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Building Durable AI Advantage

Five Reinforcing Loops That Decide Which Enterprises Lead at Scale

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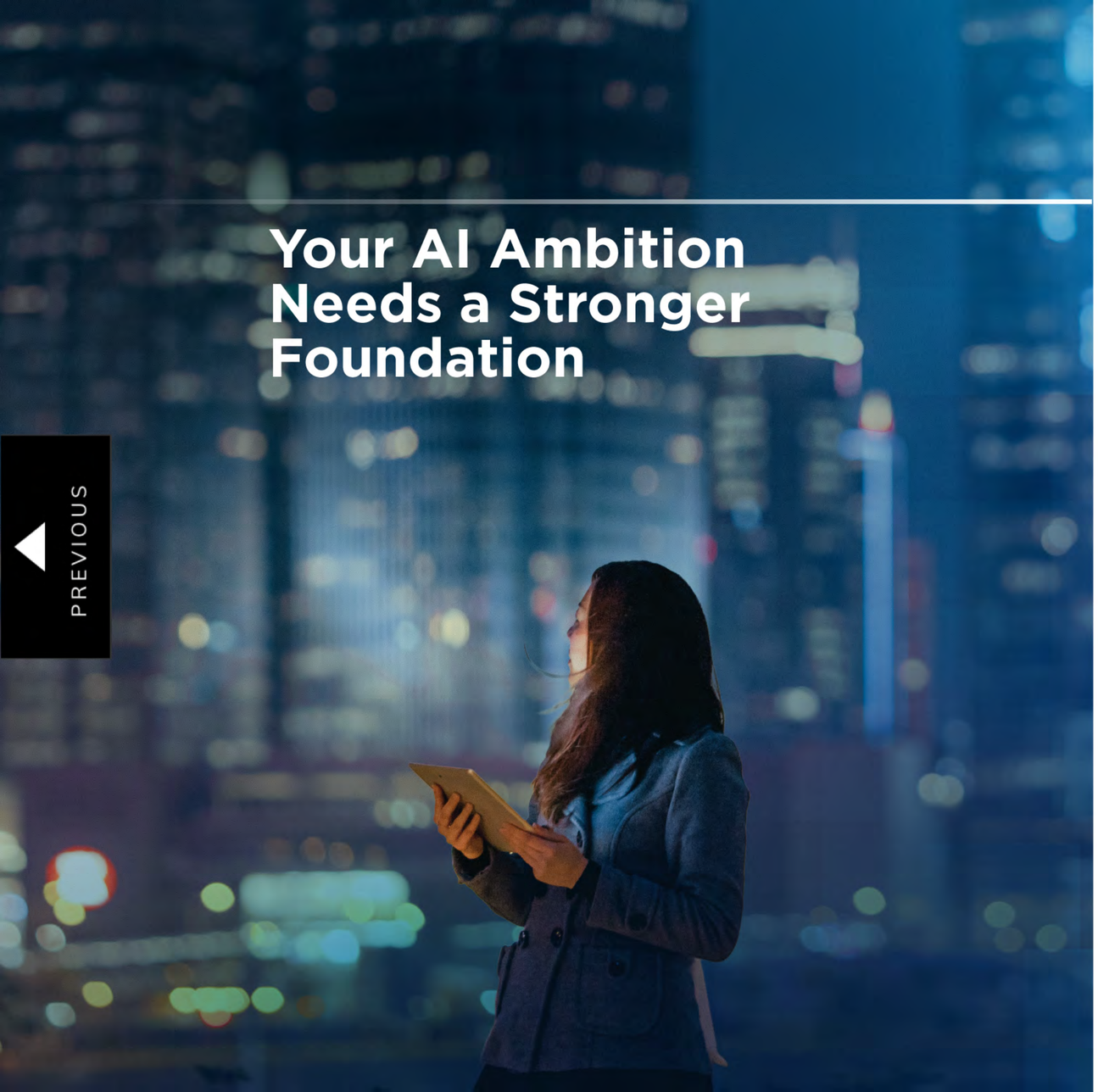

Your AI Ambition Needs a Stronger Foundation

65% of enterprises
are still running on infrastructure that wasn't built for enterprise AI.

If you're serious about scaling, that's the statistic that should keep you up at night, not the next model release.

AI will generate trillions of dollars in value across global industries by 2030. The disruption will reshape cost structures, accelerate product development, sharpen decision-making and more.

Some enterprises are embedding AI into core operations while others are just starting. The gap between those that are ready and those that are not is growing. Many companies risk getting left behind.

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Trillions in Value Are at Stake

The numbers make clear what is at stake.

> Analysts at Morgan Stanley estimate that full AI adoption across the S&P 500 alone could generate as much as **$920 billion** in annual net benefit[1].

Over time, that could translate into $13 trillion to $16 trillion in additional market capitalization, roughly a quarter of the index's current value.

The opportunity extends beyond the technology sector to everything from financial services and media to pharmaceuticals, autos and industrials. Realizing the value of AI requires change inside operating models.

[1] Source: Morgan Stanley

S&P 500 Index

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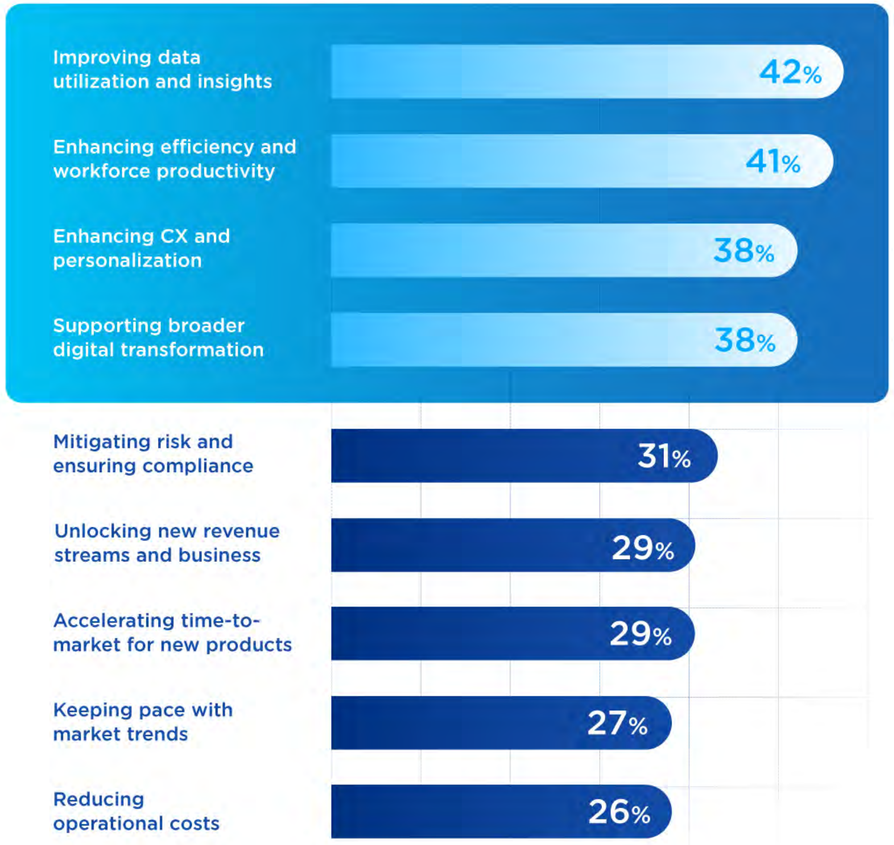
Enterprises Expect Measurable Returns

Across industries, leaders expect AI to drive measurable improvements in how their organizations function day to day.

Improving data utilization and insight generation ranks highest, cited by **42% of enterprises**. Productivity gains sit close behind. Customer experience, digital transformation and revenue expansion cluster within a narrow range, suggesting that AI is expected to lift performance across multiple fronts.

> While the ambition is clear,
> **execution is less certain.**

The Top AI Mandates



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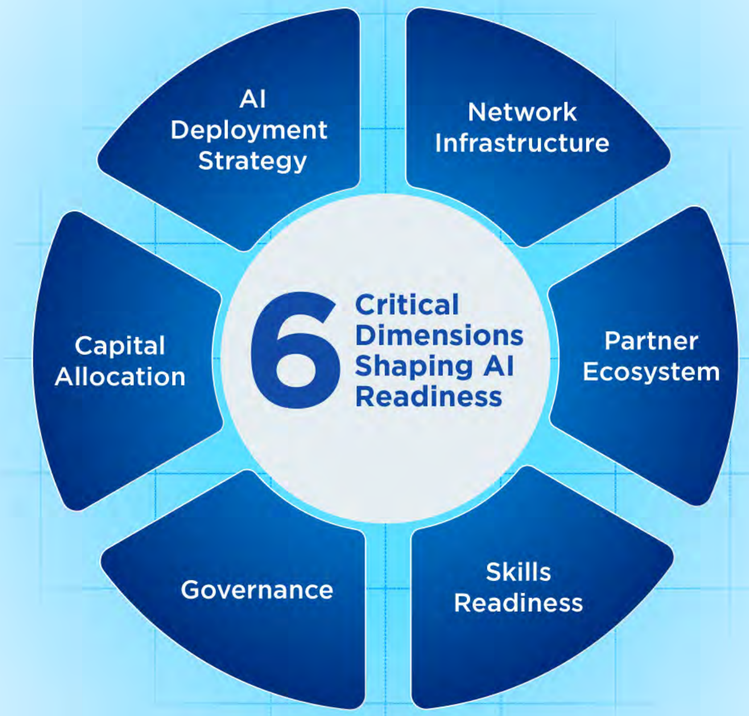

Readiness Separates Leaders from Laggards

Enterprises understand what is at stake.

> The question is
> **whether they have modernized the digital foundations**
> required to capture it.

To find out, Tata Communications commissioned a global study of 501 senior executives across North America, Europe, Asia and India. All respondents were VP-level or above and directly involved in telecom infrastructure and procurement decisions at enterprises with annual revenues exceeding $500M.

The research examined six critical dimensions shaping AI readiness. What follows explores the structural constraints shaping enterprise AI execution and the conditions that influence scale.

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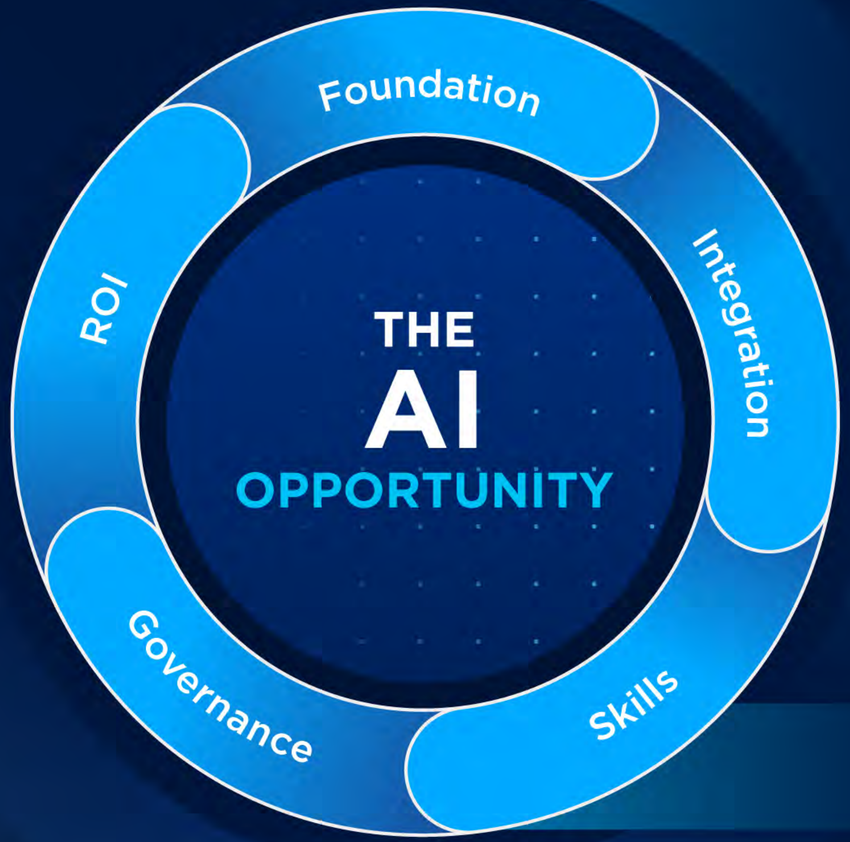

5 Loops Determine Success

Our research identified five reinforcing loops that shape enterprise AI execution. Together, they form a flywheel that determines whether AI investment compounds or plateaus.

The loops span infrastructure, governance, integration, ROI and skills, offering a simple way to judge the choices enterprises make as they scale. AI can generate isolated gains even when one loop is under strain, but lasting performance depends on alignment across all five.

When one stalls, constraints spread and momentum weakens. When they reinforce one another, progress accelerates and advantage compounds.

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Why It Matters

AI is opening a new competitive frontier — but what separates early momentum from lasting leadership is what sits beneath it. Infrastructure is no longer invisible. It is the core enabler that allows AI to scale with integrity, expand across the enterprise, and deliver growth that endures. The businesses that recognise this shift — and act on it now — will be the ones that define what AI leadership looks like at scale.

Sumeet Walia
President and Chief Revenue Officer
Tata Communications

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01

Foundation Loop

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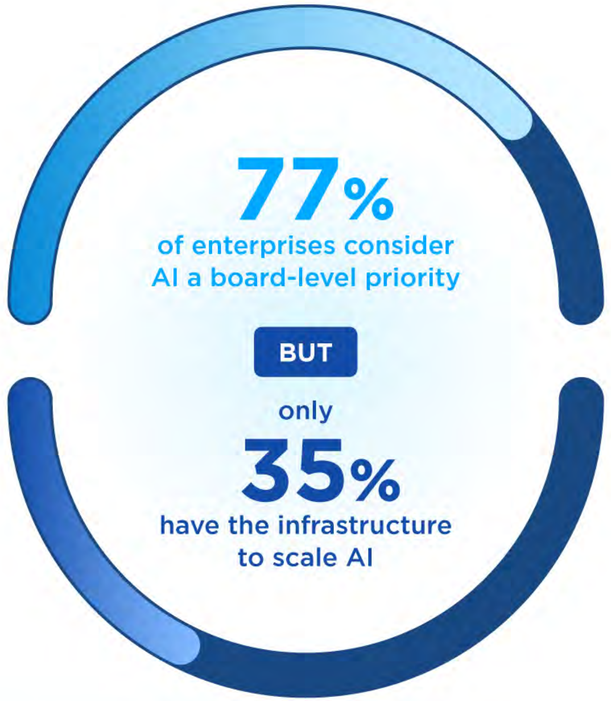
AI Is a Priority. Scale Depends on the Foundation.

AI has become a board-level priority for **77% of enterprises** surveyed. However, infrastructure readiness varies. Only **35% of enterprises** are currently on advanced infrastructure, while **65%** still operate on legacy systems not designed for the data intensity and integration demands of enterprise AI.

> **The digital architecture**
> is the foundation that scale.

Modernized networking, cloud and hybrid environments, secure data flows, compute capacity and orchestration layers allow intelligence to move reliably across the enterprise.

These capabilities sit beneath every application and use case. They determine whether AI initiatives remain episodic or become embedded over time.



BEHIND THE NUMBERS

F&B stands out as the most legacy-bound sector, with **44% of enterprises still operating on legacy-driven infrastructure**. That suggests a bigger modernization opportunity in an industry where speed, coordination and real-time decision-making are important.

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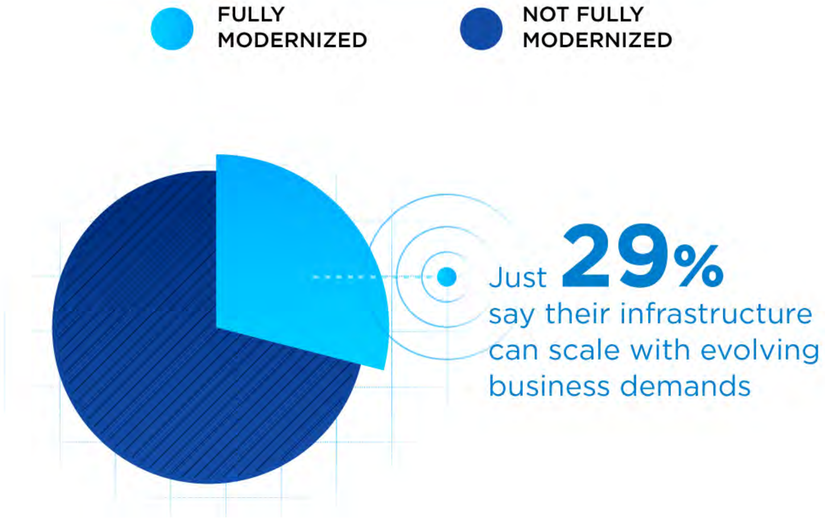
Infrastructure Readiness Is Uneven

Modernization is not a binary state. Across core infrastructure components, readiness remains uneven, even as AI places growing pressure on enterprises to scale compute, data movement and connectivity on demand.

Fewer than half of enterprises report fully modernized network connectivity, hybrid deployment flexibility or data architecture. **Just 29%** say their infrastructure can scale with evolving business demands, which matters because AI workloads do not rise in a smooth, predictable line. They surge, expand and shift across environments.

Improvement is happening, but it is uneven. Capabilities advance in pockets rather than as an integrated system, and that makes on-demand scale harder to sustain when AI moves from pilot to enterprise-wide adoption.

Tech Modernization Readiness



BEHIND THE NUMBERS

US enterprises lead most regions on infrastructure modernization, but they still fall short on the capability that matters most for AI at scale: infrastructure that can expand with changing demand. Europe sits furthest behind overall, suggesting a broader readiness gap.

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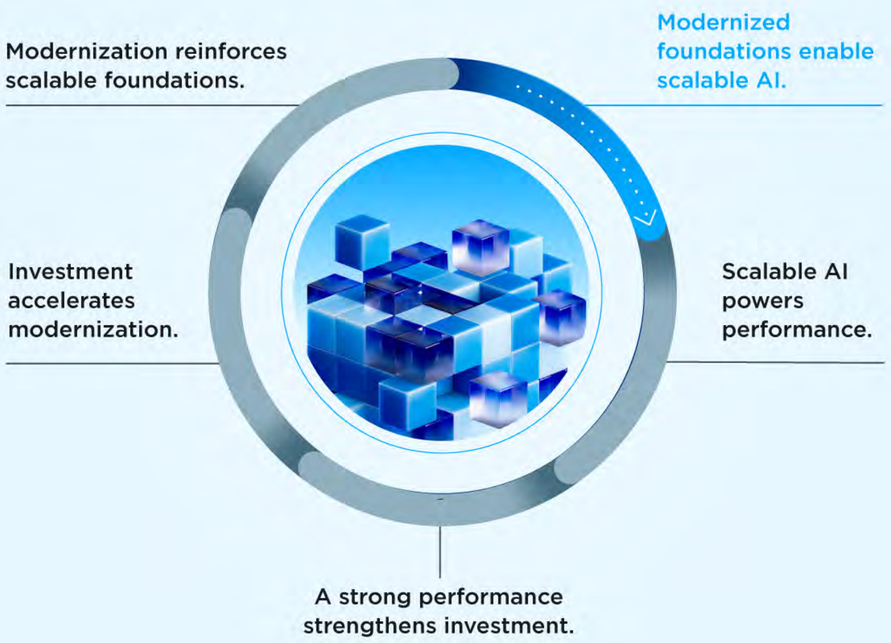
Scalable

FOUNDATION LOOP



When enterprises pursue AI on legacy foundations, deployment stays confined to pockets of the business. Proof of value exists, but it is difficult to extend. Performance varies, returns weaken and modernization gets deferred.

When enterprises modernize the infrastructure beneath AI, that cycle reverses. AI moves further into operational workflows, performance stabilizes across the business and investment starts to reinforce growth.

That shift has measurable consequences:

> Enterprises with advanced infrastructure are **nearly 2x as likely** to report business value from AI as those operating on legacy systems.

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Integration Loop

Integration Shapes AI Execution

Integrating AI across legacy platforms, cloud environments, daily workflows, and customer channels is now a major business priority. Executives increasingly select partners based on their ability to deliver seamless enterprise-wide AI integration.

Yet fragmented platforms and siloed data environments often confine AI to isolated pilots. Efforts to bridge systems introduce additional approval cycles, coordination complexity and procurement friction.

The constraint appears as uneven deployment and delayed scaling.

> Without seamless interoperability, intelligence cannot move freely across the enterprise and **value remains compartmentalized.**

The Integration Bottleneck

What Business Leaders Say About Integrating AI

28%

Integrating with legacy systems prevents value realization

37%

Integration capability is a top criterion when selecting a transformation partner

38%

Integration concerns delay approval and procurement

BEHIND THE NUMBERS

Retail, finance and insurance are the sectors most likely to cite legacy integration as a barrier to AI value. That points to a common challenge in industries where complex systems, compliance demands and customer-facing workflows all have to connect.

Note: Respondents were asked to select their top three responses.

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Execution Is Measured Across the Ecosystem

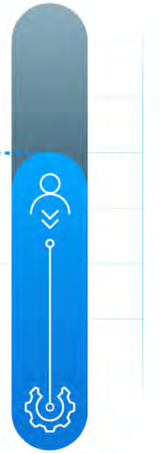
Two-thirds of leaders say the seamless blending of digital automation and human interaction in a company's ecosystem is important.

AI is judged by how well intelligence moves between customer touchpoints, operational systems and decision workflows. A recommendation engine, a service interaction and a supply chain decision are no longer discrete events. They are expected to operate as part of a continuous system.

Intelligence must travel without friction across legacy platforms, cloud environments and frontline tools. AI only feels embedded when it does.

67%

view the seamless blending of digital automation and human interactions across channels as important.



BEHIND THE NUMBERS

Younger leaders place more urgency on seamless human and digital interaction. Thirty-eight percent of respondents aged 35–50 say it is extremely important, compared with 24% of those aged 51–65. That points to a generational shift in how integrated execution is valued.

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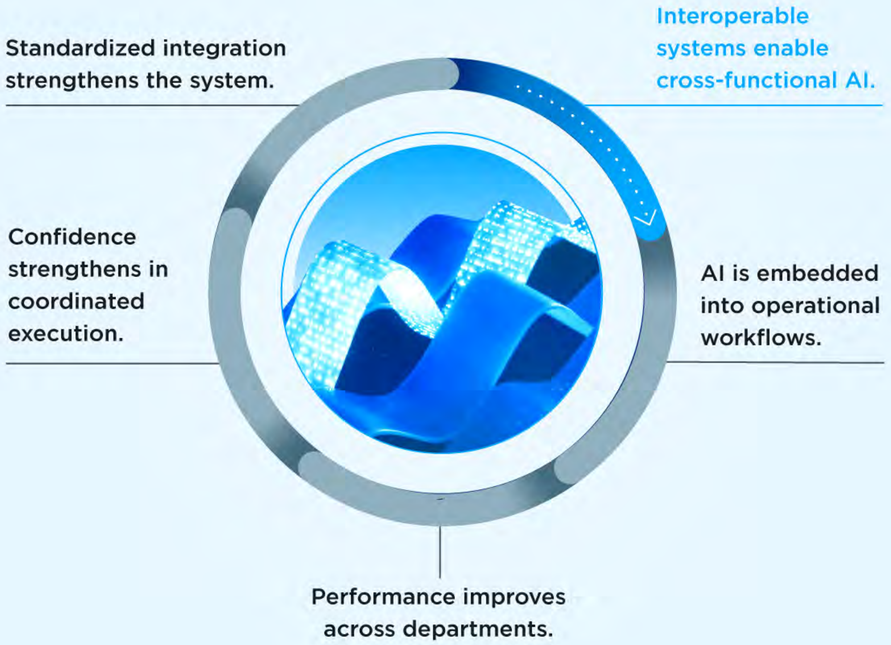
INTEGRATION LOOP



Integration challenges often appear later, when enterprises try to extend AI across legacy systems, data environments and operational workflows. What worked within one team becomes harder to scale across the business. **Twenty-eight percent of leaders** cite difficulty integrating AI with legacy systems as a primary roadblock to realizing value.

When enterprises treat interoperability as a strategic priority, that cycle begins to reverse. Systems are modernized with compatibility in mind, data standards are aligned, and intelligence moves more freely across functions.

That is what turns integration from a source of friction into a source of scale.

> Modern infrastructure enables interoperability, and **interoperability enables enterprise deployment.**

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Skills Loop

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Technology Scales Faster Than Skills

Nearly one-third of leaders say skill gaps and a shortage of specialized talent are major barriers to getting value from AI.

No single roadblock stands out as the dominant barrier, which shows how complex AI scaling can be. But skills are central because they affect every part of execution, from technology readiness and risk management to governance and integration.

> AI is not only a technology problem.
> **It's also a people problem.**

As AI adoption grows, demand for new expertise will grow with it. Enterprises that cannot attract, develop, or reorganize talent around AI risk slowing their own transformation.

30%

of enterprises
cite a skills gap and shortage of specialized talent
as a top roadblock in realizing value from AI.

BEHIND THE NUMBERS

Over one-third of enterprises in the US cited a skill gap and shortage of specialized talent as an obstacle, more than any other region. By contrast, **only a quarter of enterprises in Asia** cited the same challenge, the least of all regions surveyed.

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Skills Gaps Grow With Scale

The skills gap becomes more acute as enterprises get larger. Among companies with revenue above $5 billion, **45%** cite a shortage of specialized talent as a barrier to realizing AI value, well above the study average.

Scale makes AI harder to spread. Bigger organizations have more functions, more systems and more teams that need to work differently. It is no longer just a question of hiring technical specialists. Enterprises need broader capability across the business to apply AI, redesign workflows and govern change with confidence.

The pattern is clear: the larger the organization, the harder it becomes to build and distribute the skills AI requires.

> For large enterprises,
> capability is no longer a supporting issue.
> **It is a scaling issue.**

Share of Companies
Facing a Skills Gap And Shortage of Specialized Talent

BEHIND THE NUMBERS

Nearly 70% of companies that say they have a skills gap also say they have not modernized their network infrastructure, signaling a **correlation between skills and modernization.**

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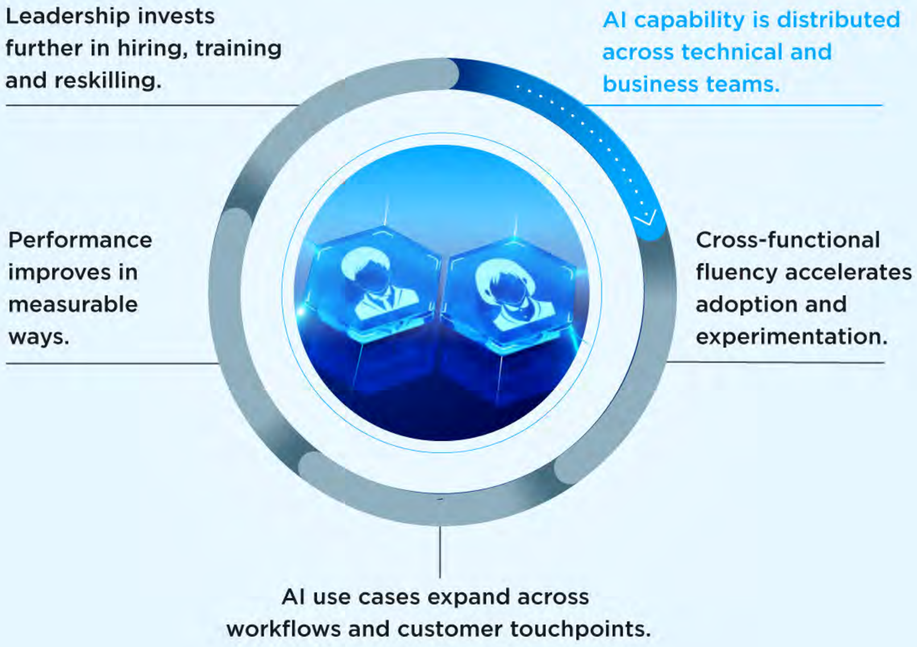
SKILLS LOOP



In many enterprises, AI expertise remains concentrated within small technical teams. Business units depend on a handful of specialists to translate potential into practice. Momentum builds in pockets, not across the enterprise, and gains remain incremental.

> **When expertise spreads beyond specialist teams and into business units,**
> that cycle begins to reverse.

AI moves closer to day-to-day operations, integration improves and deployment becomes more consistent across the enterprise. Over time, performance steadies because AI is operating within the systems that generate value.

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Governance Loop

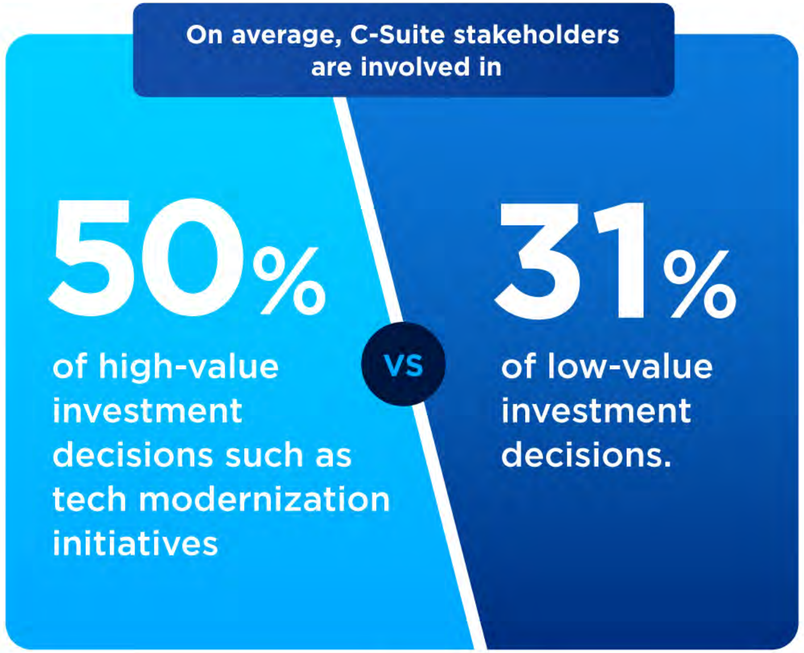
Governance Begins With Control

Governance shapes the conditions for scale. It determines how data is classified, how risk is assessed, how compliance is reviewed and how control is maintained across increasingly complex environments.

As AI and infrastructure decisions become more strategic, more stakeholders enter the process. High-value investments bring in larger decision committees and heavier executive involvement, extending governance beyond a single function or approval.

That changes the nature of execution. The work becomes cross-functional, with finance, security, technology and senior leadership all needing confidence in the same decision.

> The more perspectives involved, the more important it becomes to **establish trust, control and decision rights early.**



BEHIND THE NUMBERS

When time comes to decision making, **the professional services and finance sector typically has the most stakeholders involved.** Broadly, the more revenue a company generated, the more stakeholders were involved in such decisions.

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Delay Builds Where Trust Has to Be Verified

Governance friction gathers in a few predictable places. The biggest delays appear where enterprises need to verify trust, control and operational fit before they can move forward.

Security and compliance sit at the center of that pressure, with **42% of enterprises** saying so. Integration and procurement follow close behind. Budget approvals and ROI justification add further drag once more stakeholders enter the process.

These delays do not operate in isolation. They stack on top of one another.

> **As checks accumulate across teams and approval layers,** deployment slows and the path to scale becomes harder to sustain.

42% of enterprises cite that delays in the approval process come from **security or compliance reviews.**

Additional sources of delay cited by enterprises

- **38%** Integration with existing systems
- **38%** Procurement or vendor-evaluation complexity
- **37%** Complex budget approval process

BEHIND THE NUMBERS

The biggest gap between senior leaders and operational decision-makers sits around ROI proof. Thirty-seven percent of VPs cite cost-benefit justification as a challenge, compared with 28% of the C-suite. The pressure to prove value delays execution.

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GOVERNANCE LOOP

When key questions are resolved too late,
governance becomes a brake on scale.

Security, compliance, procurement and finance all apply legitimate scrutiny, but that scrutiny often begins after risks have already surfaced. Reviews stretch across teams, timelines lengthen and decisions become harder to sustain.

When control is established early and applied consistently, that cycle begins to reverse. Standards are aligned before deployment widens, reviews happen within clearer boundaries and stakeholders work from a shared view of risk and readiness.

That is what turns governance from a source of delay into a source of stability and scale.

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ROI Loop

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Early Returns Don't Compound Without Investment

Nine in ten enterprises report seeing some value from modernization initiatives, yet **more than six in ten** say they have not reached optimal outcomes. Progress is real, but uneven, and enterprise-scale value remains harder to unlock than early gains.

> AI scales when leaders can see
> **impact across the business,**
> not just within a single use case.

When value stays concentrated in one team or project, expansion tends to move cautiously. When value becomes visible across the operating model, investment gathers momentum and scale becomes easier to justify.

That is why enterprises with advanced infrastructure are almost twice as likely to report realizing high value. How clearly value shows up still shapes how quickly AI expands.

9/10 enterprises see ***some*** value from modernization initiatives.

YET

6/10 say they have ***not*** reached optimal outcomes.

BEHIND THE NUMBERS

While they rank among the most legacy-bound sectors, **F&B and hospitality companies** were most likely to report optimized value from modernization. More than half say they have reached that stage, suggesting **some sectors are already turning early gains into durable operational advantage.**

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Separate Priorities Create Separate Signals

Enterprises are pursuing several transformation priorities at the same time such as AI, cybersecurity, cloud migration and network upgrades. On average, companies have **3.8 investment priorities**, all pulling from the same overall budget.

AI performance is tracked inside business units. Infrastructure is measured through uptime, resilience and cost efficiency. Security is measured through risk reduction. While all of these efforts generate results, they are measured separately.

When value is evaluated inside individual programs, the broader impact across the business is harder to see.

> **Gains are real, but they appear contained.**
> And when value looks contained, reinvestment tends to follow that signal.

Investment decisions reflect what leaders can clearly see.

Businesses Have Competing Investment Priorities

BEHIND THE NUMBERS

US enterprises were more likely than peers in other regions to prioritize both cloud & data infrastructure and AI & automation. That suggests a clearer recognition that AI scale depends on upgrading the foundation beneath it.

Note: Respondents were asked to select their top three responses.

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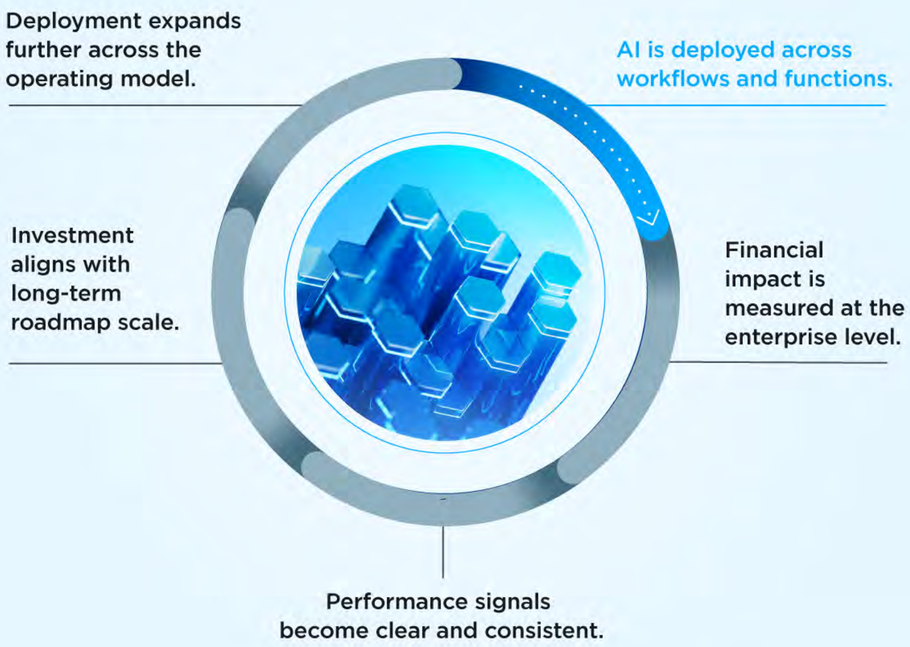
ROI LOOP



Early AI deployments often deliver tangible improvements. Processes run faster, forecasts become more accurate and customer interactions grow more responsive. But those gains often stay concentrated within a single function or workflow, so the financial signal remains limited and expansion proceeds cautiously.

When ROI is evaluated across the enterprise, that cycle begins to reverse. Infrastructure and AI are deployed with shared intent, performance is tracked across workflows and leaders can see how value is building across the business.

> **Funding starts to support expansion**
> rather than short-term validation.

That is what turns ROI from a contained proof point into a reinforcing signal for scale.

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What Leaders Can Do Next

01 Foundation

Modernize the operating layer beneath AI. Unify networks, cloud, data flows and security so AI can move reliably, scale on demand and avoid hidden fragility.

02 Integration

Choose a partner who can integrate AI across the business, connecting legacy and modern systems while reducing custom work for each new use case.

03 Skills

Build capability alongside deployment. Help teams apply AI in their own work so capability spreads beyond specialists and turns isolated use into enterprise momentum.

04 Governance

Set the rules early and make them usable. Define ownership, controls and approval paths up front so teams can move faster and with more confidence.

05 ROI

Measure value across connected workflows, not just pilots. Use that broader view to guide reinvestment, justify expansion and build sustained returns.

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Advantage Compounds When Systems Align

Durable AI is built on connected foundations: modern networks, secure data flows and interoperable environments that allow intelligence to move, adapt and scale with confidence.

When infrastructure, integration, skills, governance and ROI work as one, AI stops being a set of isolated initiatives and becomes a force that travels across the value chain. Adoption grows, impact multiplies and value compounds over time.

Tata Communications helps you cut through the noise and simplify the path forward, turning AI from isolated progress into **durable advantage**.

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