GS1 US



RESEARCH REPORT

The Supply Chain Readiness Gap

Insights from 500 supply chain professionals on what organizations need to build readiness at scale

V1.0 August 2026

This report provides a framework for organizations to assess their current readiness and identify opportunities to strengthen the foundational capabilities needed to support resilience, compliance, and long-term growth.

Created with insights from

500+

supply chain professionals



Executive Summary

Supply chains today operate in an environment defined by constant change. Organizations must navigate regulatory complexity, shifting demand patterns, and increasingly interconnected global networks while maintaining operational efficiency and resilience.

To better understand the drivers of supply chain readiness, GS1 US® surveyed more than 500 supply chain professionals across industries and organization sizes. The findings show that organizations with higher supply chain maturity consistently outperform their peers and that technology investments alone are insufficient without the data, governance, and interoperability needed to scale them effectively.

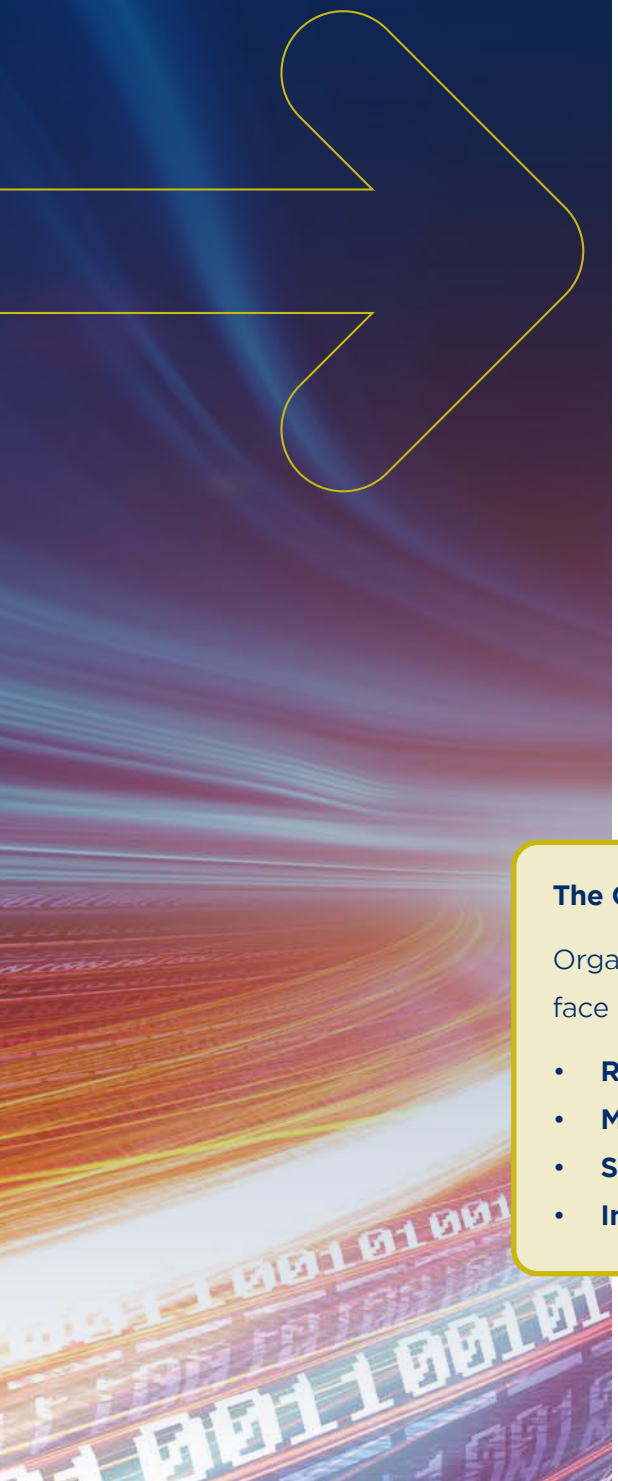
The Readiness Gap

Survey data from more than 500 supply chain professionals reveals a significant gap between organizations with high levels of supply chain maturity and those still building foundational capabilities. Organizations with stronger data integration, governance, interoperability, and standards adoption consistently report stronger operational performance and greater readiness for future challenges.

Key Capabilities That Set Apart High-Maturity Organizations*

CAPABILITY	HIGH-MATURITY ORGANIZATIONS	INDUSTRY OVERALL
AI-supported automation	**57%**	23%
Real-time centralized data integration	**81%**	38%
Highly effective external collaboration	**89%**	59%
Excellent internal alignment	**78%**	50%

**Adoption levels and capabilities are self-reported by respondents based on the definition of GS1 Standards adoption provided within the survey question.*



Why That Matters

Organizations with higher supply chain maturity are substantially more likely to report:

- **65%** Improved collaboration
- **60%** Easier regulatory compliance
- **52%** Reduced costs
- **46%** Faster time to market

Conversely, organizations that lack integrated data, governance, and interoperability often struggle to scale innovation, respond to regulatory requirements, and operate efficiently across increasingly complex supply networks. These findings suggest that supply chain readiness is not simply a technology challenge. It is the result of integrated data, strong governance, effective collaboration, and standards-based interoperability working together as a connected operating model.

Three Takeaways

1. **Technology alone does not create readiness.** Many organizations have adopted automation and AI, yet only 38% report centralized systems that collect and integrate data in real time.
2. **Most organizations remain stuck in the middle.** Nearly three-quarters of respondents fall into a medium-maturity tier, indicating meaningful progress but significant room for improvement.
3. **Standards are a common characteristic among high-maturity supply chain leaders.** Organizations with stronger supply chain capabilities consistently report deeper adoption of standards-based practices that support interoperability, collaboration, and scalability.

The findings summarized here are supported by deeper analysis throughout the report, which examines the capabilities behind the readiness gap and how they contribute to overall supply chain maturity.

The Cost of Limited Supply Chain Readiness

Organizations with fragmented data and limited interoperability face higher risk across multiple areas:

- **Revenue loss** from supply disruptions and stock issues
- **Margin pressure** caused by operational inefficiencies
- **Slower innovation** due to disconnected systems and data
- **Increased regulatory** and reputational exposure

Defining Supply Chain Maturity

Supply chain maturity reflects an organization's foundational readiness to operate, scale, comply, and innovate in an increasingly complex environment.

Rather than measuring maturity by the number of technologies deployed, this research evaluates how effectively supply chain capabilities are integrated and operationalized. While organizations report adopting an average of 3.4 new supply chain technologies in the past two years, true maturity depends on whether data, systems, standards, and trading partners function as a coordinated ecosystem.

To assess readiness more rigorously, this research uses a composite maturity model based on multiple operational indicators.

Core Dimensions of Supply Chain Maturity

Supply chain maturity is assessed across several foundational capabilities:

- **Digitization and automation** of supply chain processes
- **Data integration and quality**, including real-time visibility
- **Data governance and trust**, both internally and with partners
- **Internal alignment** across functions and teams
- **External data sharing and interoperability** with trading partners
- **Depth of standards adoption**, including consistent use of GS1 Standards

Together, these dimensions determine whether organizations can scale innovation, collaborate effectively across their ecosystem, and respond to regulatory and market change.

The Capability Gap: Progress Without Integration

While many organizations are actively modernizing their operations, foundational integration often lags behind technology adoption.

Nearly 60% of organizations report having automated most processes or employing AI or machine learning, signaling significant investment in supply chain innovation. However, far fewer have built the data infrastructure needed to support these technologies at scale.

Only 38% of organizations report operating centralized systems that collect and integrate data in real time, while roughly 32% still collect data from multiple sources and integrate it manually, creating bottlenecks that limit visibility and slow decision-making.

This disconnect creates a ceiling on innovation. Forty-one percent of organizations report they can pilot new innovations but struggle to scale them, most often due to fragmented data environments, integration challenges, or limited funding.

Current Levels of Supply Chain Automation

35% All or most processes automated, data management systems integrated with real-time visibility, and advanced analytics used for forecasting

23% AI or machine learning employed; fully automated processes and real-time digital collaboration with suppliers and partners

18% Some processes automated and some data integrated

15% Basic software tools, no automated processes, and data mostly siloed

09% Manual processes and siloed data

How Organizations Collect and Integrate Supply Chain Data From Various Sources

09% We do not have a systematic approach to data collection and integration.

21% Data collection is inconsistent and integration is challenging.

32% We collect data from multiple sources, but integration is done manually.

38% We have centralized systems that collect and integrate data in real time.

GS1 INSIGHT

Operational Integration Is the Real Barrier to Scaling Innovation

Through its work with supply chain leaders across industries, GS1 US consistently finds that organizations often focus on adopting new technologies but underestimate the operational work required to integrate them across systems, partners, and processes.

Organizations that successfully scale innovation typically invest not only in technology but also in standardized data practices, governance structures, and cross-functional alignment that allow new capabilities to operate across the entire supply chain ecosystem.

Most Organizations Sit in the Middle of the Maturity Curve

The research shows that 72% of organizations fall into a middle tier of supply chain maturity. While this distribution may suggest broad progress, it also reflects a critical capability gap: Many organizations are digitizing their supply chains but lack the data integration, governance, and interoperability needed to fully realize the value of modern technologies.

Maturity Distribution Across Organizations

20% High maturity
72% Medium maturity
08% Low maturity

The Performance Advantage of Higher Organizational Maturity

Organizations with the highest levels of supply chain maturity demonstrate what becomes possible when foundational capabilities are fully integrated. They are significantly more likely to report:

65% Improved collaboration
60% Easier regulatory compliance
52% Reduced costs
46% Faster time to market

These outcomes illustrate how improvements in data quality, governance, and standards adoption unlock downstream benefits across supply chain performance.

Scaling Supply Chain Maturity Is Often a Leadership Challenge

Through GS1's work convening cross-industry communities, GS1 US consistently sees organizations struggle less with technology availability than with operational alignment.

The organizations that scale successfully typically establish:

- Clear data ownership
- Strong governance and accountability
- A defined operating model for managing shared supply chain data

Without these foundations, even advanced technologies struggle to deliver their full value.



The Middle Tier: Continuous Improvers 72%

Representing 72% of the industry, medium-maturity organizations make up the core of the modern supply chain. The data suggests that rather than pursuing sweeping operational overhauls, this group is taking a pragmatic, step-by-step approach to supply chain transformation.

Several defining characteristics emerge across this majority segment:

- **A focus on steady progress**
  More than half (52%) describe their primary supply chain strategy for the next two years as "incremental, continuous improvement."
- **At a transition point with standards adoption**
  These organizations are actively strengthening their data foundations, split almost evenly between those that have fully adopted GS1 Standards (50%) and those that report partial adoption alongside internal systems (47%).
- **Improving collaboration while addressing data inconsistencies**
  More than 90% report good or excellent internal collaboration, though nearly half (47%) acknowledge ongoing challenges with occasional data discrepancies between departments.
- **Actively piloting innovation**
  Many organizations in this tier are experimenting with emerging technologies. While 49% believe their infrastructure is ready to scale innovation, 44% report successfully piloting new capabilities while continuing to work through integration and operational barriers.

Rather than standing still, these organizations are actively building the operational foundations needed to advance toward higher levels of supply chain maturity.

The Role of GS1 Standards in Supply Chain Readiness

As supply chains become increasingly data-driven, standardized data plays a critical role in enabling organizations to integrate systems, collaborate with partners, and respond to regulatory requirements more effectively.

GS1 Standards provide a global framework for standardized product identification, data exchange, and information management across supply chains. By enabling consistent data structures and identifiers, GS1 Standards support greater visibility, traceability, and interoperability across systems and trading partners.

Adoption of GS1 Standards

The research shows a clear relationship between GS1 Standards adoption and overall supply chain maturity. Organizations that have more advanced supply chain capabilities are also more likely to report deeper integration of GS1 Standards across their operations.

Across the full sample, 53% of organizations report that GS1 Standards are fully integrated into their supply chain processes, while others report partial implementation or ongoing adoption. In this research, "fully adopted and integrated" refers to organizations that use GS1® identification—such as barcodes or Global Trade Item Numbers (GTINs)—on products, cases, or pallets and share product data using GS1-recognized global systems.

NOTE: *GS1 Standards adoption is one of several factors used to assess supply chain maturity in this research. While standards provide a critical foundation for interoperable data, organizations may still face maturity gaps in areas such as data governance, system integration, or process automation.*

GS1 Standards Adoption by Industry*

- **57%** Healthcare/Pharma/Medical Device
- **55%** Grocery Retail
- **49%** Foodservice
- **46%** Apparel/General Merchandise/CPG

GS1 Standards Adoption Supports More Advanced Supply Chain Capabilities

Organizations with stronger foundational capabilities, such as centralized data systems, governance structures, and partner data-sharing practices, are more likely to report deeper integration of standards.

Standards adoption is less about deploying a single tool and more about embedding standardized data practices across supply chain operations. Organizations with stronger maturity indicators are significantly more likely to have fully adopted GS1 Standards, unlocking advanced operational capabilities. Conversely, organizations earlier in their maturity journey typically report only partial standards adoption, leaving them reliant on fragmented systems and manual processes that cannot scale.

Operational Capabilities by Supply Chain Maturity*

CAPABILITY	HIGH-MATURITY ORGANIZATIONS	INDUSTRY OVERALL
AI-supported automation	**57%**	23%
Real-time centralized data integration	**81%**	38%
Highly effective external collaboration	**89%**	59%
Excellent internal alignment	**78%**	50%

**Adoption levels and capabilities are self-reported by respondents based on the definition of GS1 Standards adoption provided within the survey question.*



The research shows a clear relationship between GS1 Standards adoption and overall supply chain maturity.

Barriers to GS1 Standards Adoption

Despite broad recognition of their value, organizations still report several barriers to adopting or scaling GS1 Standards. However, the research suggests that these challenges are often linked to a company's overall supply chain maturity. For example, organizations still relying on manual processes often view implementation through the lens of upfront cost and complexity. In contrast, higher-maturity organizations approach standards not as a singular expense but as a foundational investment required to unlock enterprise-wide scalability and long-term ROI.

Top Barriers to GS1 Adoption

- **67%** High implementation costs
- **61%** Limited technical resources
- **57%** Perceived complexity
- **29%** Belief it's only for large/global companies
- **26%** Lack of awareness
- **07%** Lack of retailer mandates
- **02%** No barriers

Standards Enable Scalable Supply Chain Operations

Organizations with stronger internal alignment and governance structures are significantly more likely to overcome implementation challenges and scale standards-based data practices across their operations. This suggests that successful GS1 Standards adoption depends not only on technology investment but also on organizational alignment, governance, and shared data ownership.

Operational Outcomes by Governance Strength

CAPABILITY	HIGH-MATURITY ORGANIZATIONS	LOW-MATURITY ORGANIZATIONS
Clear data governance strategy actively executed	**85.1%**	13.2%
Strong internal collaboration with shared product data across departments	**78.2%**	26.3%

Higher-maturity organizations approach standards not as a singular expense but as a foundational investment required to unlock enterprise-wide scalability and long-term ROI.

GS1 INSIGHT

Reframing the Cost of GS1 Standards: From Expense to Investment

Organizations often cite cost and complexity as barriers to adopting GS1 Standards. However, these concerns frequently reflect upfront investment considerations rather than the total value delivered over time.

In practice, standards-based approaches can reduce manual processes, improve data accuracy, streamline partner collaboration, and support regulatory compliance, driving measurable operational and financial benefits. Leading organizations increasingly view standards not as a cost center but as a foundational investment that enables scalability, efficiency, and long-term growth.

Furthermore, organizations do not have to navigate this complexity alone. GS1 US is a mission-driven association invested in the long-term success of its members. By leveraging GS1 US's extensive educational resources, advisory services, and peer collaboration networks (such as GS1 Connect® and various discussion groups), organizations can significantly bridge their internal resource gaps, reduce perceived complexity, and turn their standards implementation into a direct investment in business growth.



Data Foundations: Where Supply Chain Readiness Breaks Down

While GS1 Standards provide a critical framework for interoperability and scalable data exchange, their impact ultimately depends on the strength of an organization's underlying data environment.

Standards help create the structure for consistent product identification and data sharing, but organizations still need integrated systems, governance processes, and reliable data practices to operationalize them effectively. When those foundations are weak, organizations often struggle to scale automation, collaboration, and advanced supply chain capabilities.

Gaps in Data Collection and Integration

Centralized, real-time data collection is one of the clearest indicators of supply chain maturity—and remains relatively uncommon across many organizations. Across the full sample, only 38% of organizations report operating centralized systems that collect and integrate data in real time, highlighting a widespread readiness gap.

Organizations with weaker maturity indicators are far more likely to report fragmented data environments. Among lower-maturity organizations:

> **21%** report inconsistent data collection with difficult or manual integration
>
> **09%** report having no systematic approach to data collection

These gaps make it difficult for organizations to achieve consistent visibility across systems and trading partners, limiting the operational value of both standards and emerging technologies.

Governance Gaps Undermine Data Trust

Data governance maturity closely mirrors overall supply chain readiness. Organizations with stronger supply chain capabilities are far more likely to have clear, established governance frameworks that support consistent data management across systems and teams.

However, governance challenges are not limited to organizations at the early stages of maturity.

Approach to Data Governance and Usage

> **55%** We have a clear strategy and act on it.
> **39%** We have a partial strategy, but execution is lacking.
> **05%** We manage data within teams only.



Only 38% of organizations report operating centralized systems that collect and integrate data in real time, highlighting a widespread readiness gap.

This gap between strategy and execution suggests that many organizations recognize the importance of data governance but struggle to operationalize it across systems, teams, and trading partners. As a result, governance frameworks often remain partially implemented, inconsistently enforced, or disconnected from operational workflows, limiting their impact on overall supply chain readiness.

Perception as a Barrier to Foundational Progress

Beyond technical challenges, misconceptions about standards and data practices can also delay foundational investment.

For example:

> **29%** believe standards are only relevant for large or global companies
>
> **57%** cite the perceived complexity of implementation as a primary barrier to standards adoption

These perceptions can slow progress, particularly among smaller or mid-sized organizations, keeping them reliant on manual processes and fragmented data environments.

Why Data Foundations Matter

Weak data foundations limit an organization's ability to:

- Scale automation, AI, and predictive analytics
- Share consistent standards-based data with partners
- Confidently meet regulatory requirements

Strong data foundations, by contrast, enable organizations to integrate systems, collaborate effectively across supply chains, and support the advanced capabilities explored in the sections that follow.

Sustainability and Supply Chain Data

Sustainability is emerging as a growing operational priority, with 41% of respondents identifying it as a top-five supply chain challenge. The research also shows a strong relationship between sustainability initiatives and GS1 Standards adoption.

Organizations that have fully adopted GS1 Standards are significantly more likely to prioritize sustainability initiatives and report improvements in sustainability metrics. These findings highlight the role of standardized data in supporting product traceability, improving supply chain transparency, and enabling more reliable sustainability reporting across partners and systems.



Sustainability Outcomes by GS1 Standards Adoption Level

- Fully adopted & integrated
- Partially adopted
- Planning to adopt/Not yet adopted

Note: Specific percentages for these subgroups were omitted from the aggregate findings, though the downward performance trend remains consistent across all lower-adoption tiers.

Prioritize Sustainability Initiatives

70% | 40% | 39%

Report Effective Traceability Processes

68% | 48% | 30%

Report Measurable Sustainability Improvements

53% | 30%

Collaboration, Interoperability, and the Power of Standards

Effective collaboration—both internally and with trading partners—is a key indicator of supply chain maturity. Organizations that can share consistent standards-based data across teams and systems are better positioned to improve visibility, respond to disruptions, and support regulatory and innovation initiatives.

While many organizations report progress, gaps remain in their ability to maintain consistent data across functions. Half of organizations (50%) report excellent internal collaboration, with centralized product information accessible across teams. However, nearly as many report only moderate collaboration, often citing occasional discrepancies in product or supply chain data and persistent functional silos.

These findings suggest that even digitally enabled organizations may lack the governance, integration, or standards alignment needed to support consistent data sharing at scale.

External Data Sharing and the Role of Standards

The ability to share consistent standards-based data with external partners remains uneven across organizations. While some operate centralized real-time data environments that enable seamless collaboration across trading partners, others still rely on fragmented systems and manual integration processes that limit data sharing at scale.

GS1 Standards provide a common framework for consistent product identification and data exchange across systems, teams, and partners. Organizations with stronger data foundations report measurable collaboration and operational benefits:

- **57%** report improved collaboration with trading partners
- **54%** report fewer inventory or fulfillment issues

These findings highlight how standardized data enables organizations to move from fragmented collaboration toward more resilient ecosystem-wide supply chain operations.

GS1 INSIGHT

Interoperability Depends on Shared Data Standards

True supply chain interoperability requires more than system connectivity. Organizations must also align on how products, locations, and supply chain events are identified and described. GS1 Standards provide a common framework for product identification and data exchange, allowing organizations to reduce manual reconciliation, improve partner collaboration, and scale shared data across increasingly complex supply chain networks.



Half of organizations (50%) report excellent internal collaboration, with centralized product information accessible across teams.

Regulatory and Industry Readiness

Supply chain organizations are navigating a growing set of regulatory mandates and industry initiatives that increasingly require end-to-end traceability, standardized data, and seamless interoperability across trading partners.

Regulations such as the U.S. Food and Drug Administration's (U.S. FDA's) Food Safety Modernization Act Traceability Rule (FSMA Rule 204) and Extended Producer Responsibility (EPR) are expanding requirements for product transparency, traceability, and data sharing across the supply chain. At the same time, industry initiatives like Sunrise 2027, which aims to enable 2D barcode scanning at the point-of-sale, are accelerating the shift toward richer product identification and more dynamic data capture.

While these mandates and initiatives vary in scope and timeline, they share a common implication: Organizations must strengthen the underlying data foundations needed to support consistent product identification, traceability, and information exchange across systems and partners.

Readiness Varies by Initiative and Industry

Across the full sample, 55% of organizations report being very prepared for Sunrise 2027, while 38% report being somewhat prepared, suggesting strong awareness but uneven operational readiness. Because the survey asked all respondents about each regulation or initiative, aggregate readiness scores may underrepresent preparedness within the industries most directly affected. To provide a clearer view, the analysis examines readiness within the most relevant sectors:

"Very Prepared" Readiness by Relevant Industry*

MANDATE/ INITIATIVE	OVERALL AVERAGE	INDUSTRY-SPECIFIC "VERY PREPARED" DATA
Sunrise 2027 (2D Barcodes)	**55%**	Grocery Retail—66%
		Apparel & CPG—53%
FSMA Rule 204	**42%**	Foodservice—44%
		Grocery Retail—36%
EPR	**46%**	Healthcare—52%
		Apparel & CPG—49%

**Readiness levels are self-reported by respondents based on their own assessment of being "very prepared" rather than a standardized or externally validated definition.*

Across the full sample, 55% of organizations report being very prepared for Sunrise 2027, while 38% report being somewhat prepared.

These differences reflect how directly organizations are impacted by each mandate as well as the complexity of the traceability and data-sharing requirements involved. Initiatives tied to point-of-sale capabilities, such as Sunrise 2027, tend to show higher-reported readiness, particularly in retail environments. In contrast, regulations that require end-to-end traceability across multiple supply chain nodes, such as FSMA Rule 204, often expose deeper gaps in data integration, system interoperability, and partner coordination.

GS1 INSIGHT

Regulatory Readiness Often Reveals Underlying Data Gaps

As organizations prepare for regulatory mandates such as FSMA Rule 204 and EPR, many discover that their greatest challenges are not regulatory requirements themselves but the underlying data infrastructure needed to support traceability.

Organizations with integrated data systems, clear governance, and standards-based data practices consistently report higher preparedness across both regulatory mandates and industry initiatives.

Mandates Are Driving a Shift Toward Traceable Standards-Based Data

Beyond individual compliance requirements, these mandates are collectively accelerating a broader transformation in how supply chains manage and share data. Organizations are moving from fragmented, system-specific data practices toward standardized, interoperable data models that support traceability across the full product life cycle.

This shift places new demands on foundational capabilities, including:

- Consistent product identification across systems and partners
- Real-time or near-real-time data capture and visibility
- Scalable data-sharing frameworks across trading partners
- Strong governance to ensure data accuracy and trust

Organizations with more mature data environments—characterized by integrated systems, clear governance, and standards-based data practices—are significantly better positioned to meet both current regulatory requirements and emerging industry expectations.

Innovation Readiness

Organizations across industries are actively investing in new supply chain technologies, signaling strong intent to modernize operations.

Over the past two years:

- **44%** have adopted AI or predictive modeling
- **44%** have implemented real-time tracking and monitoring
- **42%** have deployed automation or robotics
- **28%** have experimented with digital twins

However, technology adoption does not always translate into operational readiness. The ability to scale innovation across the supply chain depends heavily on data integration, systems interoperability, and governance capabilities.

Internal Blockers That Delay Supply Chain Innovation

- **63%** Lack of funding
- **62%** Data fragmentation
- **47%** Insufficient staffing
- **41%** Misaligned leadership
- **20%** IT infrastructure gaps

Maturity Determines Who Can Scale Innovation

Supply chain maturity strongly influences whether innovation initiatives move beyond experimentation. Fifty-seven percent of high-maturity organizations report adopting AI or predictive modeling, compared to 26% of lower-maturity organizations. These organizations are also far more likely to have the integrated systems and data infrastructure needed to scale innovation across the enterprise. By contrast, organizations earlier in their maturity journey often pilot new technologies but struggle to operationalize them, revealing a persistent pilot-to-scale gap across supply chains.

57% of high-maturity organizations report adopting AI or predictive modeling, compared to 26% of lower-maturity organizations.

GS1 INSIGHT

Innovation Scales Faster When Data Foundations Are Strong

GS1 US frequently sees organizations pilot advanced supply chain technologies such as AI, automation, and predictive analytics. However, these innovations often struggle to scale when underlying product and supply chain data remain fragmented across systems. Standardized product identification and interoperable data structures help organizations move from isolated pilots to scalable operational capabilities.

Innovation Challenges Reflect Data Foundation Gaps

The barriers organizations cite most often mirror the data and governance challenges identified earlier in the report:

- **45%** cite inconsistent or poor-quality data
- **50%** cite technology implementation or adaptation difficulties

These challenges highlight a broader theme: Innovation readiness depends less on access to new technologies and more on the strength of the underlying systems that support them.

Leadership Confidence and Interoperability

Most organizations position themselves as fast followers in supply chain innovation (51%), while 38% identify as proactive innovators. Organizations with stronger supply chain maturity are significantly more likely to fall into the latter group, reflecting greater confidence in their data, systems integration, and governance practices.

Interoperability also plays an important role in enabling innovation at scale. Fifty-five percent of organizations say interoperability with external partners is extremely important for supporting innovation. Standards-based interoperability allows technologies such as AI, advanced analytics, and real-time tracking to operate across systems and trading partners rather than remaining siloed within individual organizations.

Closing the Readiness Gap

Supply chain maturity is a strong predictor of organizational performance. Organizations with stronger foundational capabilities consistently demonstrate:

- Greater regulatory preparedness
- Stronger ability to scale innovation
- More effective collaboration and partner trust
- Greater resilience in the face of disruption

These advantages are driven not by individual technologies but by the strength of the underlying systems, governance, and data practices that support them.

The Middle-Tier Challenge

Despite significant progress, most organizations remain in a medium-maturity state—having adopted modern technologies but lacking the capabilities required to scale them effectively.

This middle tier represents the largest opportunity for improvement. Without stronger data integration, governance, and interoperability, many organizations risk plateauing at incremental improvements rather than achieving enterprise-wide transformation. Closing this gap requires strengthening the foundational capabilities that allow technologies, partners, and standards to operate as a connected ecosystem.

Standards as Connective Infrastructure

Across the research, GS1 Standards consistently emerge as a common thread among higher-maturity organizations.

Rather than serving as a compliance requirement, standards function as connective infrastructure—linking data, systems, partners, and processes across the supply chain.

Organizations that embed standards into their operating model are better positioned to adapt to evolving regulatory requirements, scale innovation initiatives, and collaborate effectively across complex supply networks.



GS1 Standards consistently emerge as a common thread among higher-maturity organizations.

GS1 INSIGHT

Innovation Readiness Is Built on Data Foundations

Innovation readiness is not simply about adopting new technologies. Organizations that invest in data foundations, governance, and standards-based interoperability are far better positioned to scale innovation across the supply chain. Without these foundations, even advanced tools often remain confined to isolated pilots.

What Progress Requires

Closing the readiness gap requires sustained investment in foundational capabilities, including:

- Demystifying standards and reducing perceived complexity
- Strengthening data governance and ownership
- Building interoperable systems that support collaboration and scale

Together, these efforts enable organizations to move beyond isolated pilots and point solutions toward enterprise-wide supply chain readiness.

The Role of GS1 US

GS1 US serves as a neutral convener across industries, bringing together supply chain leaders to develop shared standards, exchange best practices, and address common operational challenges. Through standards development, education, and peer collaboration, GS1 US helps organizations navigate complexity and accelerate supply chain maturity.

One example is **GS1 Connect**, the organization's annual gathering of supply chain leaders working to advance supply chain innovation and collaboration.

Organizations seeking guidance, industry-specific resources, and implementation support can explore the tools and educational resources available at www.gs1us.org.

The Maturity Roadmap

The organizations best prepared for the future are those investing today in strong supply chain foundations. Advancing maturity requires more than adopting new technologies—it demands a coordinated approach to data, systems, governance, and collaboration.

Based on the findings in this research, organizations can accelerate supply chain maturity by focusing on the following priorities:

1

Establish a strong data foundation

Invest in centralized systems that enable real-time data collection, integration, and visibility across the supply chain.

2

Strengthen data governance and ownership

Define clear accountability, standards, and processes to ensure data accuracy, consistency, and trust across teams and partners.

3

Standardize data using GS1 Standards

Adopt standardized identification and data-sharing practices to enable interoperability, traceability, and scalable collaboration.

4

Integrate systems and break down silos

Connect internal systems and align cross-functional teams to create a unified end-to-end view of supply chain operations.

5

Scale automation and advanced capabilities

Move beyond pilots by embedding automation, analytics, and AI into core processes supported by integrated data.

6

Enable seamless collaboration with trading partners

Build interoperable data-sharing practices that support real-time collaboration and reduce friction across the supply chain ecosystem.

Methodology

This report is based on a survey of 500 supply chain professionals conducted on behalf of GS1 US. Results reflect a 95% confidence level with a ±4.4% margin of error.

Respondent Profile

41% Vice President or Executive level
38% Director level
20% C-level Executives

Industry Representation

27% Apparel/General Merchandise/ Consumer Packaged Goods
27% Foodservice
26% Grocery Retail
20% Healthcare/Pharma/Medical Device

Company Size

20% 101–500 employees
37% 501–1,000 employees
29% 1,001–5,000 employees
10% 5,001+ employees

Business Model

Respondents represented organizations operating across both business-to-consumer (B2C) and business-to-business (B2B) supply chains. Because many organizations operate across multiple channels, these categories are not mutually exclusive.

78% B2C
69% B2B

Analytical Approach

To evaluate supply chain readiness, the research developed a supply chain maturity model based on responses across multiple operational dimensions, including:

- Digitization and automation
- Data integration and quality
- Data governance and trust
- Internal collaboration and alignment
- External data sharing and interoperability
- Adoption of standards-based practices

Organizations were grouped into low-, medium-, and high-maturity tiers to enable comparative analysis. Crosstab analysis by maturity, role, industry, and company size was used to identify statistically meaningful patterns and insights throughout the report.

About GS1

GS1 US, a member of GS1 global, is a not-for-profit information standards organization that facilitates industry collaboration to help improve supply chain visibility and efficiency through the use of GS1 Standards, the most widely used supply chain standards system in the world. Nearly 300,000 businesses in 25 industries rely on GS1 US for trading partner collaboration that optimizes their supply chains and drives cost performance and revenue growth while also enabling regulatory compliance. They achieve these benefits through solutions based on GS1 global unique numbering and identification systems, barcodes, Electronic Product Code (EPC®)-based RFID, data synchronization, and electronic information exchange. For more information, visit www.gs1us.org.

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