The telco reinvention blueprint:

From data debt to enterprise intelligence

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01.

Introduction

For years, Communications Service Providers (CSPs, or 'telcos') have invested in technology transformation—modernizing stacks, migrating to the cloud and adopting AI. With generative AI (gen AI) accelerating this change, the potential for reinventing communications companies is within reach. Yet, for many CSPs that promise and those returns remain elusive.

To understand why—and to inform the actions we recommend in this report—we drew from two proprietary studies. The first surveyed 256 senior telco executives across 24 countries to assess the state of data transformation and barriers to becoming data-first. The second captured insights from 1,200 enterprise executives across 13 countries and 9 industries on expectations around telco services. To deepen our insights, we also conducted in-depth interviews with senior industry and AI experts as well as case studies of telcos already transforming their data foundations.

What emerged is a clear picture of a silent, systemic obstacle: **data debt**. This accumulated burden of inconsistent and siloed data is stifling innovation, eroding competitive advantage and slowing time-to-value, blunting the transformative potential of AI. In fact, close to 80% of our survey respondents say their companies are not ready to be data-first, AI-driven organizations—despite expecting data and AI to transform the end-to-end fabric of their business within three years.

The problem isn't data scarcity. Most CSPs hold vast reservoirs of data. But much of it is fragmented, poorly governed and unfit for intelligent systems to act on. The consequences? Grounded AI models, delayed product launches, poor customer experience and soaring operational expenses. Left unaddressed, these problems could limit CSPs' opportunities and strategic relevance in a data-defined future.

However, this critical moment also offers an opportunity to turn data into their strongest strategic asset. Leading telcos—the top 20% in our survey—are already turning data debt into a catalyst for competitive advantage. By mastering data debt across strategy, architecture, quality, products and integration, our research shows leading companies gain the power to disrupt—delivering superior customer experiences, accelerating innovation, boosting efficiency and excelling in operations.

Ultimately, the future of telcos will not be defined by how much data they have, but by how well they make it actionable. This paper outlines three priorities to realize this vision: treat data as a unifying asset, modernize architecture to be AI-native and use gen AI as a tool to solve the very data challenges holding transformation back.

02.

Why data readiness defines the next era of performance

How overcoming legacy data burdens can remove strategic bottlenecks—and clear the path for AI-driven performance

Imagine a future-facing telco in which gen AI is embedded across every process. The moment a network anomaly occurs, a gen AI agent detects and diagnoses it, while also initiating proactive measures. What's more, the agent immediately notifies the impacted customers about the disruption. This not only minimizes inconvenience but also strengthens customer relationships.

This isn't a distant vision. It's the new benchmark for intelligent, adaptive telco operations—and it's within reach.

This next phase of AI will be transformative for CSPs, as well as for their customers. The rise of agentic AI systems that go beyond passive data processing and reactive automation offer telcos the chance to redefine how they operate, serve and grow. These autonomous systems act with intent, respond in real-time and continuously optimize across vast, dynamic environments. The result: faster time to market, exceptional customer experience and greater operational resilience.

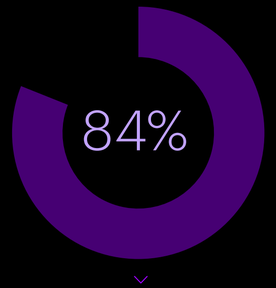
But there's a catch.
AI-driven, connected enterprise intelligence requires CSPs to be data-ready. Most are not there yet. While their data estates have grown in volume, usage and value (Figure 1), they haven't modernized fast enough to support scaling AI at speed. As a result, most are falling short of their AI-first ambitions.

Becoming an AI company: How CSPs can apply AI inside and out to gain a competitive edge[1]

CSPs are uniquely positioned to lead in the gen AI value chain —both by accelerating adoption within their own organizations and by delivering solutions to customers and nations.

An AI-driven telco scales internal use while simultaneously bringing new AI-powered services to market. In a recent Accenture survey of 1,200 cross-industry executives, 84% named CSPs as key partners in scaling gen AI, citing advantages such as data proximity, infrastructure maturity and trusted networks.

Q) To what extent do you agree or disagree with the following statements about telcos' role in hosting, operating and managing (gen) AI solutions?



Enterprises see telcos as a **primary partner for sealing (gen) AI in the organization**

Q) If you were to partner with a telecom provider for (gen) AI solutions, please rank the top 3 factors influencing your selection.

Top 3 factors that will make telcos preferred provider of gen AI solutions

75% enterprises say **data proximity and security**

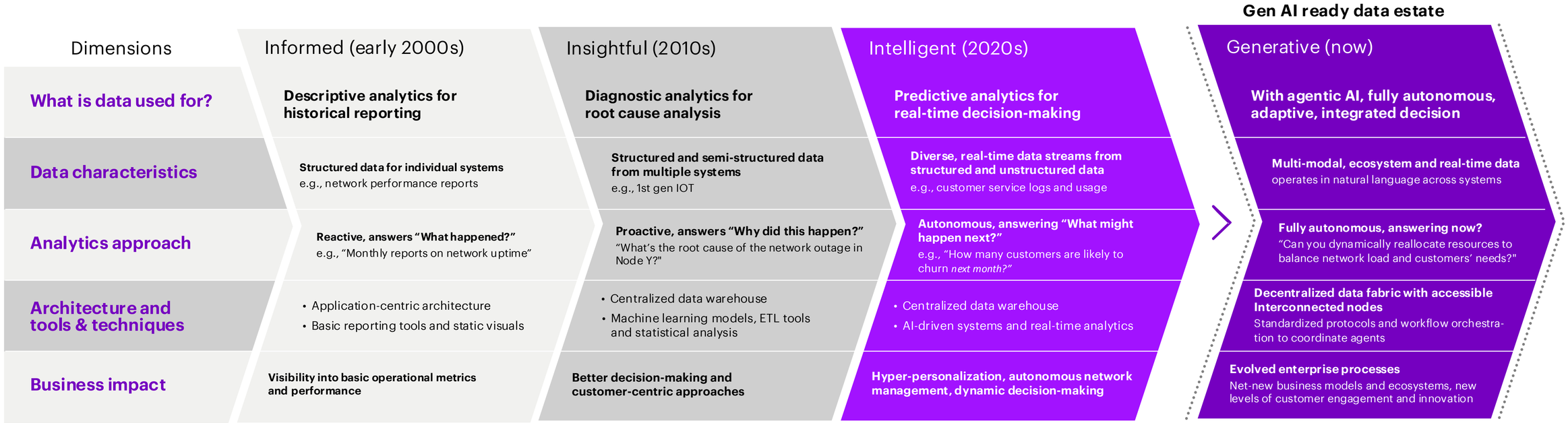
67% enterprises cite **network infrastructure advantage**

59% enterprises say **(gen) AI capabilities and talent**

Note: Considered sum of ranks 1, 2 and 3.

Source: Accenture Communications Industry Enterprise Study, N=1,200.

Figure 1: Evolution of data in the communications industry



Source: Accenture Commucations Industry.

Much of the problem is rooted in data fragmentation, inconsistency and legacy architectures. Years of layered systems and reactive modernization have created entrenched silos and disconnected workflows. This results in delays and inefficiencies and limits integrated real-time insights—an outcome exacerbated by the lack of standard data quality processes.

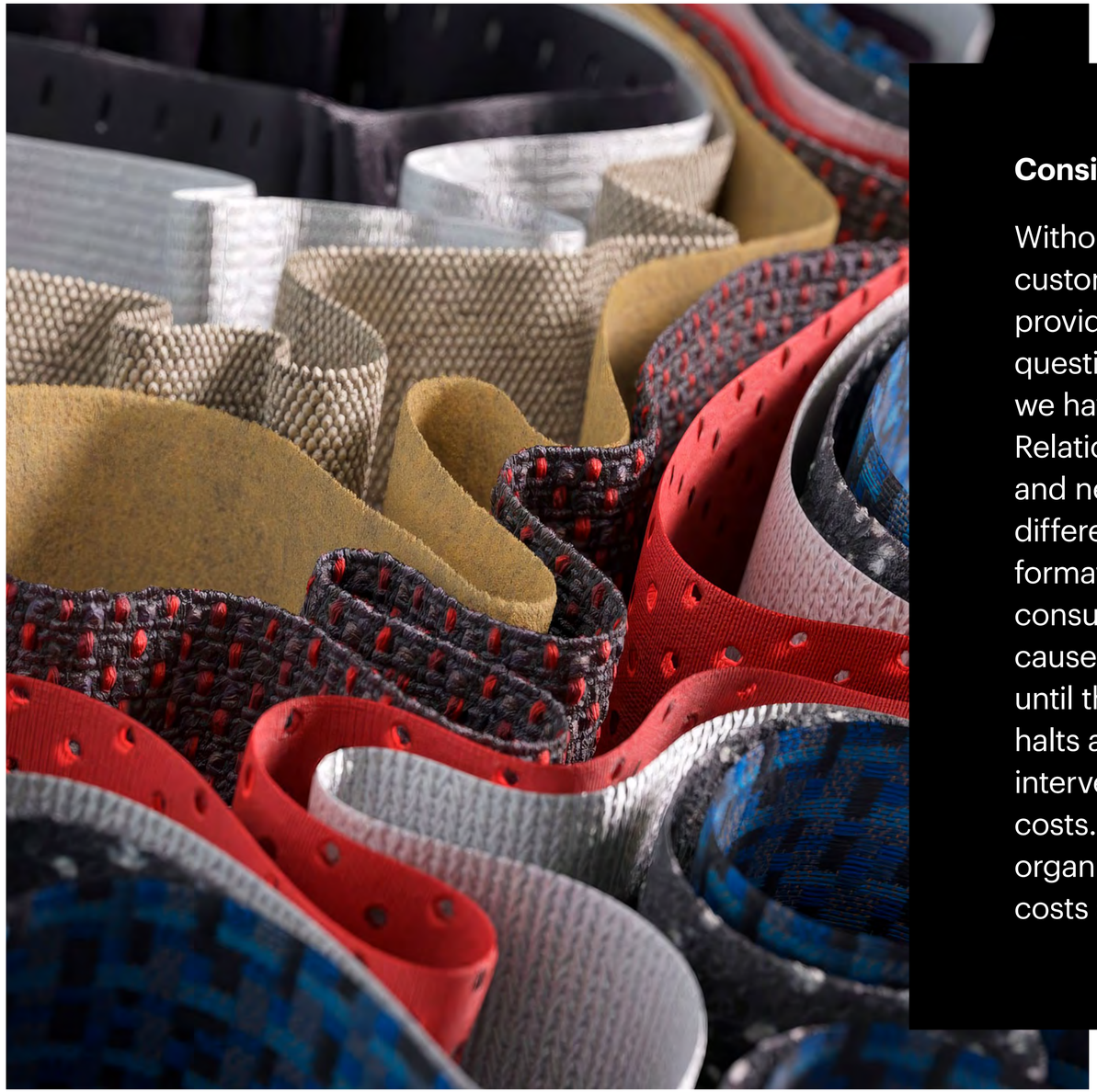
Our research shows 72% of CSP technology executives consider data quality and consistency issues as the top barriers to managing their organization's data estate and scaling gen AI applications. Meanwhile, 63% are concerned by the growing volume and diversity of data. 70% point to data security and privacy concerns, while 63% note spiraling data maintenance costs.

This is what we call data debt: the unrealized value trapped inaccumulated data assets.

It grows quietly, fueled by poor-quality, inconsistent, incompatible and redundant data—rooted in siloed, legacy architectures that lack real-time pipelines and embedded governance.

The impact is measurable and growing:

- **Efficiency** is compromised as data teams spend 62% of their time cleaning up data and only 38% on meaningful analysis.
- **Productivity** suffers, with 69% of CSP executives reporting limited visibility and consistency across functions, networks and product portfolios, making data-driven decisions slow and unreliable.
- **Effectiveness** is impaired, with 72% saying their organizations are struggling to implement and scale gen AI due to a lack of data readiness.



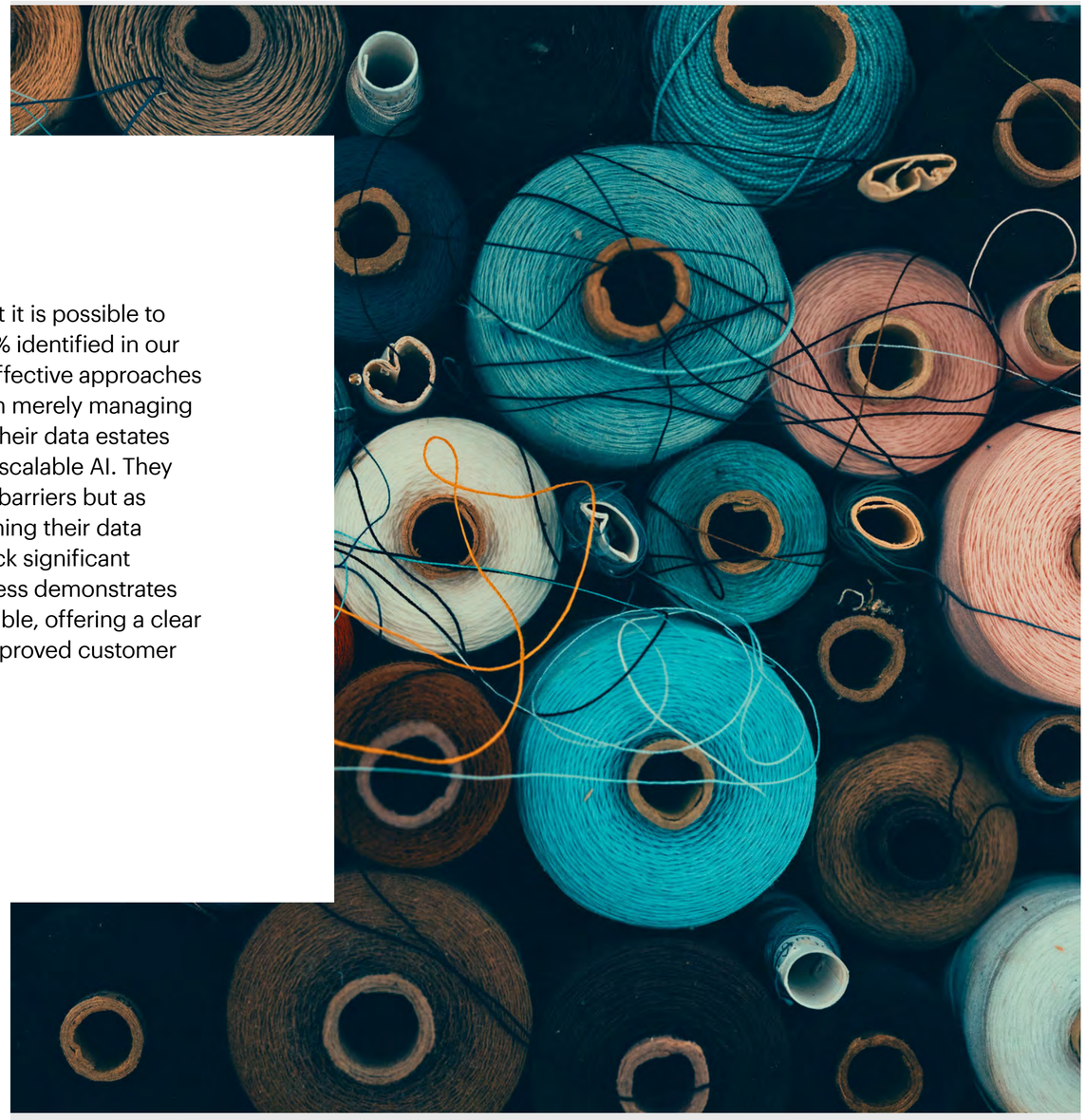
Consider this:

Without real-time network performance data, customer service teams are often unable to provide proactive support to users. Even basic questions like “how many active customers do we have?” can take days to answer, if Customer Relationship Management (CRM), billing and network systems track this information differently. Misaligned definitions, inconsistent formats and manual reconciliation create time-consuming bottlenecks. Lack of quality data causes errors that go unnoticed in CRM systems until the Operations Support System (OSS) halts activation, requiring manual back-office interventions that delay workflows and increase costs. These inefficiencies ripple across the organization, slowing time to market, inflating costs and limiting growth opportunities.

The consequences show up in most routine processes. Activating a simple promotional offer to a subscriber can get delayed by weeks, bogged down by manual interventions and extensive testing due to non-standardized data structures. Likewise, a basic fiber-to-the-home (FTTH) installation could take longer because fiber construction data (such as address, network ports, optical path) is not integrated into the IT systems or shared with field teams, resulting in multiple technician visits, higher operating costs and dissatisfied customers.

These are not edge cases. They are symptoms of a deeper, structural misalignment between the telco data estate and the demands of an AI-powered enterprise.

However, a few CSPs are proving that it is possible to break free. These leaders—about 20% identified in our study—have already demonstrated effective approaches to overcoming data debt. Rather than merely managing risk, they're proactively redesigning their data estates to enable agile decision-making and scalable AI. They view these challenges not merely as barriers but as chances to lead, proactively redesigning their data architectures and operations to unlock significant competitive advantages. Their progress demonstrates that overcoming data debt is achievable, offering a clear pathway to operational efficiency, improved customer experiences and sustained growth.



03.

How top telcos are moving from stalled to scaled

The 20% pulling ahead: what they're doing differently—and why others risk falling behind

Our survey and in-depth research identified a standout group of CSP leaders—roughly 20% of the industry—who have successfully navigated data transformation. These telcos have proactively shifted their approach, moving beyond traditional practices to establish intelligent, agile and scalable data estates. Their experiences show not only what's possible but what's realistically achievable across the industry.

The contrast within the industry is stark: While these leaders are already realizing tangible business benefits from their data and AI initiatives (building intelligent, scalable data estates), most of their peers don't expect to reach meaningful data readiness for at least another one to three years (Figure 2).

Who are these leaders and what are they doing differently?

To evaluate the data estate maturity level of each company, we developed a Data Readiness Index composed of six equally weighted components, which covered five pillars: data strategy, infrastructure, architecture, transformation and consumption. These pillars are based on our primary research conducted with 256 senior telco executives. The survey sought details on how advanced CSPs are in terms of data ingestion, management and consumption.

Based on the index scores, we identified the top 20% highest-scoring respondents. When compared to their peers, a significantly high percentage of these leaders expect to unlock benefits such as faster time to market, exceptional customer experience, improved network efficiency and utilization and enterprise operations excellence.

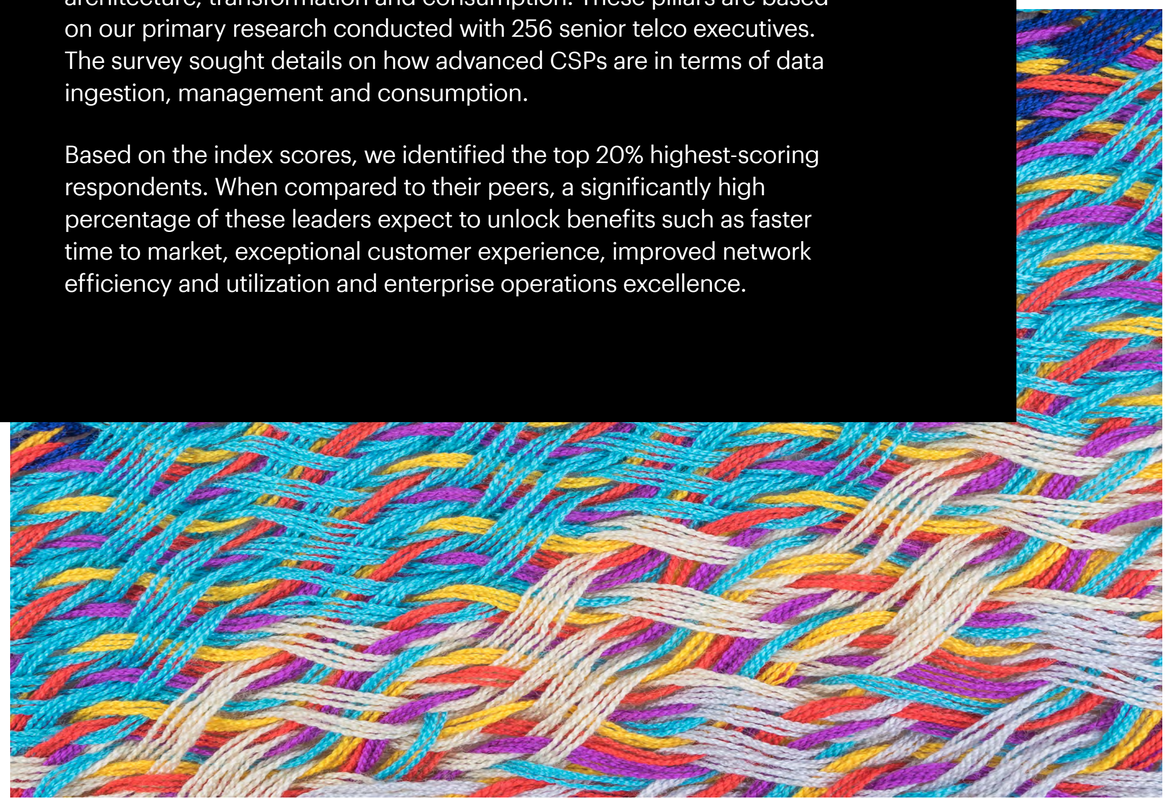
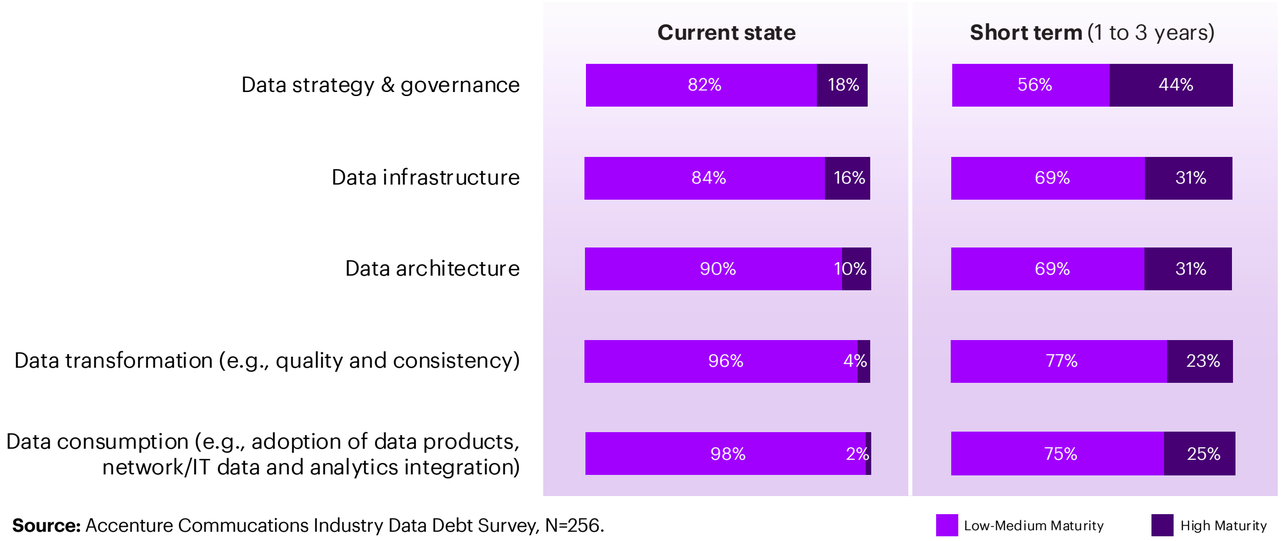


Figure 2: Data readiness: executives' evaluation of their company's data modernization maturity

Across the five pillars, what is your assessment of **your company's status of data modernization and targets** in the short-term?



Source: Accenture Commucations Industry Data Debt Survey, N=256.

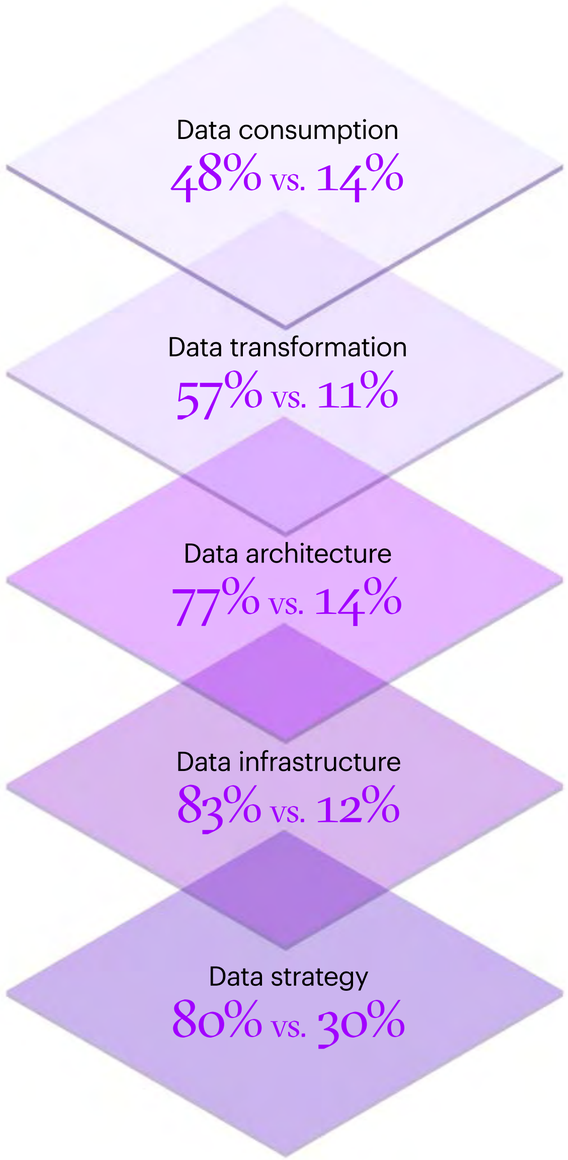
Our research and client experiences deduce that these leaders set themselves apart because they have deliberately invested in building a highly capable data and AI infrastructure, enabling them to drive efficiency, agility and innovation at scale.

These investments span areas like strategy and governance, infrastructure and architecture, quality processes, data products and cross-functional integration (Figure 3). Crucially, these CSPs view data as a strategic asset, central to their business growth rather than merely a technical byproduct. Most of these leaders have an API-driven ecosystem built on standardized data models for seamless data sharing between organizations, paired with a framework that supports agile decision-making and responsive action within the enterprise.

Figure 3: Data readiness best practices

Percentage of executives expecting high maturity by layer in 1-3 years.

Leaders vs. rest



Best practices

- **Independent creation of self-service data products** integrated with marketing, customer service, or operations
- **AI-powered** intelligent recommendations and automation of routine analyses
- **Real-time data analytics** into network and **operational workflows**

- **Automated workflows** and proactive data management practices for usability in real time
- **Real-time ingestion** from diverse sources and transformation
- Up-to-date **data catalogue and dictionary** to categorize and label data across the organization

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- Decentralized data fabric architecture with enhanced **microservices** and **API management**
- Reinforced **metadata-driven intelligence** to provide context, lineage and discoverability of data
- Integrated and interoperable across legacy and cloud environments
- **Federated governance models** with built-in policies for **data lineage, access and auditability**

- **High-performance and flexible** infrastructure that supports and enables real-time data processing
- **Scalable** and able to handle massive volumes of structured and unstructured data
- **Security-hardened** infrastructure with end-to-end encryption

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- **Executive sponsorship** on data as a strategic asset and accountability
- **Cross-functional collaboration** and pervasive data-driven culture
- Shared business goals and KPIs across data initiatives **moving from an IT-only managed resource**
- Strengthen **data literacy** across both technical and no-technical teams

Source: Accenture Communications Industry Data Debt Survey, N=256.

The payoff: comprehensive business value and competitive advantage

Leaders that master data debt can disrupt their industries with speed, experience and efficiency.

Customer experience

- **65% of leaders** expect a high-to-disruptive impact on their **net promoter score**, compared to 48% of their peers.
- **52% of leaders** expect a high-to-disruptive impact on **customer acquisition costs**, compared to 40% of their peers.

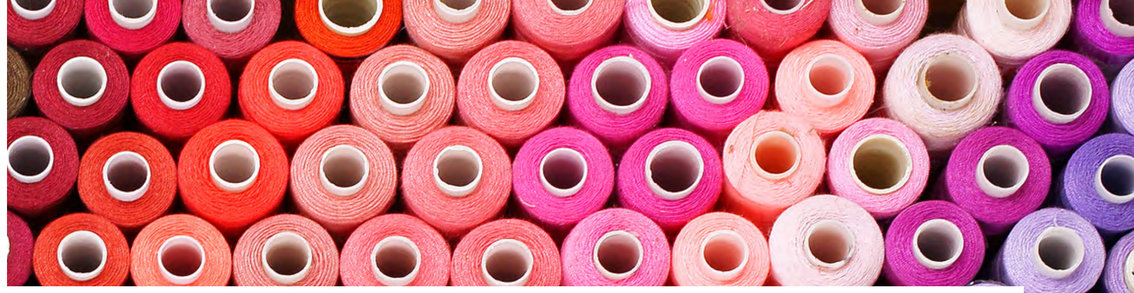
Product and service development and lifecycle management

- **68% of leaders** expect a high-to-disruptive impact on **time-to-market for new products and services, compared to 39% of their peers.**
- 59% of leaders expect a high-to-disruptive impact on **operational excellence** vs. 39% of their peers.

Network operations

- **57% of leaders** expect a high-to-disruptive impact on network fault detection and resolution time, compared to 39% of their peers.

Source: Accenture Communications Industry Data Debt Survey, N=256.



04.

From accumulating data debt to leading in data and AI

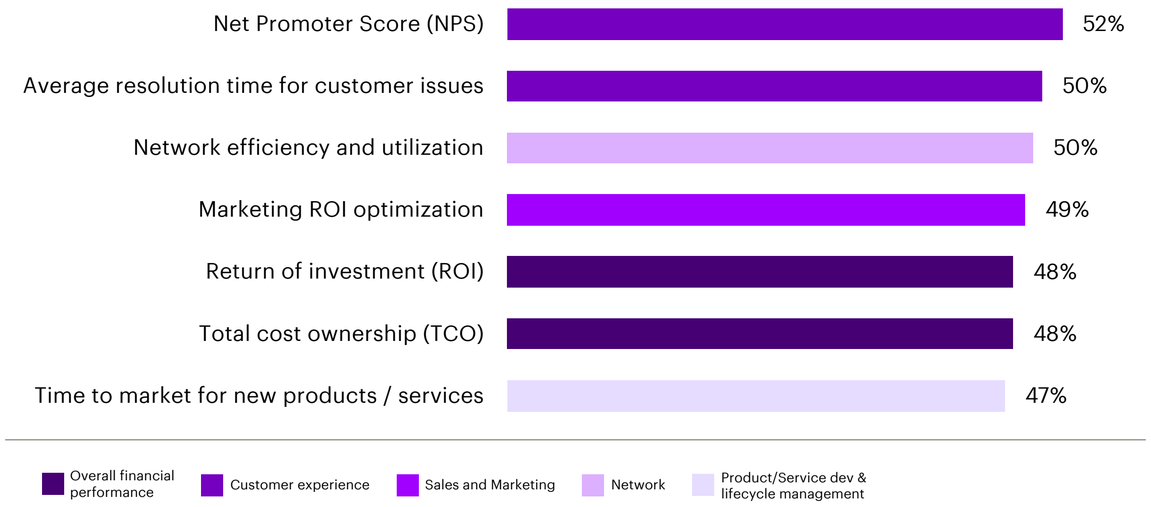
Addressing data debt is not just an operational necessity—it is a strategic enabler for CSPs to fully harness the value of their data assets and accelerate gen AI-driven transformation. Telco leaders have already shown that this is possible. Executives across the industry recognize this: half of CSP executives expect data and AI to have a high-to-disruptive impact on performance metrics in domains such as customer experience (NPS, average resolution time) and network (efficiency and utilization) (Figure 4).

The key challenge now is reimagining data strategy, architecture and operations—so that data becomes a growth driver.

Our research and experience show that telcos on their way to realizing this goal are led by three priorities: treating data as a product, building AI-native architecture and fully capitalizing on gen AI capabilities.

Figure 4: How data and AI transformation will impact key performance metrics

Customer experience (NPS, average resolution time) and network efficiency & utilization are the top performance metrics which are expected to be most impacted by data and AI transformation initiatives.



Source: Accenture Communications Industry Data Debt Survey, N=256.

1. Treat data as a unifying asset

Data is a strategic asset. But most telcos still treat it as a technical byproduct, owned by scattered functions with little alignment. The result is duplication, siloed insights and decision paralysis. Basic KPIs are defined differently across departments. Customer data, network performance and billing metrics sit in isolated systems. Coordination becomes expensive, and insights remain partial. This creates operational bottlenecks in network optimization, provisioning and billing, delaying service delivery and inflating expenses for storage, integration and reconciliation.

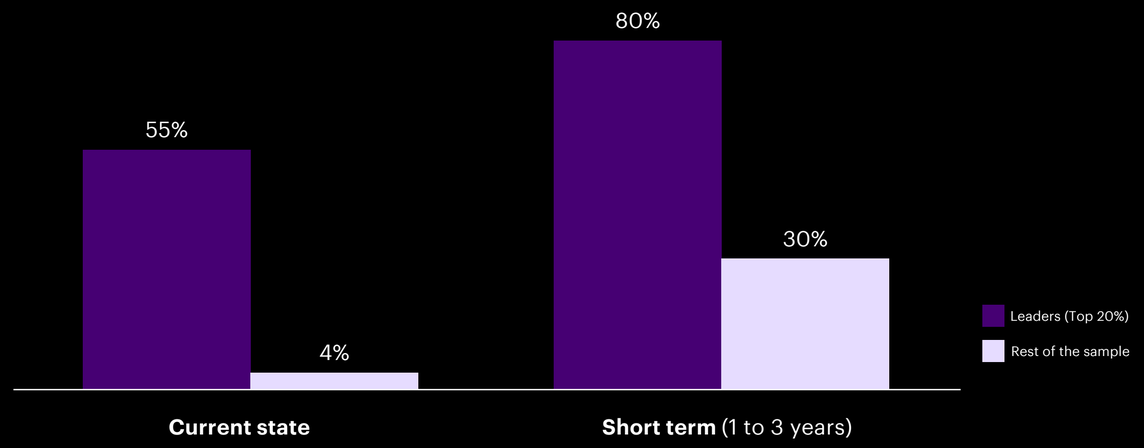
It is now time telcos consolidated this estate, companywide. This will accelerate decision-making, align functions around a unified data view and foster widespread use of data products. Reducing redundancy and rework in a data-driven culture will quickly improve time to value. The 20% of telcos we identified as leaders in data maturity are already reaping these rewards (Figure 5).

Figure 5: More leaders follow enterprise-wide data strategy & governance than the rest

Data strategy & governance

% of companies reaching peak maturity (levels 4-5) in current and future periods according to the following parameters:

- Data strategy is actively promoted by C-levels
- Data-driven decision-making deeply embedded in its operation
- Pervasive data-driven culture, and de-centralized data capabilities



Source: Accenture Communications Industry Data Debt Survey, N=256.

As soon as telcos are ready, they must turn this strategy into their reality.

As a first step, CSPs must establish a single data governance model that all business divisions follow. A centralized team balances data ownership by business domains and is responsible for defining and enforcing best practices to maximize data reuse and value realization. This core group will provide a common data marketplace for cataloging data and its use, metadata mechanisms to measure its quality and security standards to ensure its safety. This defines what the data looks like, making it useful for more than one team. Clear governance facilitates performance benchmarking against defined outcomes and sets a standard for new data product development.

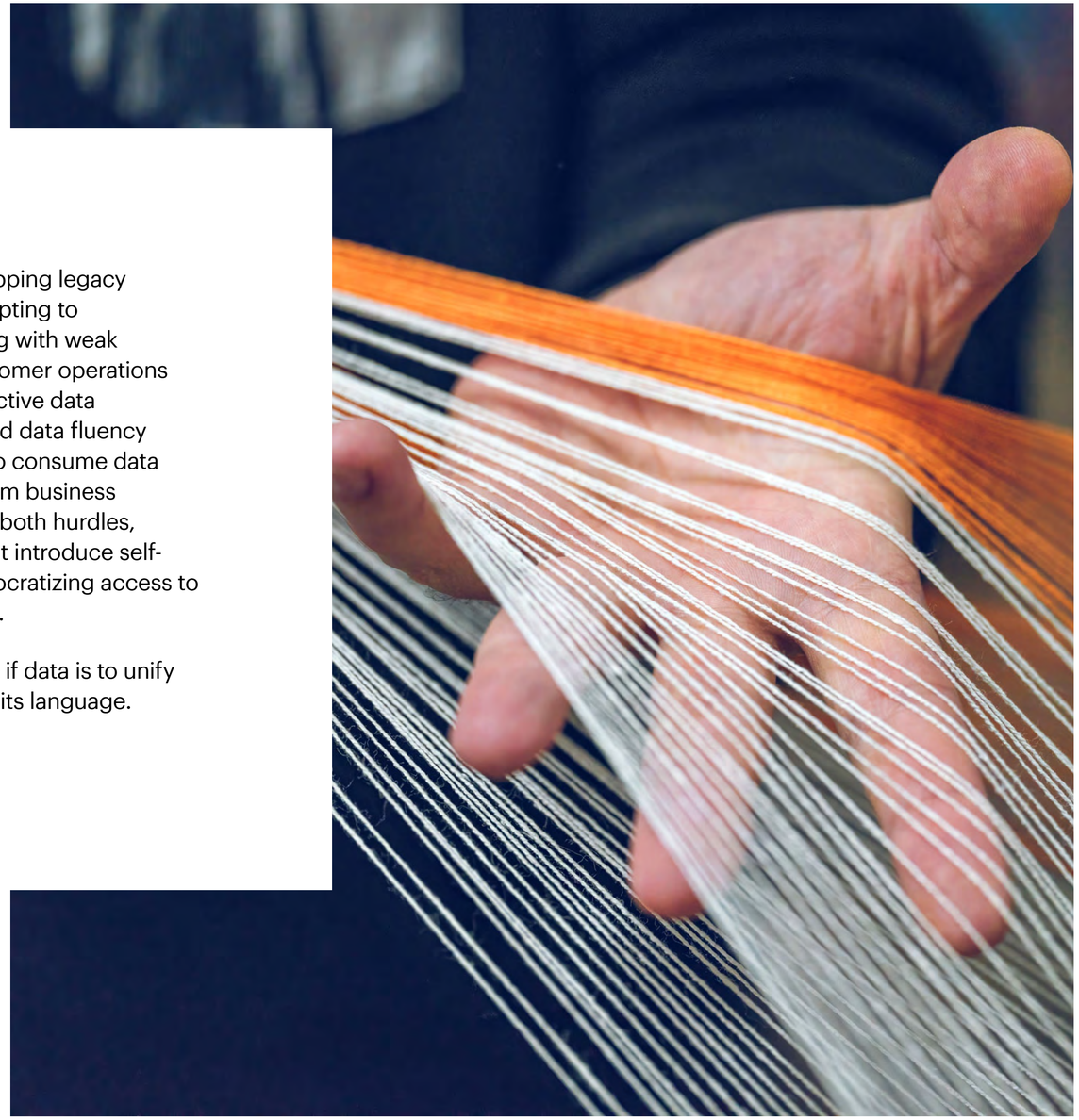
Scale is achieved when central governance is balanced with federated responsibility. Each business unit must own its data products—which includes maintaining centralized standards to enable cross-functional use. That also means they are accountable for key performance indicators tied to their data products—such as adoption rates, data quality, interoperability and measurable business impact. This alignment ensures that owners are motivated to continuously improve usability and deliver tangible value to the entire organization.

To track these outcomes, owners must ensure their data products are curated and interoperable. Here, AI can play a critical role: it can automate tasks like data pipelines and workflows, governance, metadata tagging and data maintenance, so products remain compliant and reliable. An added semantic layer (that captures relationships across data products and use cases) could then, for example, help a CSP's fraud detection system identify real-time inputs from multiple reliable data products, including customer transaction patterns and network behavior analytics.

Architecture and tooling are critical, but not enough. Overcoming cultural challenges within their organizations may prove harder.

Resistance to change—whether swapping legacy operations and business tools or adapting to new workflows and processes—along with weak collaboration between network, customer operations and product teams often hinder effective data sharing. Moreover, CSPs need to build data fluency and empower non-technical teams to consume data effectively, without requiring help from business intelligence specialists. To surmount both hurdles, company-wide training programs that introduce self-service analytics platforms and democratizing access to data insights have proven successful.

The message is simple and effective: if data is to unify the enterprise, everyone must speak its language.



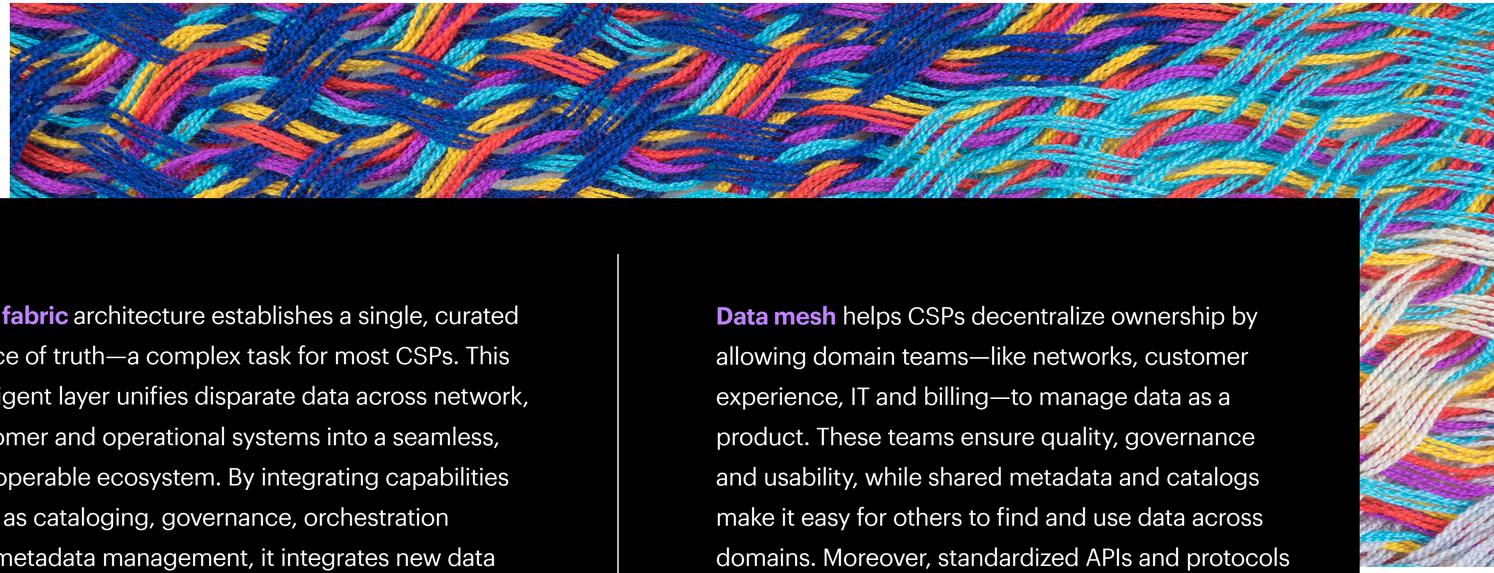
2. Build an AI-native data architecture

In our earlier research, From survive to thrive: Building tomorrow's communications on a modern digital core, **79% of CSPs recognized the need for modern IT systems to streamline processes and drive flexibility.** Yet the layering of legacy systems alongside new architectures has limited the full value of IT transformation.

Many CSPs are still locked into legacy data architectures, both in design and in practice. Our research shows that 60% of them are still using traditional data tools such as Extract, Transform, Load (ETL)—and more than half anticipate they'll still be using them by 2026. Legacy telco data architectures are monolithic, designed to support standalone applications across domains such as Business Support Systems (BSS), Operations Support Systems (OSS) and Enterprise Resource Planning (ERP).

Systems like data lakes and warehouses are widespread, but increasingly inefficient, inflexible and costly. Built for batch processing, they fall short of what modern telcos require to deploy AI effectively: real-time analytics and automation. They're inaccessible and under-indexed so that different business units (from network IT to marketing) are unable to harness gen AI solutions to analyze information or implement fixes.

As we already mentioned, 72% of CSP executives in our survey reported they are struggling to implement and scale gen AI use cases—a reflection of how deeply outdated architectures are impeding progress. What CSPs need now is an AI-native architecture that unifies data, breaks down silos and supports real-time, context-aware decision-making at scale. Two architectural approaches are already in the market and proving especially effective: **data fabric** and **data mesh**.



Data fabric architecture establishes a single, curated source of truth—a complex task for most CSPs. This intelligent layer unifies disparate data across network, customer and operational systems into a seamless, interoperable ecosystem. By integrating capabilities such as cataloging, governance, orchestration and metadata management, it integrates new data sources without disrupting existing systems.

Data mesh helps CSPs decentralize ownership by allowing domain teams—like networks, customer experience, IT and billing—to manage data as a product. These teams ensure quality, governance and usability, while shared metadata and catalogs make it easy for others to find and use data across domains. Moreover, standardized APIs and protocols allow cross-functional reuse with external partners, reducing reliance on central data teams.

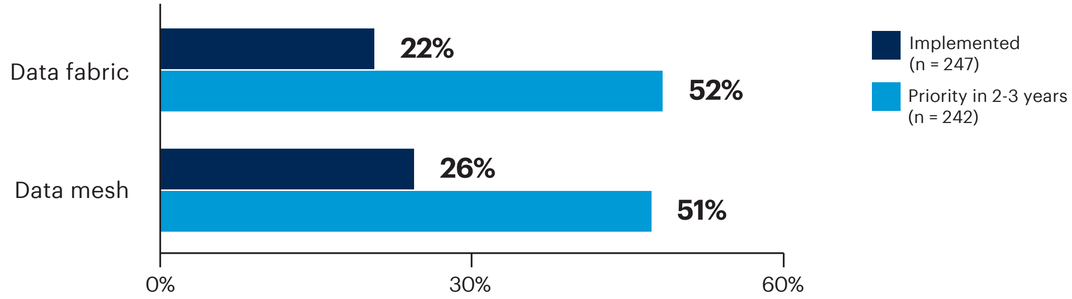
Some CSPs are already rethinking their data architectures with the application of data fabric and mesh (Figure 6). Telefónica, for example, is re-architecting its data estate using both data fabric and mesh to support its autonomous network vision.[2] Comcast is deploying a mesh model to enable domain-level control over data products, while BT is building a comprehensive data fabric that spans all customer and service data.[3-4]

These aren't experiments—they're structural reinventions aimed at scaling intelligence enterprise-wide. And they're working.

Figure 6: Rising adoption maturity of data fabric and data mesh[5]

Data fabric and mesh adoption rates

Data management designs and architectures (multiple answers allowed)



n = varies. All respondents, excluding don't know

Q: Think about your organization's data management architecture patterns at the moment. Which of the above data management designs and architectures have you implemented already?

Q: Think about the evolution of your organization's data management architecture patterns in the next 2-3 years. Which of the above data management designs and architectures will be prioritized for implementation in the next 2-3 years?

Gartner

Source: Gartner, How Data Leaders Can Complement Fabric and Mesh Approaches, 29 January 2025.

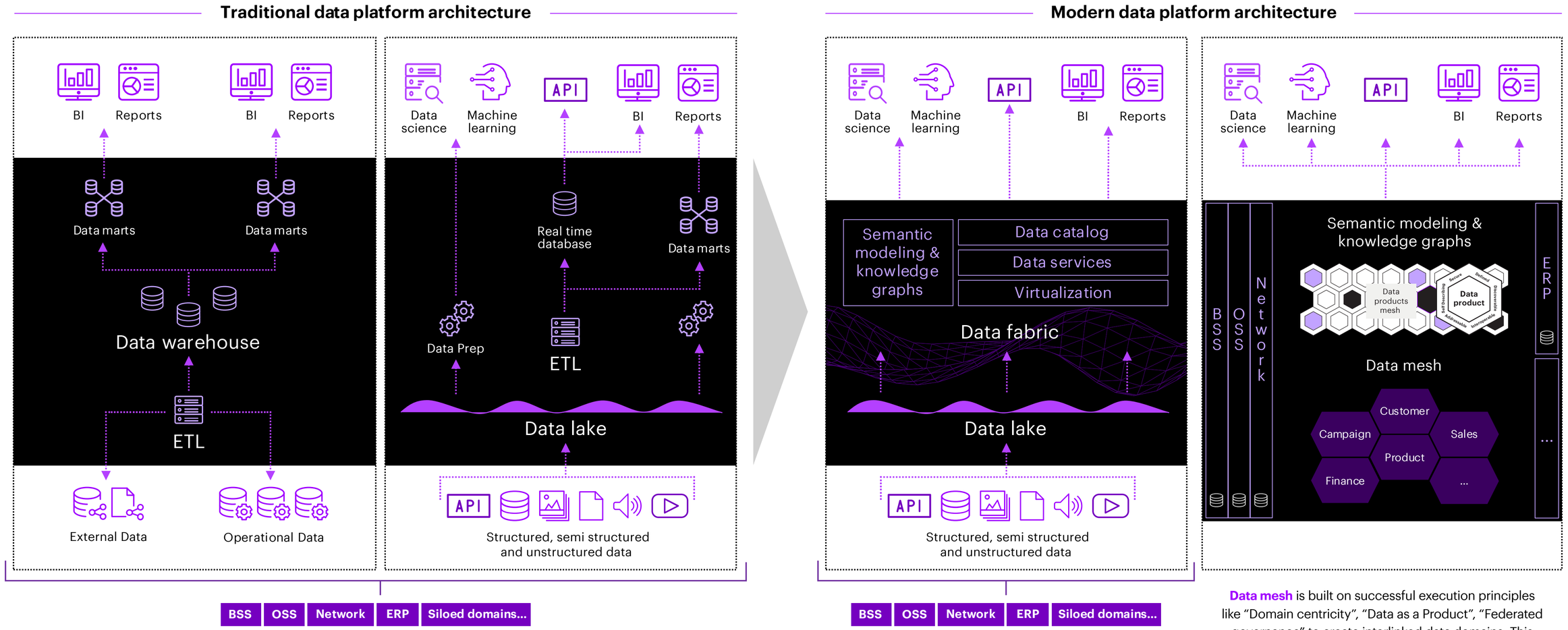
The advantages of hybrid data architectures

Hybrid data architectures that combine the strengths of data fabric and data mesh are gaining attention. When designed well, the mesh model decentralizes ownership without recreating silos. The fabric model provides the connective tissue that integrates disparate data sources, ensuring relevance and accountability across the organization. The combined architecture enables CSPs to reimagine how data management processes operate across the entire data lifecycle. Most importantly, with this architecture, CSPs can realize the full benefits of data for AI, reliably bringing structured and unstructured data together in context.

Horizontal cross-domain enterprise-level functions like supply chain and finance are best suited to be implemented as a data fabric while a new campaign based on customer segmentation and specific product launch could be a data product exposed on a data mesh. Implemented in a hybrid architecture by company, a company gets the best of both.

Figure 7 showcases how telco data architectures have evolved from early data lakes and data warehouses to the introduction of data fabric and mesh architectures.

Figure 7: Example of traditional vs. modern data platform architecture



Source: Accenture Commucations Industry.

In this architecture, proactive, intelligent systems replace reactive, manual data management practices. Dynamic and efficient data ingestion and transformation, metadata and automated workflows optimize data availability, quality and usability. For example, CSPs can combine live data from network equipment with customer complaint logs to predict and prevent service disruption arising from issues like network congestion in real time.

Data consumption becomes frictionless for business teams as self-service analytics are embedded into decision-making processes and customer-facing systems. This, for example, gives marketing and customer service teams instant access to contextualized insights, instead of relying on IT and data engineering teams for custom reports or dashboards. They now get a unified view of complaint history, local network performance and churn risk. This allows human agents to resolve issues proactively or suggest tailored retention offers during live interactions.

To meet growing regulatory requirements and industry-specific security standards, CSPs can embed compliance directly into data architecture, ensuring access control and auditability across domains. Most importantly, the hybrid architecture gives CSPs a powerful foundation for governance and security. Data mesh ensures consistent, domain-level policy enforcement through federated governance. Data fabric, meanwhile, adds a unified layer of metadata-driven automation, intelligent discovery and access controls across on-premises, cloud and multi-cloud environments.

An AI-native communications company must have a complementary modern data platform architecture. The leaders in our research have demonstrated that it’s achievable.

European convergent CSP taps into its data to power new growth

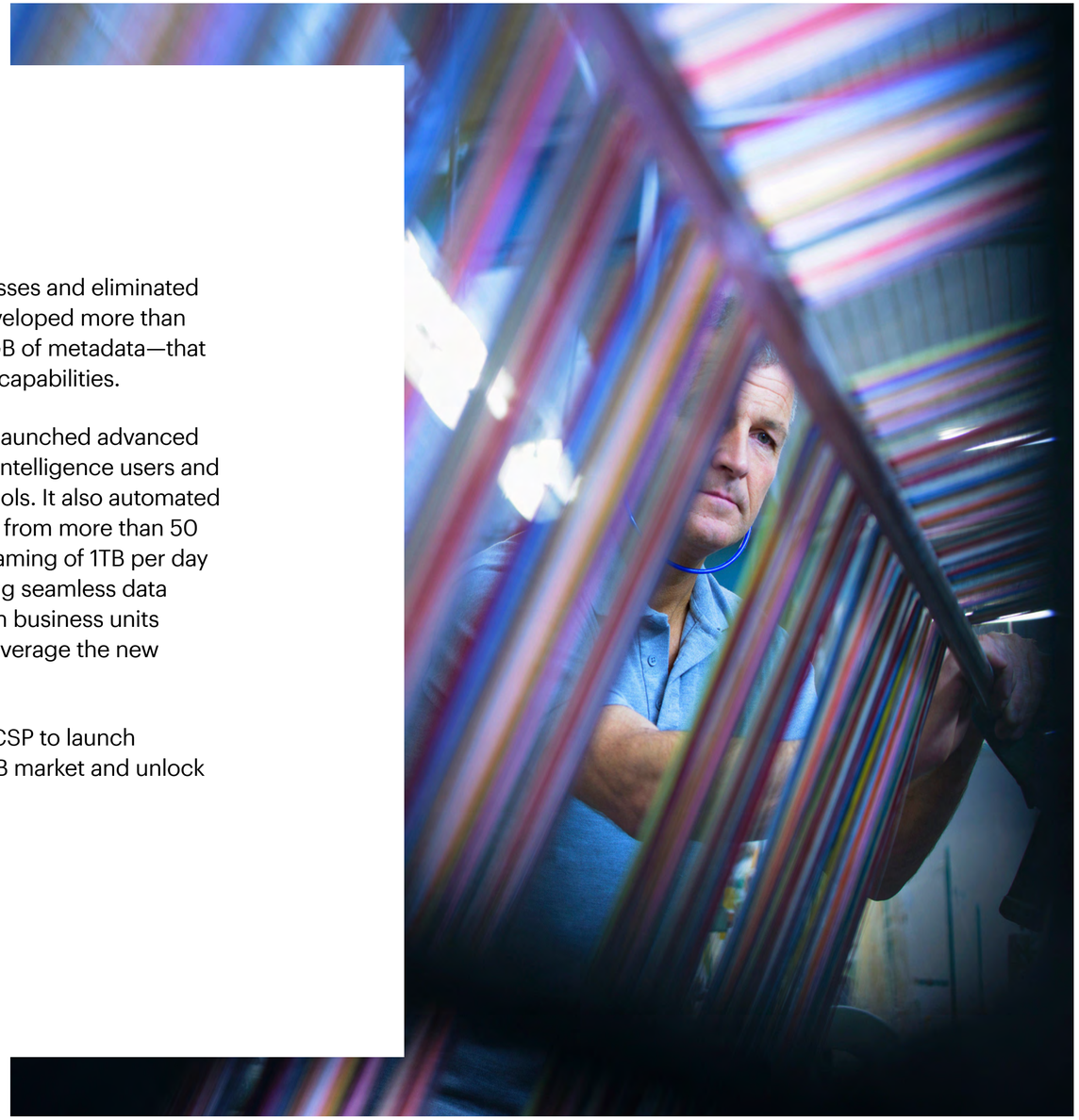
A major European telecom operator faced a mounting data challenge. With over 30 million customers, 550 BI users and more than 15 business units, its data infrastructure could no longer keep pace with demand. The company needed a scalable solution to manage 27 petabytes of data, ingest 30 billion records daily and optimize more than 1,000 ETL/ELT processes. Legacy systems and a rigid, outdated data warehouse stood in the way of progress.

To modernize, the CSP partnered with Accenture to consolidate its fragmented data landscape and adopt a cloud-based platform built on Google Cloud Platform (GCP). This modern architecture, designed for scale and performance, now serves as the backbone of the enterprise data ecosystem. The team integrated tools including Cloudera, Talend, Google Dataflow, BigQuery and Google Cloud Storage to streamline data ingestion, processing and storage.

The new platform enabled a shift to a **data fabric framework**, delivering lower costs, faster data access and higher quality outputs. The company migrated 315 critical assets, optimized 148 processes and eliminated significant manual effort. It also developed more than 10,000 MicroStrategy objects—15GB of metadata—that significantly advanced its analytics capabilities.

Within eight months, the company launched advanced data labs, equipping 550 Business Intelligence users and 30 data scientists with AI and ML tools. It also automated daily batch ingestion of 4TB of data from more than 50 systems and enabled real-time streaming of 1TB per day from three critical sources—ensuring seamless data access across the enterprise. Eleven business units received targeted training to fully leverage the new platform.

The transformation positioned the CSP to launch analytics-driven services for the B2B market and unlock future monetization opportunities.

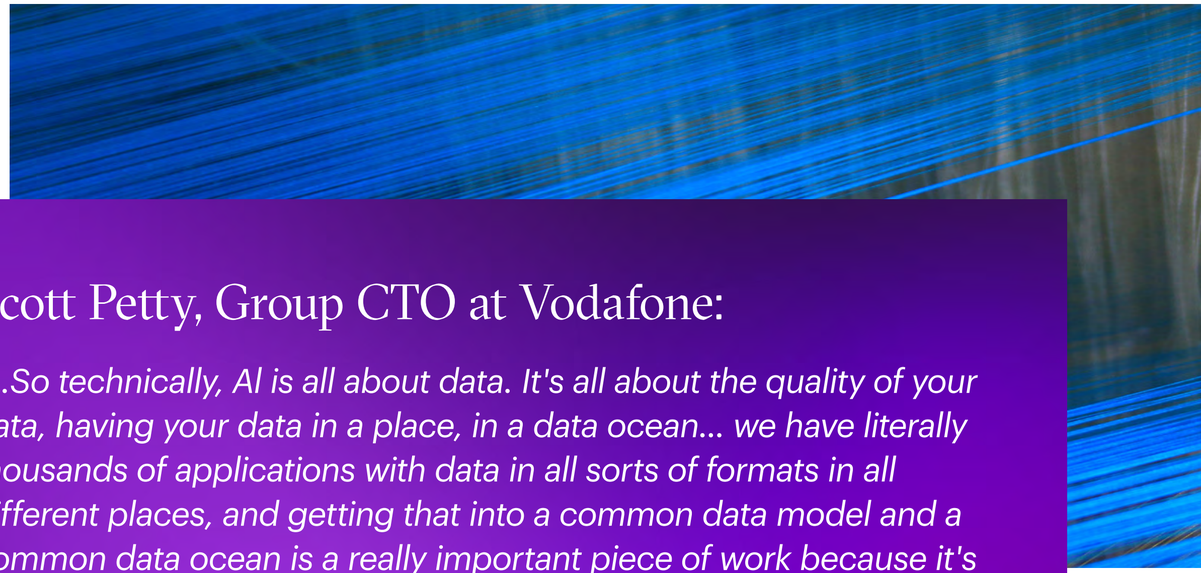


3. Use gen AI to kickstart data-first enterprise

Gen AI needs high-quality data to be effective. But today nearly half of the executives we surveyed (49%) see data technology integration complexity as a major barrier to getting started. And they're right—traditional approaches to modernizing the legacy data estate take too much time, cost and effort to keep up. But the good news is that the solution lies in the technology itself.[6]

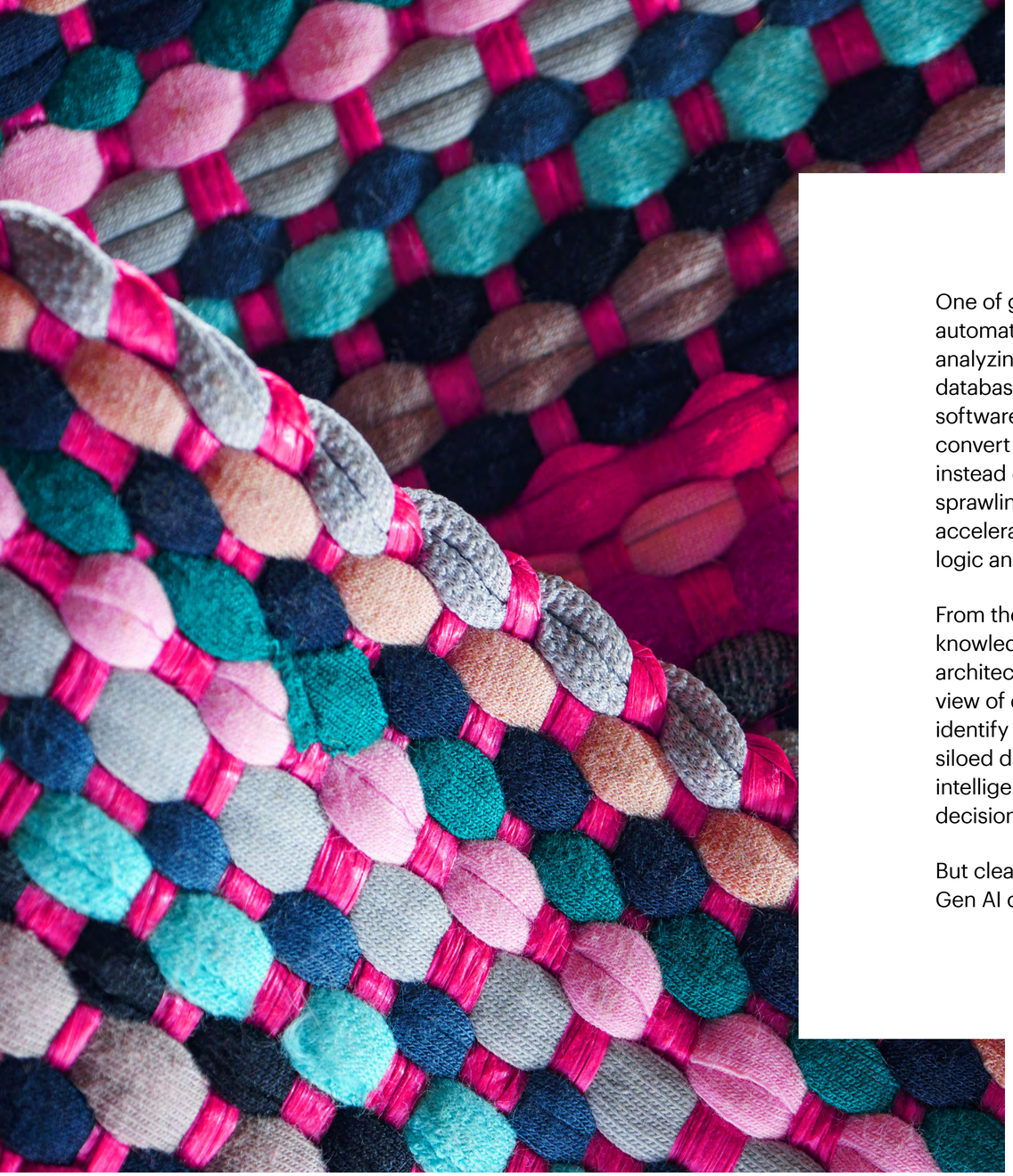
While high-quality data is essential to ensure gen AI efficacy, the technology is also a powerful tool for generating good quality, clean data. Gen AI offers CSPs an unprecedented opportunity to reinvent the entire life cycle of data, which reduces cost, enhances agility and improves decision-making.

Our research also found that **63% of executives** rank rising data maintenance costs among their top three data infrastructure and management challenges. This is where gen AI offers a practical breakthrough. Large Language Models (LLMs) can significantly improve the time and effectiveness of producing clean, high-quality data, radically accelerating data readiness rather than waiting for lengthy modernization cycles.



Scott Petty, Group CTO at Vodafone:

"...So technically, AI is all about data. It's all about the quality of your data, having your data in a place, in a data ocean... we have literally thousands of applications with data in all sorts of formats in all different places, and getting that into a common data model and a common data ocean is a really important piece of work because it's really the accuracy of that data that defines how accurate the large language model will be."



One of gen AI's most powerful capabilities lies in automating reverse engineering. By reading code, analyzing database structures and interpreting legacy database scripts, it can automatically document software features, inputs and outputs. It can also convert such scripts into modern formats in minutes instead of months. This allows CSPs to map their sprawling and undocumented data estate at an accelerated pace—uncovering dependencies, hidden logic and architectural blind spots.

From there, gen AI can help build a unified knowledge graph that forms the basis of modern data architecture. This provides a single, connected, full view of data across the organization. Gen AI helps identify patterns, relationships and overlaps across siloed datasets. In short, data becomes an integrated intelligence layer, powering faster, more accurate decision-making across functions.

But clean, connected data is only part of the equation. Gen AI can also help fill the gaps—literally.

CSPs can use gen AI to generate synthetic data that mirrors their actual operations, customer behaviors and network activities to fill gaps in datasets for testing, model training and simulations.[7] For instance, gen AI's synthetic data generation abilities can be harnessed to simulate a surge in service inquiries during new product launches, which could help train customer support models and anticipate service loads with greater accuracy.

Multi-agentic systems can be deployed to constantly monitor data quality, detect anomalies and trigger real-time remedial actions. These systems quickly reap rewards by reducing the need for manual intervention and increasing overall confidence in the data foundation.

How gen AI helped Telia lighten the data engineering load

Telia, one of the Nordics' largest communications operators, wanted to transform its largely inaccessible data estate that suffered from gaps and inconsistencies. The main challenge: just 1% metadata coverage across its data warehouse, which severely constrained data discovery, governance and analytics efficiency.

To address this, Telia launched an enterprise-wide gen AI-powered initiative aimed at improving metadata management and data discoverability. Through its Gen AI Data Steward Program, developed in collaboration with Accenture, Telia integrated Large Language Models (LLMs) via AWS Bedrock to automatically create detailed, high-quality column descriptions.

This included an automatic update of 87,000 data fields, which saved a significant number of data engineering hours. Teams could more easily locate, interpret and apply the right datasets—reducing delays in analytics workflows and improving overall data usability. This enhanced data governance and compliance while fostering better collaboration and data literacy across the organization.

05.

Data readiness today defines telco leadership tomorrow

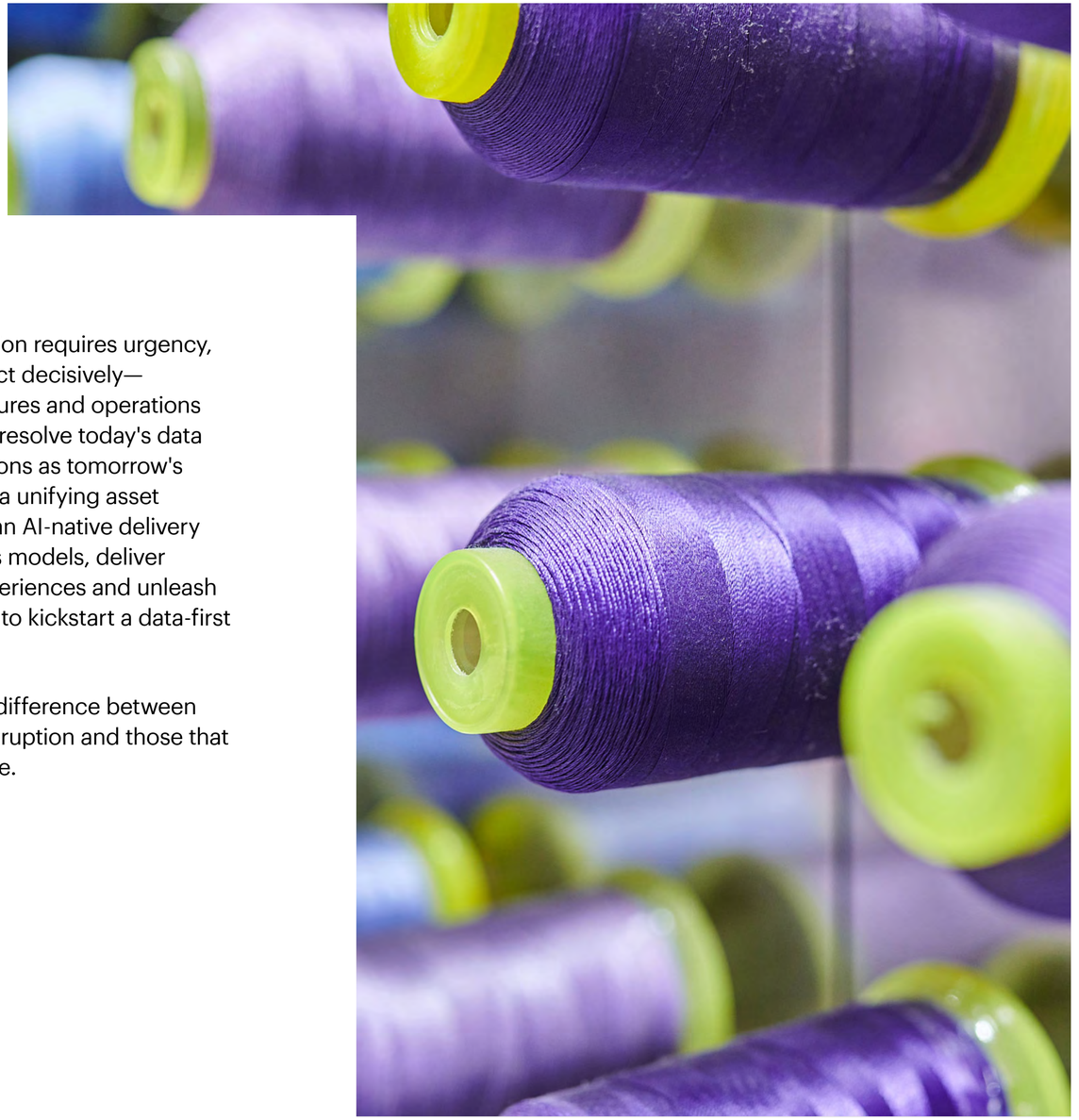
The rise of gen AI applications and agentic architectures is not just a business opportunity or routine technological advancement—it represents an existential shift. To seize this moment, telcos must start by fixing the foundation: how data is treated, governed and activated, embedding gen AI into the transformation process to unlock trapped data value.

The industry's leaders have shown us a way forward: treating data not as a technical afterthought, but as a strategic asset integrated into every business decision. Reimagining how data is treated, governed and activated is what builds real-time, intelligent enterprises. They are demonstrating how embedding gen AI at the core of their data transformation unlocks trapped value with powerful business outcomes, enabling real-time insights, personalized customer experiences and substantial operational efficiencies.

This is more than just an IT modernization challenge. It's an enterprise reinvention imperative that could result in profitable growth the industry has been pursuing.

While the window for transformation requires urgency, it also holds promise. CSPs that act decisively—aligning their strategies, architectures and operations around data and AI—will not only resolve today's data challenges but secure their positions as tomorrow's industry leaders. Treating data as a unifying asset and building the architecture for an AI-native delivery system, will pioneer new business models, deliver hyper-personalized customer experiences and unleash new paths to profit—using gen AI to kickstart a data-first enterprise.

Ultimately, this will be the crucial difference between companies that simply endure disruption and those that confidently define their own future.



About the research

Our multi-method research approach integrates a primary survey, interviews with subject matter experts at Accenture and case studies.

Primary survey:

1. Communications Industry Data debt study: In September 2024, Accenture conducted a comprehensive survey of 256 senior executives from telecommunications companies with revenues exceeding $5 billion, spanning 24 countries. The objective was to evaluate the current data landscape of the industry and gain deeper insight into how leading telcos are approaching data transformation. The study examined key strategic drivers, systemic challenges and varying levels of data maturity, while also identifying the critical enablers and barriers that influence the ability to turn data into a true strategic asset.
2. Communications Industry Enterprise Study: Between January and February 2025, Accenture conducted a survey of 1,200 enterprise executives of mid and large companies across 13 countries and 9 industries to assess evolving connectivity and digital service needs. The research explored enterprise satisfaction, experiences and preferences for telco B2B offerings versus other providers including digital and managed services and their willingness to consider telcos for gen AI and vertical integrated solutions.

Expert interviews: From December 2023 through April 2024, we conducted 12 in-depth interviews with senior Accenture Industry and AI experts to uncover how forward-looking operators can rearchitect their strategy, technology, processes and talent to modernize their data estates and accelerate AI readiness. These discussions also yielded actionable insights and strategic recommendations to help telcos drive tangible transformation outcomes.

Case studies: To complement our survey findings, we gathered case studies of companies that Accenture helped with data and AI transformation. These case studies illustrate the impact of technological reinvention on business and critical factors for a successful transformation.

For more information, visit **www.accenture.com/research**

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Accenture is a leading global professional services company that helps the world's leading businesses, governments and other organizations build their digital core, optimize their operations, accelerate revenue growth and enhance citizen services—creating tangible value at speed and scale. We are a talent- and innovation-led company with approximately 791,000 people serving clients in more than 120 countries. Technology is at the core of change today, and we are one of the world's leaders in helping drive that change, with strong ecosystem relationships. We combine our strength in technology and leadership in cloud, data and AI with unmatched industry experience, functional expertise and global delivery capability. Our broad range of services, solutions and assets across Strategy & Consulting, Technology, Operations, Industry X and Song, together with our culture of shared success and commitment to creating 360° value, enable us to help our clients reinvent and build trusted, lasting relationships. We measure our success by the 360° value we create for our clients, each other, our shareholders, partners and communities.

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