem w.r.t to digital services.
- **Network Capacity:** Access network for CSP along with roaming agreements with other CSPs.
- **API Gateway and Authentication:** Enabling different components across layers to communicate via standard protocols.
- **MNO Gateway:** Entry point for MNO's network accessible via partners in the ecosystem to provide these services.
- **Agentic AI Platform:** Ecosystem integration to enable Agentic AI use cases.
- **Security:** Security compliance across the platform.

With different enterprise IT architecture patterns across CSPs, TechM's Connected Enterprise framework recommends transformation paths based on IT maturity, technology landscape, AI adoption, and automation readiness to support the digital service enablement journey.

#	Current Enterprise IT State	IT Architecture Path
1	Legacy stack with non-standard APIs and fragmented processes	Legacy applications and functions abstracted using converged overlay, unified engagement, and API enablement layer
2	Multiple technology stack across business services, mergers, etc.	Introduce unified digital channels and commerce layer in Phase 1 and gradually consolidate multiple technology stack to single strategic stack
3	Lack of support for new services – converged bundles, digital offers.	Introduce new converged catalogue (either as part of the commerce layer or as BFF microservices to enable converged bundle, digital offerings inc. partner products
4	Lack of AI, automation and self-service customer and user journeys	Leverage Agentic AI platform, autonomous operations and API-enabled self-service experiences to unlock conversational and on-demand customer services

Figure 8: Enterprise IT Transformation Paths for Digital Service Enablement



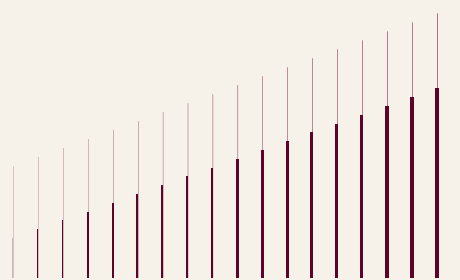
Together, Tech Mahindra, CSPs, and technology partners can create the global DSE platform that supports the expansion of digital brands and service offerings across markets, optimized spectrum investments, and stronger digital monetization opportunities. Below is a three-year phased approach, in addition to Phase 0 (0-8 weeks) focused on planning and design.



Figure 9: Phased Roadmap for Scaling Digital Service Enablement

Tech Mahindra leverages its Connected Enterprise framework, ecosystem play with AI@Core, and global market systems integration (SI) experience across industries to help CSPs align with their strategic initiatives and unlock growth trajectory with the digital service enablement platform blueprint and related accelerators.

From Vision to Value with Tech Mahindra



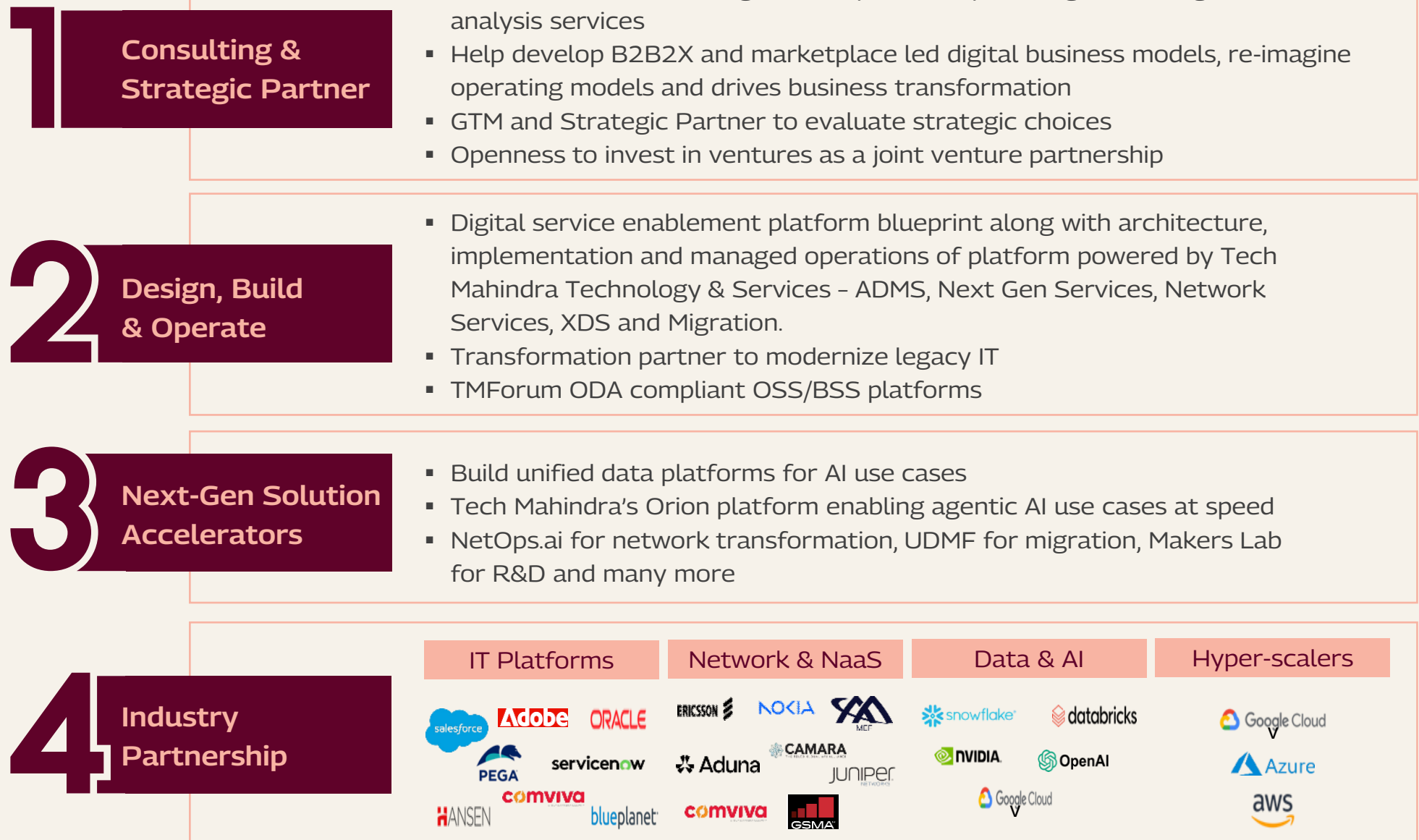


Figure 9: Phased Roadmap for Scaling Digital Service Enablement



Today, communications technology goes beyond devices. It connects people, platforms, and possibilities. Every connection, every wavelength, and frequency represents an opportunity to create meaningful impact and unlock a spectrum of possibilities. Digital service enablement platform powers telcos to unlock business spectrum using the 'grow' pillar solution through Connected Enterprise Framework and Ecosystem Play with AI@Core offering solutions to scale enterprise offerings, build B2B2X models, monetize platforms and APIs, create cloud, edge, and AI-driven services, and accelerate diversification into vertical-specific solutions.

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About the Author

Rajat Gupta is an enterprise architect at Tech Mahindra with over two decades of experience spanning strategy, transformation, and solution consulting for telecom operators. At Tech Mahindra, he leads Telecom B2B2X solutions & global initiatives that drive customer success, unlock new revenue streams, enable AI-led digital transformation, and strengthen strategic partnerships & joint Go-to-market initiatives with telcos and partners.



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About Tech Mahindra

Tech Mahindra (NSE: TECHM) offers technology consulting and digital solutions to global enterprises across industries, enabling transformative scale at unparalleled speed. With 147,000+ professionals across 90+ countries helping 1100+ clients, Tech Mahindra provides a full spectrum of services including consulting, information technology, enterprise applications, business process services, engineering services, network services, customer experience & design, AI & analytics, and cloud & infrastructure services. It is the first Indian company in the world to have been awarded the Sustainable Markets Initiative's Terra Carta Seal, which recognizes global companies that are actively leading the charge to create a climate and nature-positive future. Tech Mahindra is part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies. For more information on how TechM can partner with you to meet your Scale at Speed™ imperatives, please visit <https://www.techmahindra.com/>.

*Figures as per Q4, FY 26.



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