TATA COMMUNICATIONS

TATA

THE HIGH COST OF STANDING STILL

Why Network Modernisation Is Critical for Enterprise Success?

CONTENTS

1. EXECUTIVE SUMMARY

In a world of AI-driven workloads, hybrid workforces, real-time transactions, and distributed edge systems, legacy networks are no longer fit for purpose. Enterprises today demand a programmable, secure, and resilient Network Fabric that acts not merely as a utility—but as a business enabler.

This whitepaper explores why delaying network modernisation is no longer an option. Legacy networks are increasingly a liability—causing poor user experiences, operational inefficiencies, innovation bottlenecks, and security vulnerabilities. As data volumes explode—from 120 ZB in 2023 to an expected 180 ZB by 2025—and cloud, AI workload, SaaS, and edge adoption grow, enterprises must address the widening gap between digital ambition and network capability.

Think of your network like the road system of your business. Legacy networks are similar to old, single-lane roads riddled with potholes—causing traffic jams, delays, and breakdowns as digital demands surge. Modern enterprises need an intelligent expressway system—capable of rerouting, scaling on demand, and adapting in real time. Without a modern network foundation, businesses can lag behind their competitors in the race towards digital success.

Despite the urgency, many enterprises hesitate—viewing the network as too critical to touch, too complex to transform, or merely a cost centre. But this inertia has a cost: degraded productivity, lost revenue, security exposure, and competitive stagnation.

This paper outlines a clear business case for change, supported by real-world examples and a pragmatic roadmap. It shows how modern, intent-driven networks can:

Boost user experience through app-aware routing, edge intelligence, and real-time optimisation

Accelerate innovation by **43%** through scalable bandwidth, AI-ready infrastructure, and cloud interconnects

Lower total cost of ownership by **25-30%** replacing rigid MPLS with SD-WAN and cloud-native connectivity

Strengthen security via Zero Trust, microsegmentation, and SASE integration

Backed by global leadership and proven successful deployments across hundreds of global enterprises, Tata Communications offers a low-risk, high-impact transformation path—combining technical expertise, deep industry understanding, and advanced capabilities to deliver a network foundation that is not only scalable, programmable, and secure, but tailored to your enterprise goals.

The message is clear: standing still is the most expensive strategy of all. Now is the time to build a network that's engineered for what's next—resilient, intelligent, and aligned to your digital-first future.

2. INTRODUCTION

"You can't just widen old roads, give them a shiny top and new signboards and call yourself future-ready," said a city planner. "Today's roads must be built for a different era—where volume, variety, and traffic velocity all demand attention."

Modern roads must be **wider**, yes—but also **smarter** and **more adaptable**. They need:

- **Multiple lane types** to accommodate everything from bicycles and electric scooters to freight trucks and autonomous vehicles.
- **Underpasses, flyovers, and bridges** to overcome geographical constraints and ease congestion choke points.
- **Real-time incident detection and rapid response systems** to prevent minor hiccups from becoming major traffic bottlenecks.
- **Dedicated freight corridors, HOV lanes, and emergency pathways** that separate mission-critical movement from general flow.
- **Programmable traffic patterns and dynamic signage** that respond to weather, traffic, and emergencies in real time.

Modern highways require intelligent, responsive, and resilient infrastructure. It's not about adding concrete—it's about **engineering intelligence into the road itself.**

Information highways: purpose-built networks for seamless digital logistics

This analogy mirrors the challenges faced by CIOs and digital infrastructure leaders today.

Legacy networks were designed for a centralised, predictable world—but today's enterprise mirrors a **hyperconnected city**—with **human-to-human, human-to-machine**, and **machine-to-machine** communication happening simultaneously across cloud, edge, and everywhere in between. Digital workloads like real-time transactions, seasonal traffic spikes, edge data flows, digital twins, cyber threats, and AI analytics demand a new kind of Network Fabric to stay competitive and resilient.

Just as modern roads must be **wide and purpose-built**, today's Network Fabric must support massive **concurrency, high throughput, and diverse traffic types**, from low-latency control signals to large data transfers. Where cities design **multiple lane types for different vehicles,** networks must enable **traffic segmentation and differentiated QoS** to accommodate diverse traffic—voice, video, IoT, and business-critical apps.

Just as **cities build flyovers and tunnels,** networks need overlays, direct cloud paths, and edge aggregation to cut through digital traffic bottlenecks.

Smart highways have **incident detection systems,** and networks require **real-time observability, auto-remediation, and AI-driven anomaly detection** to ensure service continuity, amidst threats, failures, or peak loads.

And smart cities prepare **for autonomous lanes and sensor-embedded roads,** enterprises need **low-latency, programmable infrastructure with edge intelligence** to support robotics, AI, remote operations, and real-time data-intensive workloads.

The Network Fabric should be:

- **Context-aware:** It understands the workload type and routes it accordingly
- **Persona-driven:** It differentiates between users, devices, and applications based on purpose
- **Resilient and programmable:** It can dynamically reconfigure routes, apply new policies, or recover from failure in real time
- **Secure by design:** It ensures zero-trust access, encrypted data paths, real-time threat detection and response, and end-to-end visibility and compliance at every layer of the fabric

Whether it's a bank processing real-time transactions across branches and cloud, factory floor streaming data from robots, a remote employee accessing cloud apps, or a hospital enabling remote diagnostics and AI-assisted imaging—this digital ecosystem needs more than bandwidth, an intelligent network infrastructure—a Network Fabric engineered with purpose, not patched on demand.

3. THE COST OF INACTION

20-25%
operational inefficiency is introduced due to the legacy network

50%
reduction in application times is observed across banks that are supported by agile, high-performance networks

21%
increase in operational efficiency experienced by connected factories using a scalable and secure network, as per Cisco

25-30%
reduction in total network operations costs observed for modernised software-defined networks (depending on the magnitude and complexity of the network)

43%
increase in business and IT innovation reported by enterprises that deployed modern networks, as per a Cisco report

20+
billion digital assets could be exposed to "harvest-now, decrypt-later" attacks by 2030, as per a McKinsey report

Millions **of dollars in losses** were reported due to cyber breaches caused by an outdated legacy network

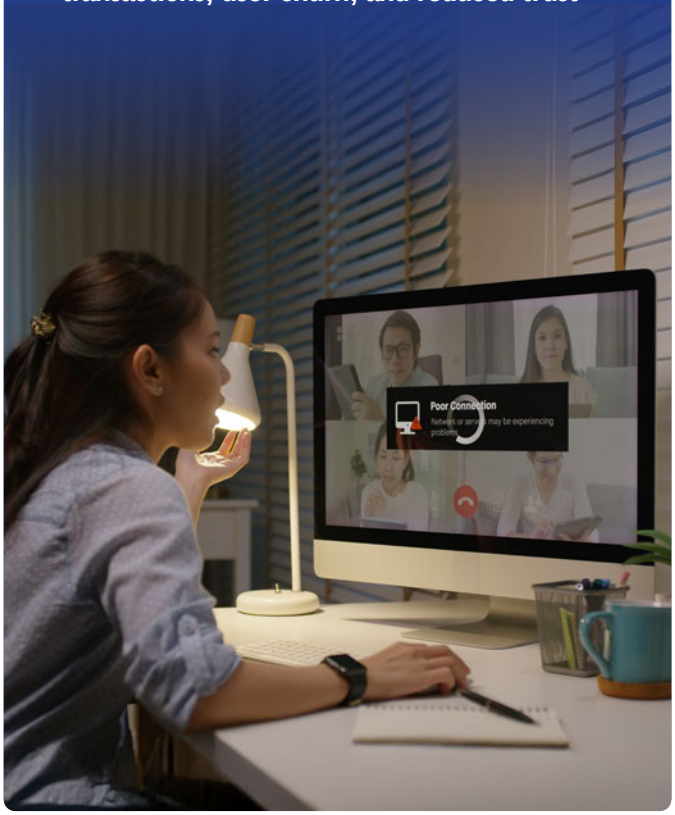
While some organisations are actively building a purpose-built network, many continue to operate on legacy foundations that were never designed for today's scale or complexity. This isn't just a technology gap—it's a business risk. The longer enterprises delay modernisation, the more they expose themselves to a widening chasm of inefficiency, vulnerability, and lost opportunity.

Delaying network modernisation can result in:

A.Poor user experience

In today's enterprises, access to applications is federated and requires a fabric-based overhaul to provide a consistent user experience anytime and anywhere across all platforms. With SaaS, PaaS, IoT, and edge adoption accelerating, data volumes are exploding—from 120 ZB in 2023 to an expected **180 ZB by 2025** and 1000 ZB by early 2030s. Without scalable, real-time network adaptability, latency spikes, access lags, and service disruptions follow, eroding user confidence and trust.

- **Legacy networks can't handle cloud, SaaS, and edge workloads—causing lags and app failures**
- **High latency and poor coverage lead to session drops, slow dashboards, and frustrated users**
- **Flat LANs and poor segmentation affect mobility, access, and real-time visibility**
- **Unreliable network leads to abandoned transactions, user churn, and reduced trust**



a. For modern banks, delivering seamless digital experiences—across mobile apps, eKYC, video consultations, ATMs, and payment gateways—depends on a stable, high-bandwidth network. Legacy networks cause slow app performance, failed transactions, and onboarding delays, leading to poor customer experience, reputational damage, and increased customer churn

b. In manufacturing, factory operators face delayed dashboards and visibility gaps as the network fails to handle high-throughput IIoT, video, and control signal concurrency

c. For a hospital, clinicians wait for diagnostic scans to load, telehealth sessions stutter, and handheld devices disconnect due to an unsegmented LAN and poor wireless coverage.

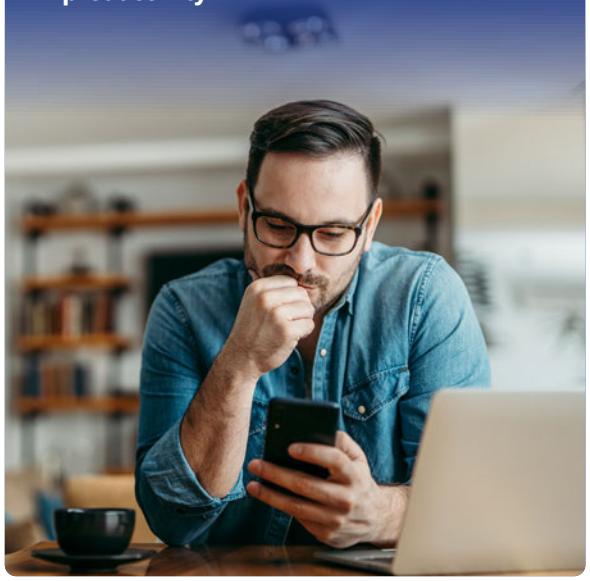
i. Doctors and nurses use clinical tabs to update patient health and make informed decisions with the flexibility to move within the facility. Traditional LAN-based networks cannot support these use cases that impact their experience

d. For a retailer/e-commerce, network lag can force customers to abandon carts as PoS terminals hang or mobile and web apps show outdated stock, leading to a poor experience and churn. Product dispatchers face dashboard delays, and customers get inaccurate delivery timelines due to poor edge connectivity and fragmented cloud sync

B.Operational and cost inefficiencies

Legacy networks were designed for static, office-based setups—not today's hybrid, cloud-driven environments. Without modernisation, enterprises struggle with app slowness, traffic drops, latency, and scalability limits—impacting productivity, employee experience, and bottom-line costs. As per some of our customer conversations, it is observed that legacy networks can introduce operational inefficiencies of about **20%-25%,** driven by bandwidth wastage, underutilised infrastructure, and manual troubleshooting. Every failed **transaction,** lagging **application,** or hour of **downtime** impacts **revenue and brand trust.** Let's look at industry-specific examples:

- **Static, non-scalable networks can't adapt to peak loads or dynamic operations.**
- **Downtime, failed submissions, and application delays increase operational costs.**
- **Legacy infrastructure limits automation, increases troubleshooting time, and stalls workflows.**
- **High bandwidth wastage and inefficient routing lead to higher TCO and lower productivity.**



a. A global bank faces delays in processing real-time transactions and difficulty accessing core applications. Legacy LAN lacks segmentation and flexibility, making it unfit for modern workloads like **KYC, self-kiosk, and digital signage**

Faster GTM for branch rollouts, demand a more agile, software-defined approach to lower the cost of operations

Seasonal business surges require the bank network to be elastic and secure, connecting various data centres and hyperscalers

Digital banking growth needs intelligent, application-aware core networks to ensure business continuity and revenue scale

For stock trading, legacy networks cause latency and slow throughput— impacting performance and increasing operational cost

Modern banks require agile, high-performance networks to support digital services, rapid rollouts, and trading workloads—unlocking a **50% reduction in application response** times[2] and increase in available bandwidth 5X[3].

b. A smart manufacturing is a digitally enabled factory that requires multiple integrations of machine-to-machine and human-to-machine communication, along with integrations across edge systems and factory software. Without a modern network backbone, critical Industry 4.0 use cases across shop floors and warehouses become unreliable and inefficient.

An outdated LAN is unequipped to handle real-time data from IIoT sensors, and robotic control

As core manufacturing applications move towards cloud and edge, legacy WANs can't prioritise critical data over bulk sync jobs, causing performance delays

On the floor, industrial wifi struggles with interference, interrupting handheld diagnostics and being unable to support mission-critical factory operations

For data residing in hyperscalers and private data centres, manufacturers need a hybrid network path connecting factories, R&D labs, offices, and cloud systems—something legacy networks fail to provide, leading to silos and inefficiencies

To **support modern** industry 4.0 use cases, manufacturers need **a stable, secure, and persona-driven network** across both IT and OT. **A modernised network** boosts shopfloor flexibility, enables next-gen technologies, and accelerates productivity. According to Cisco, connected factories using a scalable and secure network experience a 21% increase in operational efficiency[4].

c. A hospital chain experiences sluggish access to cloud-hosted diagnostic scans and frequent operational disruptions.

Flat LAN architecture allows no isolation between medical imaging, patient monitoring, and admin systems

Wifi dead zones impact mobile carts and bedside care devices

Centralised WAN routes add latency to time-sensitive clinical data

Weak multi-cloud connectivity impacts PACS and AI performance

Portable medical devices now depend on a stable LAN, which legacy networks can't ensure

As hospitals digitise, modern, secure networks are essential to enable faster diagnoses, uninterrupted critical care, and seamless access to records—enhancing clinician productivity and patient outcomes.

d. A **nationwide retail chain sees PoS** failures during flash sales. Legacy LAN fails to segment video, digital signage, billing, and CRM traffic, causing local congestion. WAN backhauling adds latency during high-volume promotions, impacting ordering, inventory management, and overall operational inefficiency.

Network delays in retail stores slow down customer onboarding processes, or in-store sign-ups, by causing lag in cloud access, failed submissions, or unstable kiosk performance

Wifi instability disrupts staff devices, causing delays in checkout and restocking, and they lose productivity in troubleshooting

LAN/wifi handoffs cause loading carts to stall mid-task infrastructure in warehouses, with traditional networks unable to support workloads. WAN limitations affect real-time fleet updates and visibility across the supply chain. Multi-cloud orchestration across WMS, ERP, and analytics slows down dashboard visibility for dispatch teams

Retailers must provide smart retail services, ensure faster rollout of stores while optimising operations cost, and achieve higher uptime to help in consistent revenue generation. According to research by the CUBE and ZK Research, 89% retail organisations believe that the network plays an important role in achieving their business objectives[5].

It has been observed that modernised, software-defined networks can reduce total network operations costs by **25-30%** (depending on the magnitude and complexity of the network), by improving bandwidth efficiency, enabling automation, and minimising outages and troubleshooting time.

C.Innovation bottlenecks

Outdated network infrastructure doesn't just slow things down—it **blocks progress**. As per a Cisco report on networking trends, enterprises that deploy modern networks **report a 43% increase** in business and IT innovation[6]. Legacy networks lack the flexibility and high-bandwidth scalability for modern data centre (DC) to hyperscaler connectivity. In a hyperconnected world, AI, automation, and real-time insights are foundational to transformation, and they require low-latency, high-throughput links that legacy MPLS or WAN setups and fragmented multi-cloud connectivity (MCC) simply can't deliver. To support innovation and realise the full potential of their digital initiatives, organisations need direct cloud interconnects, multi-cloud connect, programmable SD-WAN, and elastic bandwidth—enabling seamless data movement between DCs, cloud, and edge at scale.

- **Outdated networks lack agility for AI, multi-cloud, and edge-based innovations.**
- **Poor interconnectivity hampers real-time insights, automation, and collaboration.**
- **Bandwidth and latency constraints delay rollout of new digital services.**
- **Legacy WAN/MPLS setups block integration across DCs, clouds, and edge environments.**

In banking, open banking APIs, real-time fraud detection, and digital onboarding are hampered by flat LANs, legacy WANs lacking traffic awareness, and poor integration with multi-cloud fintech partners

In sectors like **manufacturing, energy,** and agriculture, organisations can't deploy AI at the edge without localised, high-speed network infrastructure, stalling use cases like predictive maintenance or smart grid automation. Legacy WANs cause synchronisation lags, limiting collaborative design, simulation, and real-time decision-making in pharma, tech, and R&D teams across geographies

In a **hospital,** the network struggles to scale innovations like AI diagnostics and robotic surgery due to outdated network infrastructure. Large imaging files lag during upload, teleconsultations drop mid-session, and bedside monitoring devices frequently lose connection. Flat LAN design limits isolation between clinical and administrative systems, creating security risks and delays

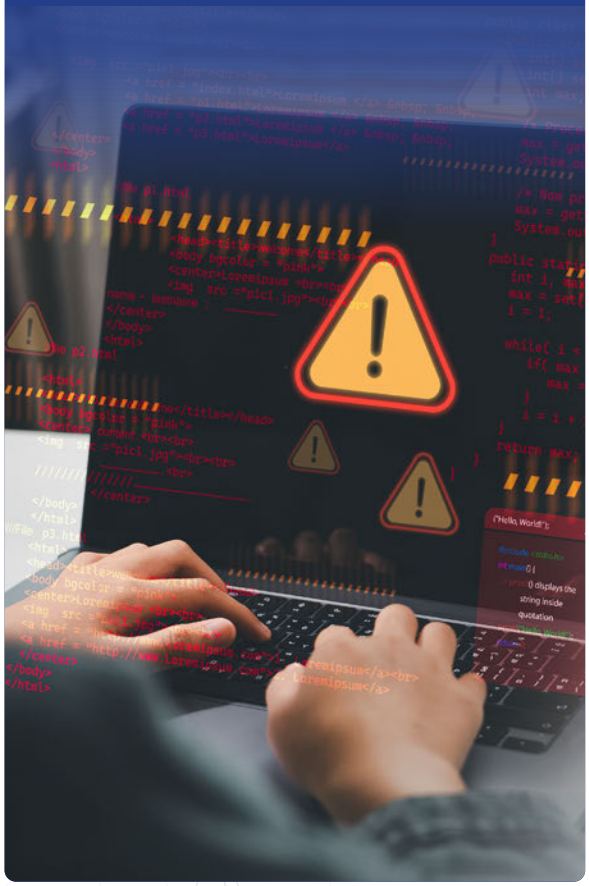
In **retail,** AI-driven personalisation, real-time inventory sync, and omnichannel innovations are disrupted by overloaded PoS networks, poor in-store wifi, and disconnected e-commerce cloud systems. Traditional networks are unable to support simultaneous AGV and drone movement and robotic scanning workloads

D.Security vulnerabilities

Legacy networks lack robust protection for distributed environments. The rise of edge computing, BYOD, and hybrid work exposes security vulnerabilities.

The rise of **quantum computing** poses a future risk to traditional encryption standards like RSA and ECC. According to **McKinsey,** by 2030, **20+ billion digital assets** could be exposed to "harvest-now, decrypt-later" attacks. Legacy networks and VPNs using outdated cryptographic protocols will be vulnerable to quantum decryption.

- **Legacy networks lack zero-trust, segmentation, and dynamic threat detection—making them easy targets.**
- **Outdated encryption protocols are vulnerable to future quantum-based attacks.**
- **VPNs and flat LANs expose gaps in access control and incident isolation.**
- **Poor segmentation and patching increase the risk of ransomware, breaches, and downtime.**



A bank suffered a major cloud breach in 2019, which exploited a misconfigured firewall, exposing **106 million** customer records. This highlighted how multi-cloud environments built without zero-trust principles or intelligent perimeter control expose financial institutions to devastating data loss

A global automotive company, suffered a targeted malware attack in 2020 that shut down its internal networks and **halted production across 11 factories,** affecting global operations and costing over **$100 million in lost output and recovery.** The breach, traced to compromised internal LAN systems and outdated segmentation protocols

A **US-based** hospital network suffered a ransomware attack in 2021 after attackers infiltrated through an unpatched legacy VPN system. The breach: Took down patient monitoring systems, caused delays in surgeries and diagnostics, and led to the **theft of over 1 million patient records**

A cyberattack on a major retailer disrupted online customer payments and delayed supply chain data, costing millions in lost revenue. Initially identified as an IT system vulnerability, the root cause was poor network segmentation and a lack of incident isolation

In today's digital world, legacy networks slow businesses down. As enterprises shift to AI-driven, cloud-first, hyperconnected operating models, the network becomes a foundation for innovation, speed, customer experience, and security—not just a commodity. Yet many still see it as a cost, not a strategic asset. A modern network must be tailored, not off-the-shelf, and aligned to specific business needs.

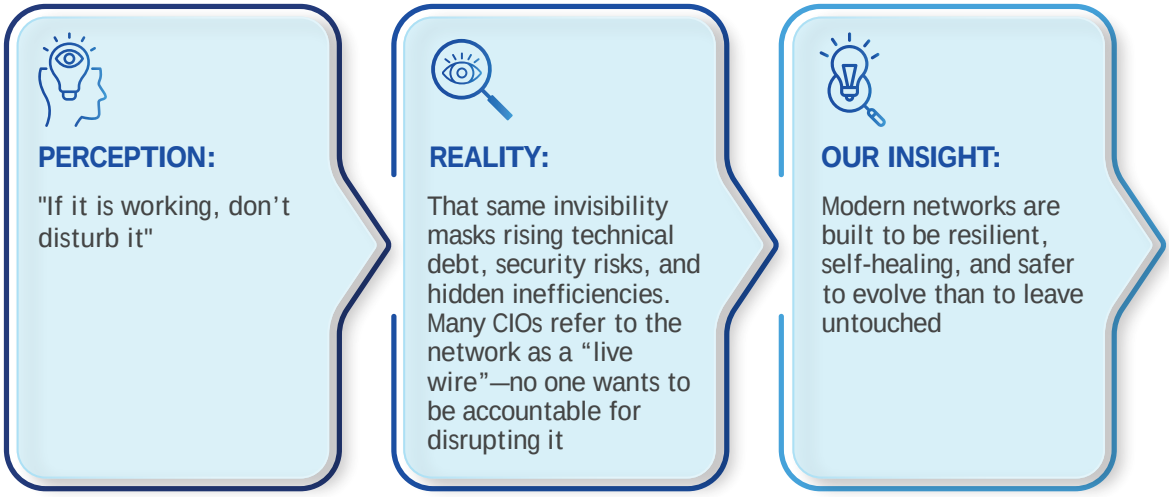
4. WHY DO ENTERPRISES DELAY? UNDERSTANDING THE BARRIERS TO NETWORK MODERNISATION

Despite clear evidence of inefficiency, poor user experience, innovation bottlenecks, and rising risk, many enterprises continue to operate on outdated network infrastructures. The hesitation doesn't always stem from ignorance—it often stems from deeply embedded perceptions and structural barriers that prevent decision-makers from acting.

Here are the four core reasons behind this inertia:

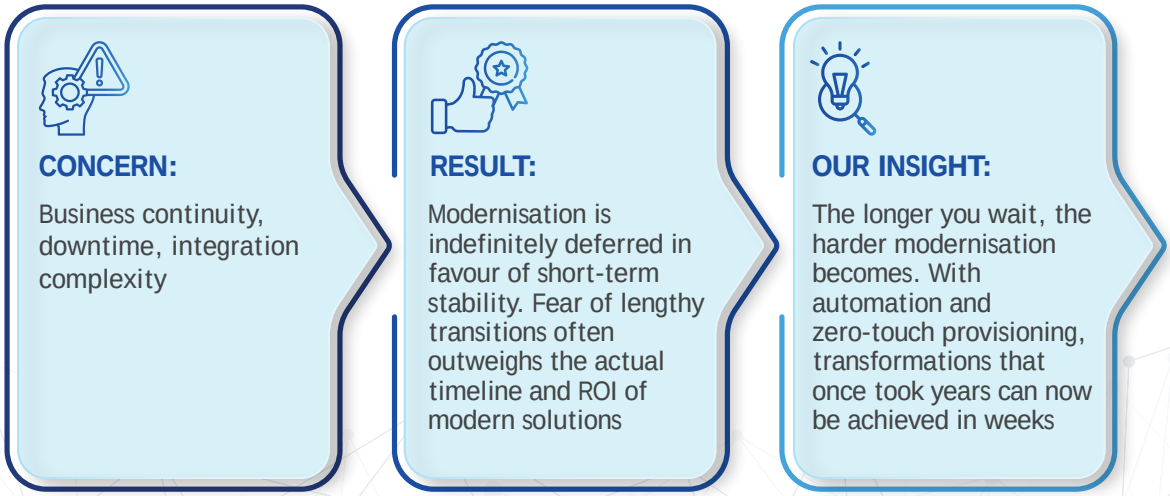
1. "It's too critical to touch"

The network is seen as the invisible backbone of the enterprise. It powers everything—applications, security, collaboration, customer touchpoints, and operations. That very importance makes it feel "untouchable."



2. "Modernisation will take too long"

Network transformation is often perceived as a drawn-out, resource-intensive, and high-risk endeavour—especially in large, distributed enterprises.



3. "Global uniformity is not required"

In multinational or regionally distributed enterprises, there's often a belief that localised networks sourced regionally can be more cost-efficient.

PERCEPTION:

"Let each region manage its own setup"

REALITY:

Fragmented procurement leads to inconsistent performance, variable security posture, and reduced enterprise agility. Without global visibility and control, hybrid work, cloud performance, and regulatory compliance suffer

OUR INSIGHT:

Localised networks may appear cheaper, but fragmentation drives hidden costs. Global uniformity reduces spending, simplifies governance, and strengthens compliance across borders

4. "It is a cost centre, not a value driver"

Traditional thinking sees the network as infrastructure—something to maintain and minimise spending on, rather than a platform for growth.

BARRIER:

Budgets are allocated for customer-facing innovations, not the underlying pipes.

CONSEQUENCE:

The network becomes the weakest link in the digital strategy.

OUR INSIGHT:

CIOs are now reframing the network as a business enabler—not just a utility. Networks don't just carry data—they shape experiences. Modern networks now directly drive revenue, resilience, and innovation.

5. THE BUSINESS CASE FOR NETWORK MODERNISATION

The cost of inaction is no longer theoretical—it's a lived reality across enterprises. Traditional networks are showing their age, from rising downtime costs and missed SLAs to degraded user experiences and heightened security risk. Enterprises poised for growth must embrace modern network architectures to meet evolving demands, break free from these constraints and move towards proactive transformation. Network modernisation is not just an IT initiative—it is a business imperative enabling scale, agility, and resilience in constant change. Four imperatives now drive this shift:

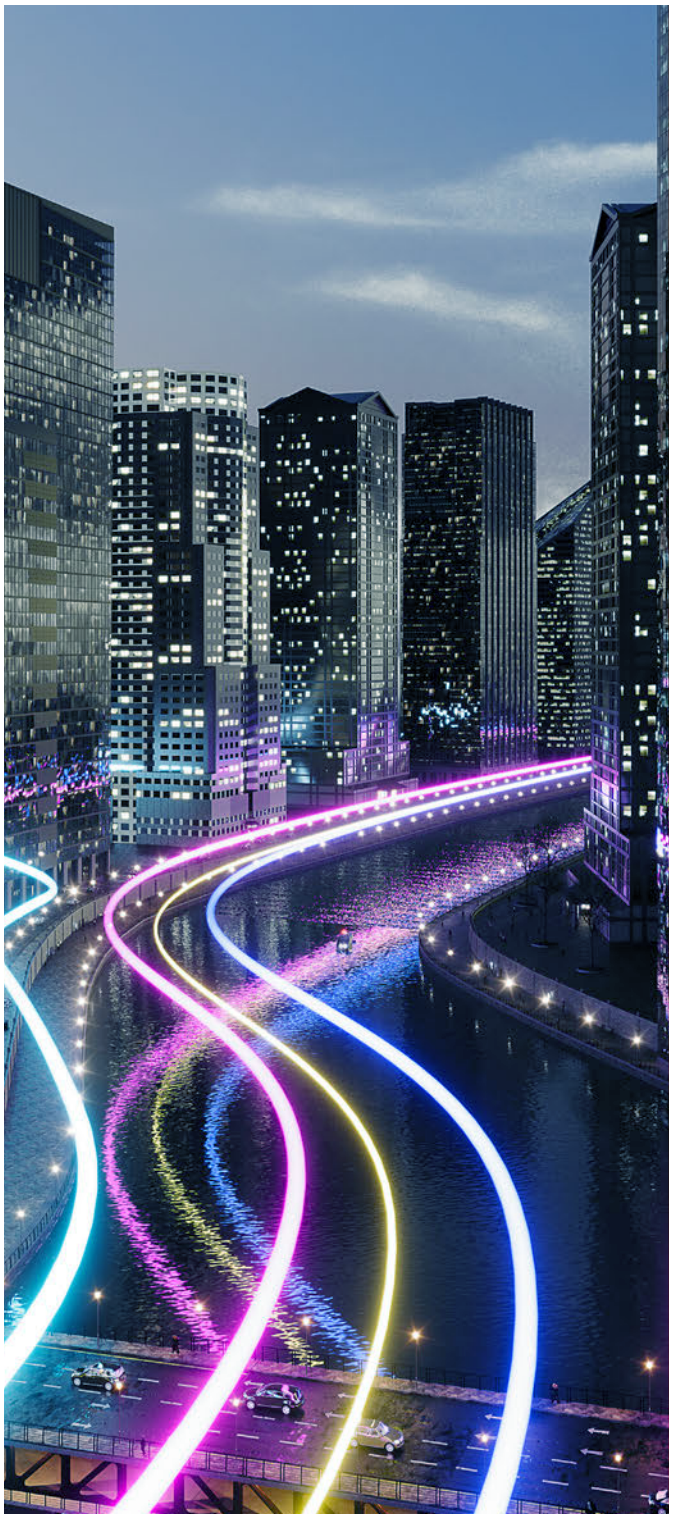
Cloud and SaaS-first operations: Multi-cloud and SaaS tools demand always-on, high-performance access. Enterprises require resilient, app-aware routing and high availability across geographies

Remote work enablement: With remote and hybrid work being the new normal, distributed teams need high-performing WANs for seamless collaboration, video conferencing, and access to critical applications

AI and automation: AI workloads generate and consume massive volumes of data, often in real-time. Applications like fraud detection, predictive maintenance, and process automation demand ultra-low latency and high throughput

Business continuity and resilience: Modern networks with automated failover, real-time analytics, predictive health monitoring and self-healing reduce downtime. Intelligent routing ensures uninterrupted service during peak loads or outages

Modernisation is not a rip-and-replace strategy — it is a phased evolution aligned with digital priorities, leveraging technologies like SD-WAN, SASE, Zero Trust, quantum-proof networks, and next-gen smart LANs.



6. REIMAGINING CONNECTIVITY: THE RISE OF THE DIGITAL-FIRST ENTERPRISE

Adopting a **"Digital-First"** strategy is no longer optional—it is a foundational pillar for enterprises aiming to operate with agility, scale, and resilience in the digital era. This shift redefines the network from a utility into a strategic fabric, interconnecting users, machines, applications, and clouds across distributed environments. Here's how a modern network delivers tangible outcomes:

Faster access to cloud-hosted services improves customer satisfaction and reduces drop-offs during payment transactions

Centralised LAN/WAN provisioning and zero-touch rollout reduce the time needed to connect smart devices, and go live with new services, improving internal efficiency and customer responsiveness

Built-in user-centric optimisation

Programmable networks prevent checkout delays, video feed buffering, or smart inventory sync issues, ensuring uninterrupted service even during peak hours

SD-WAN overlays and modern LAN infrastructure use app-aware routing, QoS tagging, and real-time path selection to prioritise user-critical apps like video, CRM, or digital onboarding and ensure they remain responsive across any device or location

Lower WAN and Cloud Costs: SD-WAN and direct multi-cloud connectivity (MCC) can cut WAN and cloud egress costs by 25–40% by dynamically routing traffic and bypassing expensive internet pathways

Faster, Zero-Touch Deployments: Centralised LAN/WAN provisioning and zero-touch rollout enable rapid expansion across branches, warehouses, and IoT environments

Cost-optimised, flexible and agile connectivity

Elastic Bandwidth at Scale: Programmable networks aggregate multiple links to handle peak traffic, AI/ML processing, and smart device loads without hardware upgrades

High-speed LAN with low-latency fabric and **application-specific network slicing** supports AI-driven workflows, real-time video analytics, and digital twins

MCC (Multi-Cloud Connect) helps enterprises achieve **cloud-native app performance** with enterprise-grade SLAs

Accelerated innovation

Integrated overlays (SD-WAN + SASE) ensure workloads and users across multiple clouds or on-prem sites are securely and optimally connected

Security is no longer an afterthought — **it is architected into the Network Fabric**

Modern networks support **Zero Trust**, identity-aware access, microsegmentation at LAN and WAN levels, and SASE convergence

Built-In security

Centralised visibility across cloud, edge, and branch mitigates risk from shadow IT, ransomware, and lateral threats

Future-ready encryption and resilience strategies also prepare enterprises for **quantum-era threats**

By evolving their LAN/WAN backbone into an **intent-driven Network Fabric,** enterprises can meet the demands of **hyperconnectivity, hybrid work, multi-cloud, IoT,** and **AI adoption**—while maintaining cost efficiency, operational speed, and security posture.

7. REAL-WORLD EXAMPLES

Example 1: Semiconductor equipment giant sees reduced costs and improved productivity with Tata Communications' solutions

A leading semiconductor equipment manufacturer struggling with inconsistent application access, legacy network costs, and slow digital transformation outcomes partnered with Tata Communications to modernise its global network infrastructure.

Through a unified SD-WAN overlay, intelligent traffic steering, and cloud-optimised connectivity, the company achieved measurable transformation:

- **38% reduction** in WAN costs by consolidating links and leveraging existing broadband infrastructure
- **Over 50% increase** in branch bandwidth, outperforming legacy MPLS for most workloads
- **Sub-10 ms access** to cloud apps like Microsoft 365 and SharePoint through direct internet breakout—improving productivity and collaboration
- **Simplified IT operations** with four device functions merged into one and automated provisioning
- **Stronger security and compliance** with next-gen firewall, SASE integration, and guest wifi controls
- **Complete network visibility** using real-time traffic analytics and centralised policy control

Example 2: Simplified global tech-based fiduciary giant's network while slashing TCO

A global fiduciary services leader sought to expand across jurisdictions and launch new digital business lines—but was limited by a fragmented, high-latency, and costly legacy network.

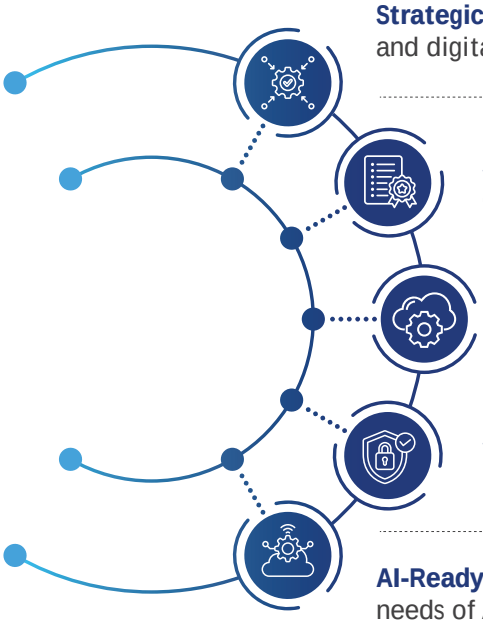
Tata Communications stepped in with a modern, cloud-ready network architecture, enabling scalable, secure, and compliant operations globally:

- **30% reduction** in Operational Expenses by consolidating six network hubs down to 2, with persona-based underlay design
- **Improved latency and user access** to centralised apps using an internet-first architecture and zero-touch provisioning
- Scalable global connectivity across **45+ locations** with integrated SD-WAN, Cloud Gateways, and Multi-Cloud Connect
- **Enhanced compliance and security** across China, India, and EMEA through SD-WAN–based secure branch and cloud access

This transformation laid the foundation for faster business expansion, improved employee productivity, and simplified IT operations—future-proofing the firm's digital growth.

8. A ROADMAP TO NETWORK MODERNISATION

A phased approach ensures enterprises build a unified, simplified network architecture that supports current operations and future innovation:



Strategic alignment: Define network strategy aligned with cloud, AI, security, and digital initiatives

Standardisation: Implement standardised protocols for seamless data exchange across partners and value chains

Cloud optimisation: Extend internet connectivity directly to cloud platforms for efficient routing

Security reinforcement: Apply Zero Trust principles and micro-segmentation to reduce the attack surface and protect key business assets

AI-Ready infrastructure: Design networks to meet the bandwidth and latency needs of AI-driven applications

9. HOW TATA COMMUNICATIONS CAN HELP YOU MODERNISE YOUR NETWORK?

Tata Communications offers a proven, risk-mitigated, and value-driven approach to modern network transformation—combining strategic consulting, deep implementation expertise, and cutting-edge technologies across the globe:

1.Proven experience, trusted partner

We've successfully transformed network infrastructures for hundreds of global enterprises—across banking, manufacturing, retail, logistics, and healthcare—delivering measurable outcomes in uptime, agility, and cost-efficiency.

Recognised as a Leader in Gartner Magic Quadrant for 12 consecutive years, Tata Communications is the global service provider of choice for large-scale, complex transformations

We currently **carry over 30% of the world's internet routes at any given time,** making us a powerful enabler for any **Internet-first, cloud-first transformation journey**

Our deep experience ensures **zero disruption to business continuity,** even in high-risk rollouts and mission-critical environments

2. Structured, low-risk modernisation methodology

Our end-to-end transformation framework includes:

Network Readiness Assessment: Uncover hidden risks, legacy limitations, and immediate cost-saving opportunities

Purpose-Built Network Blueprint: Customised architecture aligned to your strategic priorities—whether AI workloads, multi-cloud integration, edge computing, or Zero Trust frameworks

Pilot-to-Scale Rollout Support: Start small with targeted deployments, validate performance, and scale seamlessly across sites, countries, and user environments

Integrated Security and Resilience: Secure, encrypted, intelligent networks with built-in SASE, Zero Trust, and software-defined policy controls—ensuring compliance and business continuity

Unified Digital Fabric: A global, programmable backbone that connects users, applications, data centres, cloud platforms, and edge locations—anywhere in the world

Software-Defined LAN and wifi: Extend control from **user to application**, orchestrated through a **common software-defined layer** to create a **Network Fabric,** enabling **end-to-end visibility, optimisation, and automation** across access and core

3. Continuous innovation and value delivery

We are not just transforming networks — we are c**ontinuously investing in advanced tools, automation platforms, AI-driven network intelligence,** and integrated observability solutions to deliver **ongoing value.** These capabilities help customers:

Predict and resolve network issues faster

Optimise performance dynamically across workloads

Scale securely with evolving business needs

Enable next-gen use cases like AI, automation, edge computing, and immersive CX

What sets Tata Communications apart

Zero-risk migration strategy: Backed by our global NOC/SOC teams, hybrid expertise and proven frameworks, ensuring non-disruptive transition

Strategic partnerships with hyperscalers, technology providers, and telecom operators across 190+ countries

Bandwidth-on-Demand capabilities **with a "Pay as you Grow" commercial model,** giving customers the flexibility to **scale capacity elastically and cost-efficiently**

Global SLA-backed reach and 24/7 support

Innovation at the Edge with network-integrated AI/ML, real-time analytics, and programmability

Tata Communications is your **trusted partner** for building the foundation of a digital-first enterprise—one that's scalable, secure, intelligent, and ready for what's next.

10. CONTRIBUTORS

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