SAPinsider

BUILDING RESILIENT AND AGILE SUPPLY CHAINS LEVERAGING DATA, ANALYTICS AND AUTOMATION

DETAILED FINDINGS FROM THE BENCHMARK REPORT

By Mark Vigoroso April 2024

DETAILED FINDINGS

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DETAILED FINDINGS

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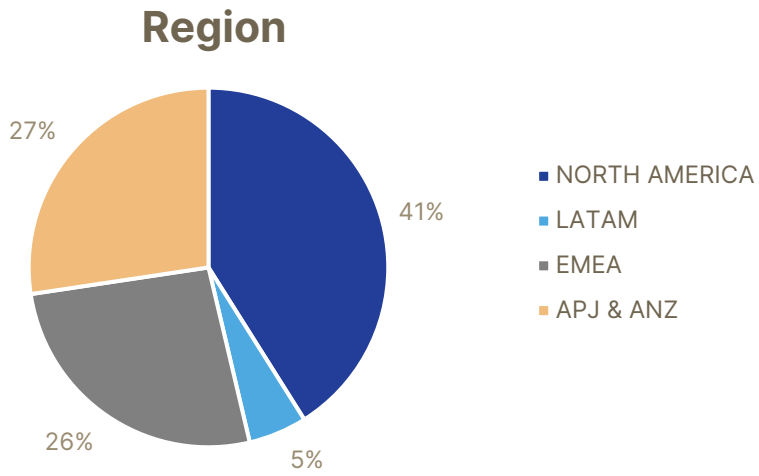
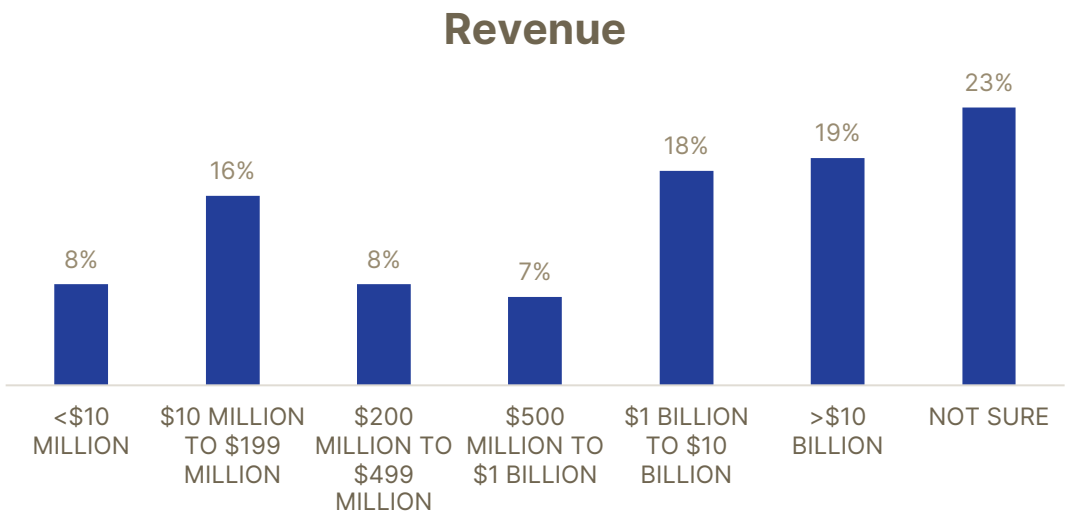
Between January and April 2024, SAPinsider surveyed 133 of its community members to understand how SAP organizations currently or plan to enable more resilient and agile supply chains with data, analytics, and automation.

The survey participants came from various geographical regions worldwide and represented diverse organization sizes, contributing to a comprehensive dataset.





DETAILED FINDINGS

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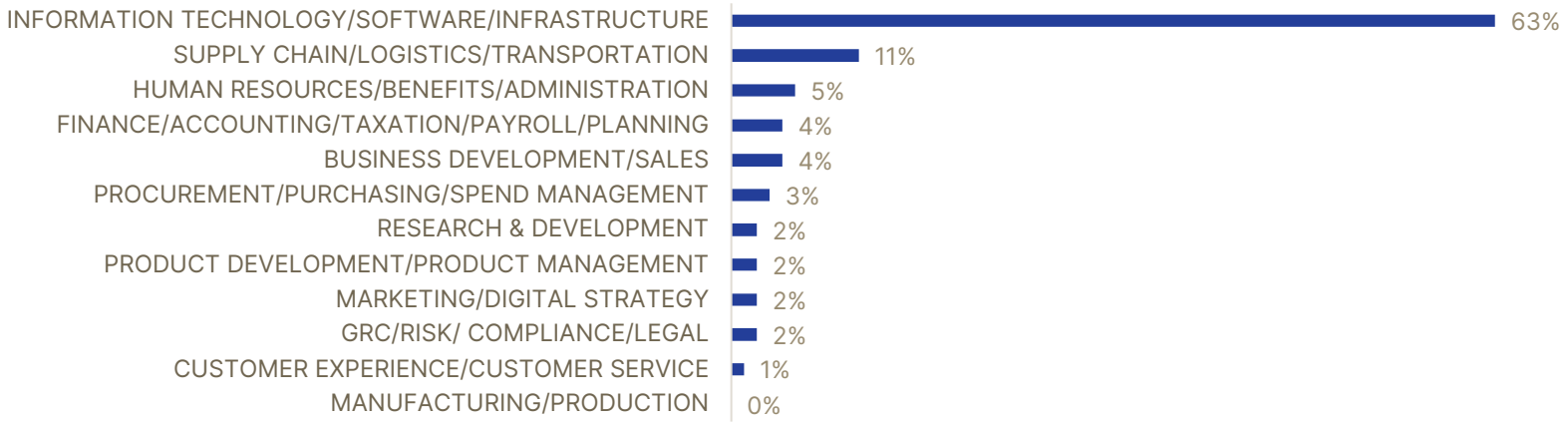
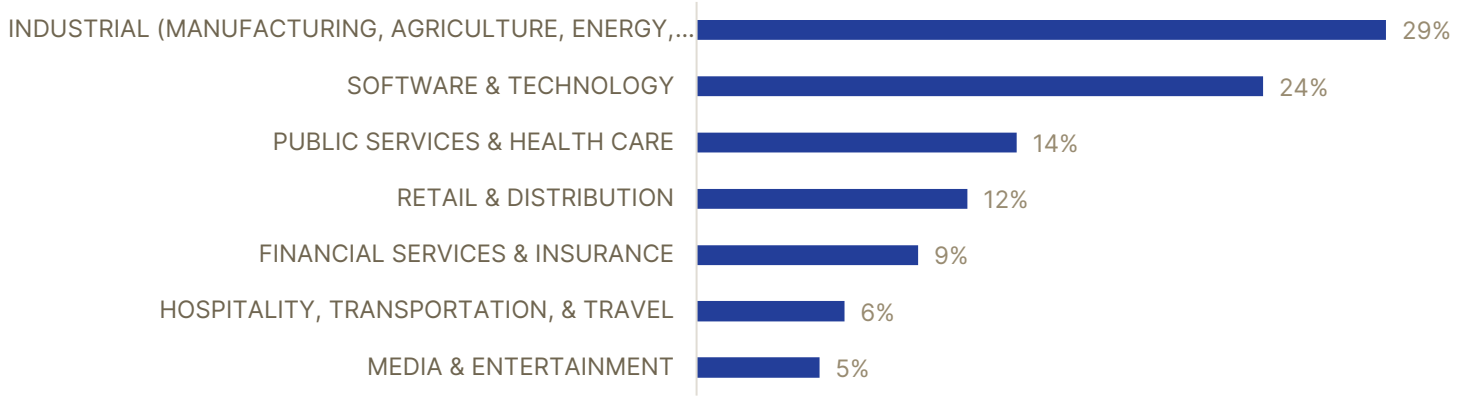
The survey targeted a broad range of job functions directly or indirectly involved in supply chain decision-making, with the largest proportion coming from information technology (IT), software and infrastructure.

These professionals came from a variety of industries, with the largest proportion coming from industrial — including manufacturing, agriculture, energy and natural resources — followed by software & technology, public services & healthcare, and retail & distribution.

Job Functions



Industries



DETAILED FINDINGS

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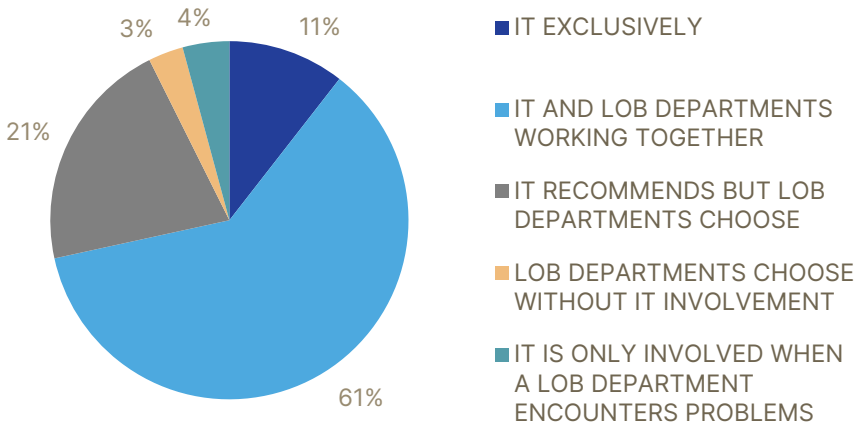
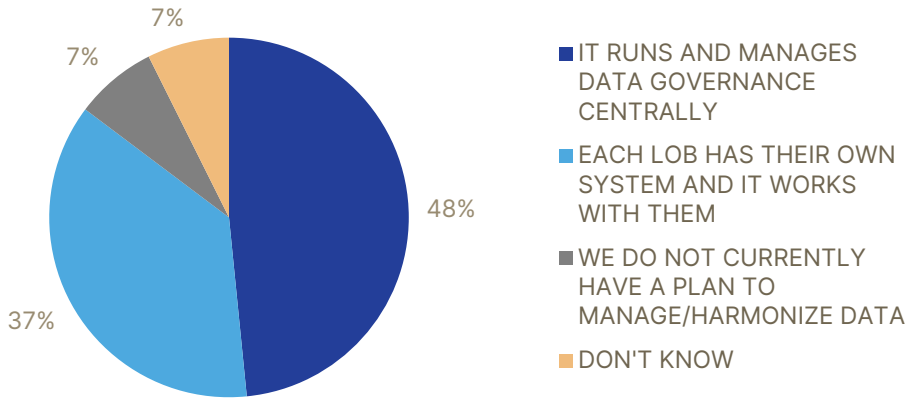
Over 60% of respondents reported that IT and LOB departments work together to make decisions around data, analytics and automation solutions for supply chain, a slight uptick from 2023.

When it comes to data governance, it appears lines of business are taking a stronger role. About 48% of respondents said that IT runs and manages data governance centrally, a full 10 percentage points lower than 2023. And 37% reported that each LOB has their own data governance system and partners with IT, about 8 percentage points higher than 2023.

Decision Making Group



Data Governance Group



DETAILED FINDINGS

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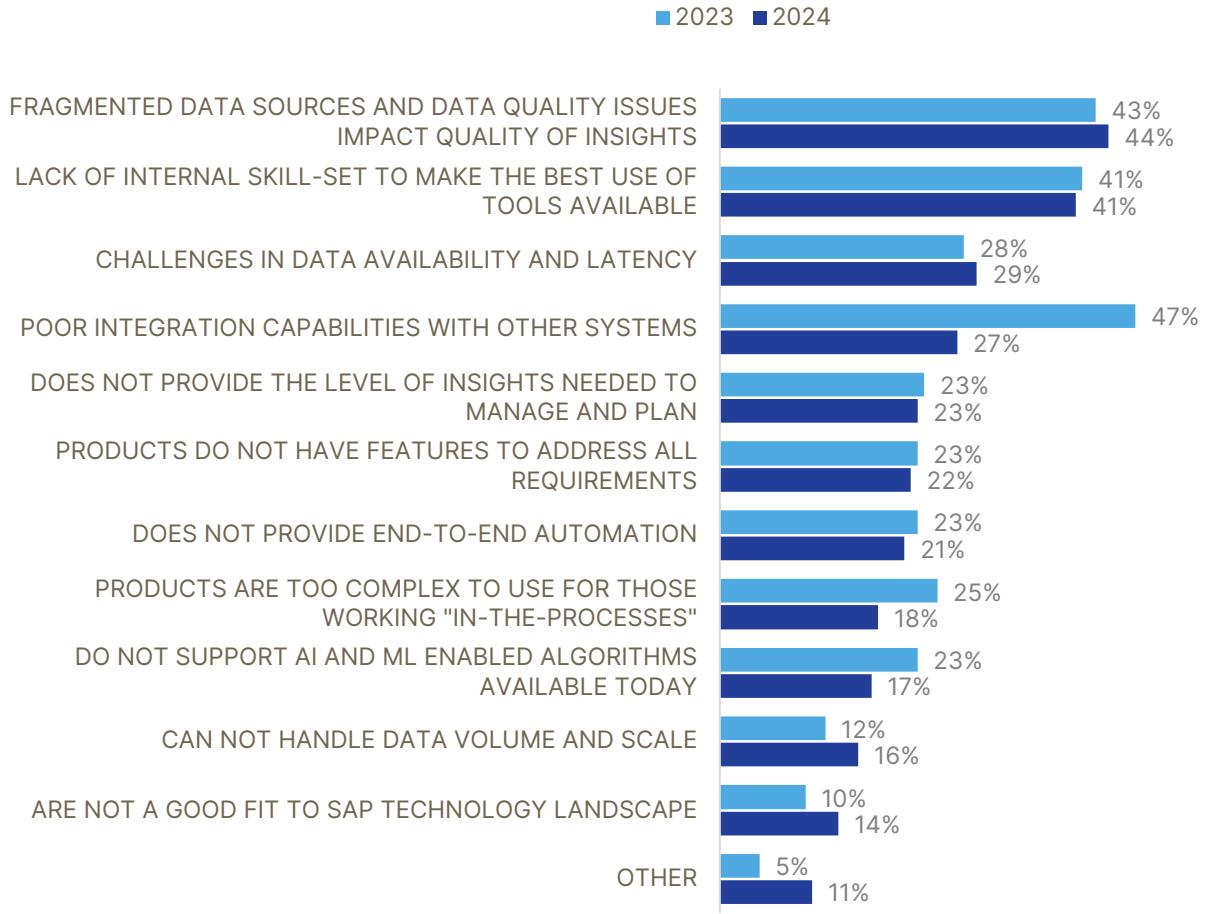
In 2024, almost half of the organizations surveyed (44%) stated that fragmented data sources and data quality issues inhibit them from optimally utilizing existing data analytics and automation solutions. A significant portion also noted that a lack of internal skill sets available to make best use of these tools (41%).

The results also reveal a technological shift in available solutions. In 2023, respondents identified poor integration capabilities as the primary inhibiting factor, accounting for 47% of the responses. However, the results show a significant improvement at 27% in 2024, indicating that data analytics and automation tools have likely enhanced integration capabilities with other systems.

Challenges Hindering Optimal Use of Supply Chain Data, Analytics and Automation Tools



DART MODEL FRAMEWORK

Building Resilient and Agile Supply Chains Leveraging Data, Analytics and Automation

DRIVERS

- Significant increase in supply chain complexities and associated risks (53%)
- Increasing prominence of AI/ML on the corporate agenda (43%)
- Rapidly evolving customer expectations and customer demand (37%)
- Increasing talent shortages in supply chain domain (36%)
- Pressure to run more sustainable supply chains in a responsible manner (35%)
- Imperative to create and support new capabilities and operating models (34%)

ACTIONS

- Build resilient supply chains that can help mitigate disruptions and risks (47%)
- Capture customer demand accurately and with minimum latency and fulfill customer demand on time, in-full (46%)
- Build in-house innovation capabilities and train employees on skills that can help generate innovation (42%)
- Develop agile supply chains that can respond to disruptions and volatility faster (34%)
- Minimize information latency and fragmentation in end-to-end supply chain (29%)
- Develop a supply chain specific talent and reskilling strategy (28%)

REQUIREMENTS

- Supply chain data quality enhancement and harmonization (79%)
- Building end-to-end visibility across the supply chain (79%)
- Generate actionable insights from data in a timely and accurate manner (78%)
- Monitoring and reporting compliance (78%)
- Process automation to improve process productivity and quality (72%)
- Ability to predict leveraging data and analytics (71%)
- Consistent data usage experience across many devices and channels (68%)

TECHNOLOGIES

- Cloud Data Warehouses and Datalakes (86%)
- Descriptive, Prescriptive and Predictive analytics (82%)
- Data Integration and Orchestration tools (82%)
- Integrated Business Planning Tools (77%)
- AI and ML Enabled Supply Chain Management Tools (74%)
- Augmented/Self-Service Analytics (73%)
- Edge Analytics and Near Real-Time data streaming (73%)
- ESG Reporting Tools (71%)
- Supply Chain Control Towers (70%)

DETAILED FINDINGS

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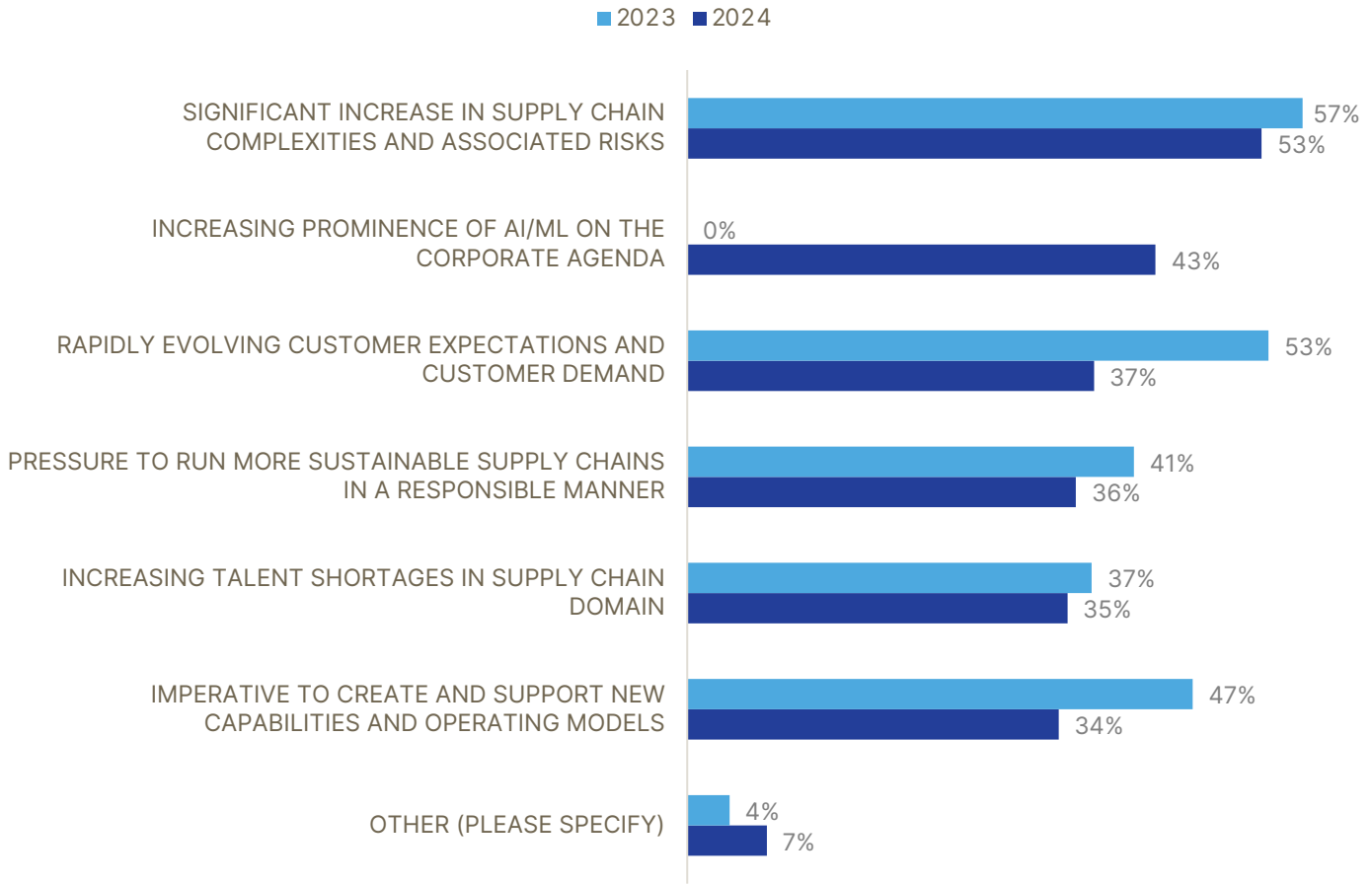
The research shows a continuing focus on mitigating the rising complexities and risks within supply chains (53%). Notably, companies also recognize the significance of AI/ML , with 43% of respondents highlighting its increasing prominence on the corporate agenda.

External pressures also influence the need to enhance data, analytics, and automation capabilities. Evolving customer expectations and demand (37%) and the pressure to run more sustainable supply chains (36%) indicate a growing societal and environmental consciousness among supply chain leaders.

Drivers Shaping Supply Chain Data, Analytics and Automation Transformation



DETAILED FINDINGS

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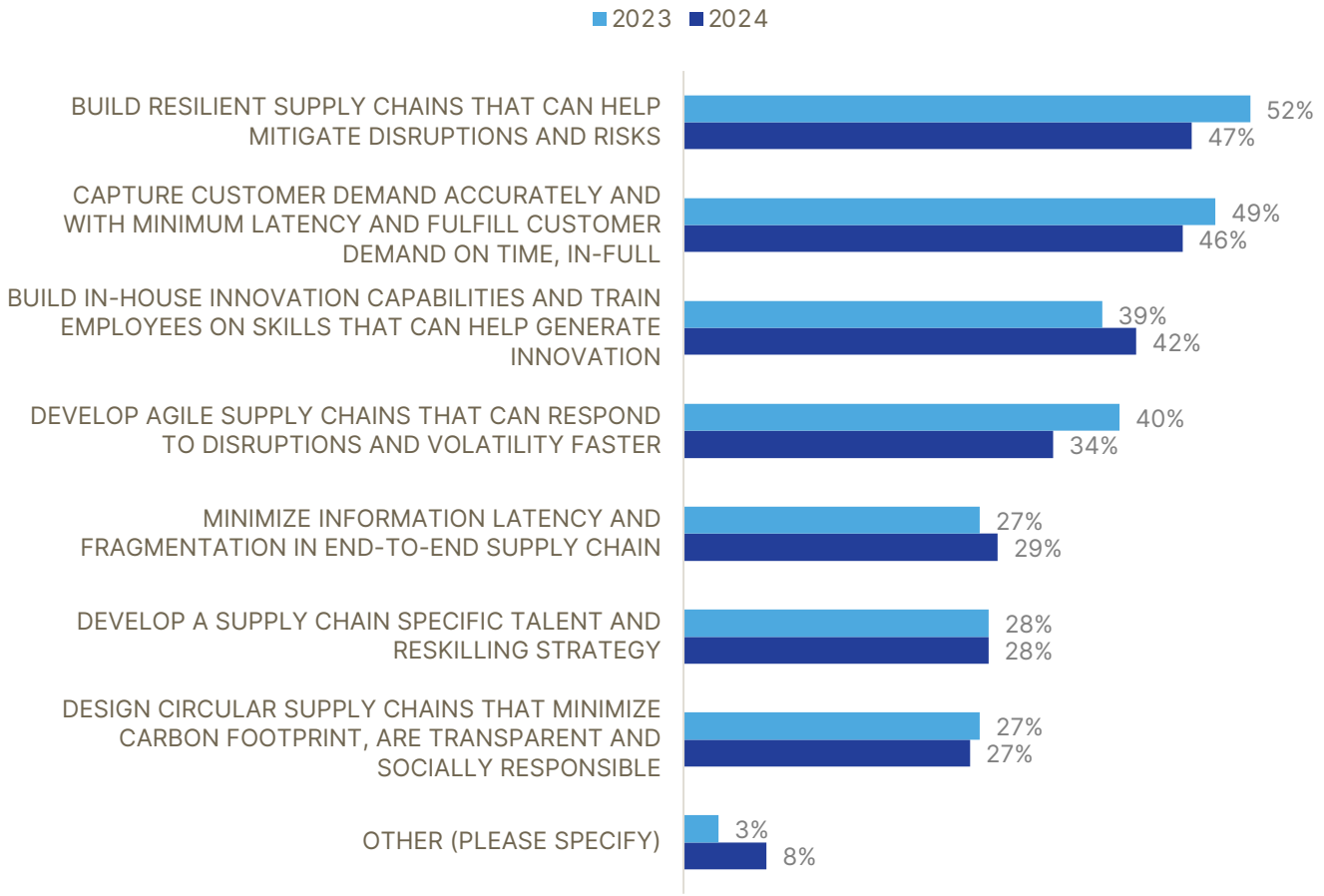
In 2024, organizations are prioritizing resiliency, innovation and meeting customer demands promptly. Recognizing the growing complexities within supply chains and the persistent disruptions arising from geopolitical and technological shifts, organizations emphasize the need to construct resilient supply chains capable of withstanding such disruptions (47%) over merely fostering agile supply chains geared towards faster responses to volatility (34%).

Organizations also acknowledge the significance of in-house innovation capabilities and allocating resources to employee training aimed at cultivating skills conducive to innovation (42%). This strategic approach is vital for tackling challenges such as the increasing prominence of AI/ML and addressing talent shortages within the workforce.

Prioritized Strategies for Data, Analytics and Automation Optimization



DETAILED FINDINGS

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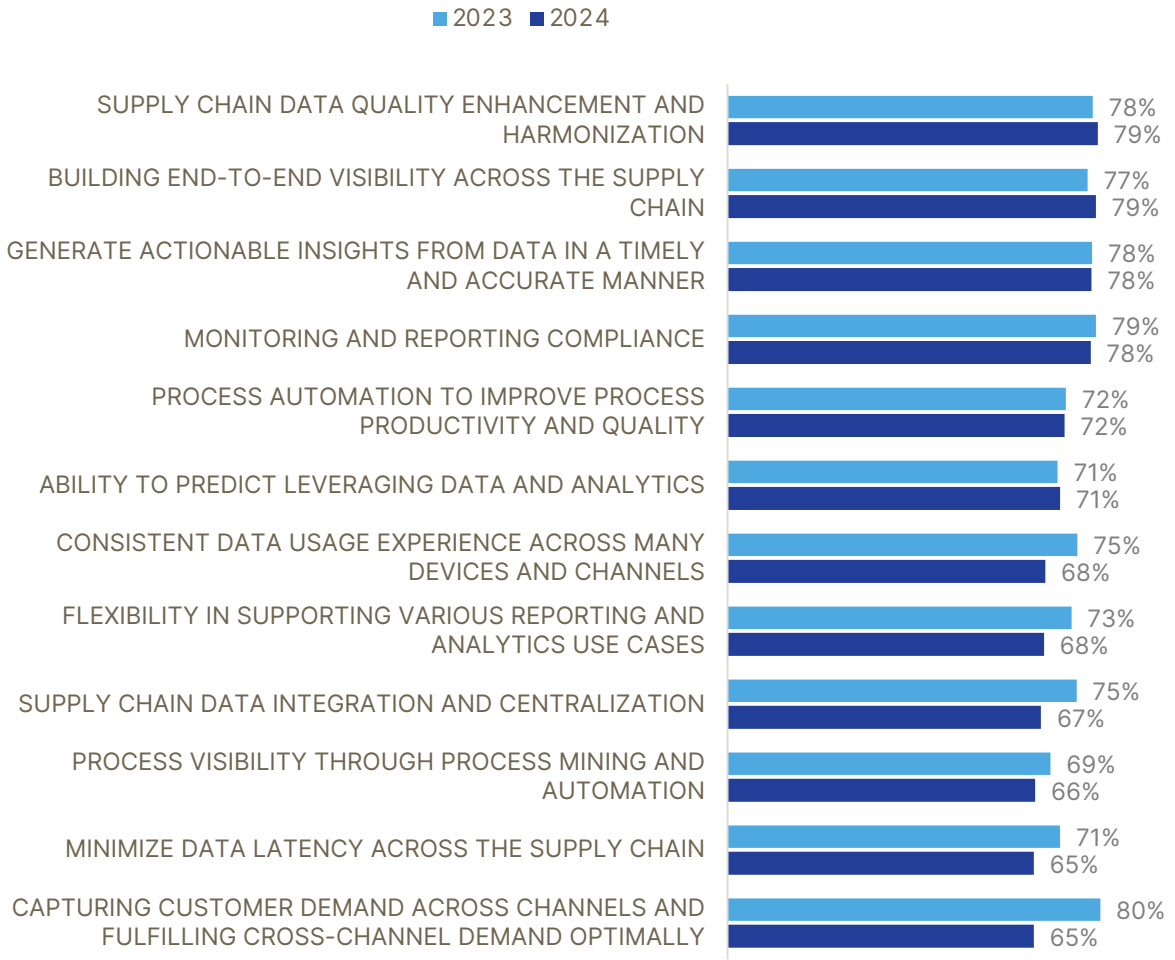
At 79% each. survey results emphasize the importance of enhancing data quality and harmonization, as well as building end-to-end visibility. Following closely behind, at 78% each, were priorities such as generating actionable insights and meeting monitoring and reporting requirements.

These responses underscore a pressing demand for data accuracy and transparency within supply chains. Data accuracy and transparency are foundational elements of supply chain resilience. By leveraging reliable data and promoting transparency among stakeholders, companies can better anticipate and respond to disruptions, collaborate with suppliers and manage risk. Organizations necessitate solutions that not only ensure compliance with regulations but also enhance data integrity, facilitate informed decision-making, and provide comprehensive visibility across the entire supply chain ecosystem.

Requirements of Data, Analytics and Automation Solutions



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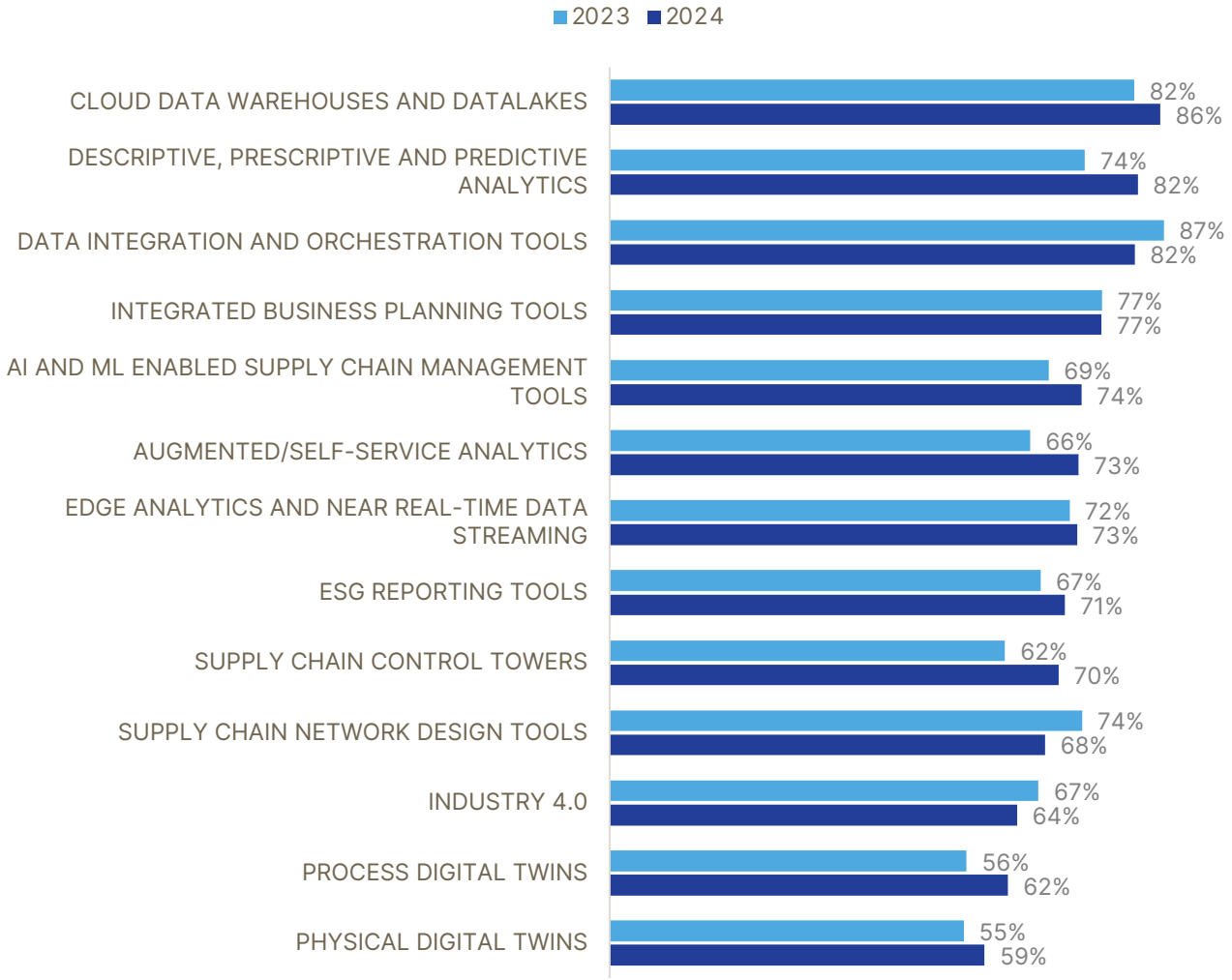
Companies are focusing on data integration, orchestration and analytics tools. Cloud data warehouses and data lakes emerge as foundational components, with 86% of organizations prioritizing centralized data assets and access. Complementing this, organizations recognize the importance of employing various analytical methods (82%) and data integration and orchestration (82%).

Additionally, AI and ML-enabled tools (74%), augmented/self-service analytics (73%), and edge analytics and real-time data streaming (73%) are also of significant importance to organizations, highlighting a growing interest in leveraging advanced analytics in supply chain management, contingency planning, decision making and risk management.

Technology Adoption



DETAILED FINDINGS

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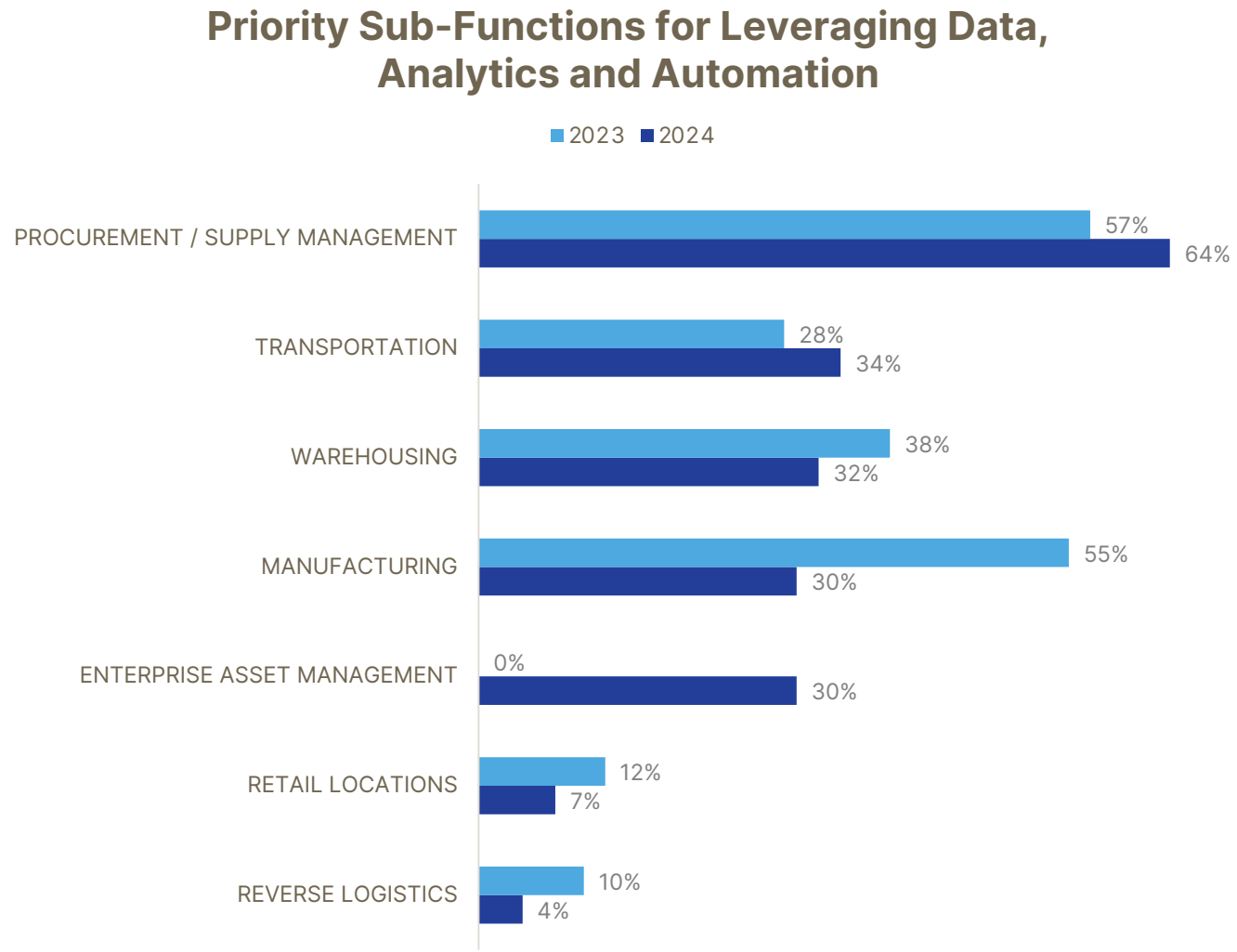
Responses show a consistent emphasis in prioritizing procurement and supply management when leveraging data, analytics, and automation with 64% of respondents highlighting this sub-function.

Responses also indicate a redistribution of priorities within various sub-functions. Currently, there seems to be similar priority shared between enterprise asset management (30%), manufacturing (30%), warehousing (32%) and transportation (34%), revealing a more balanced approach across these areas compared to the previous year.



DETAILED FINDINGS

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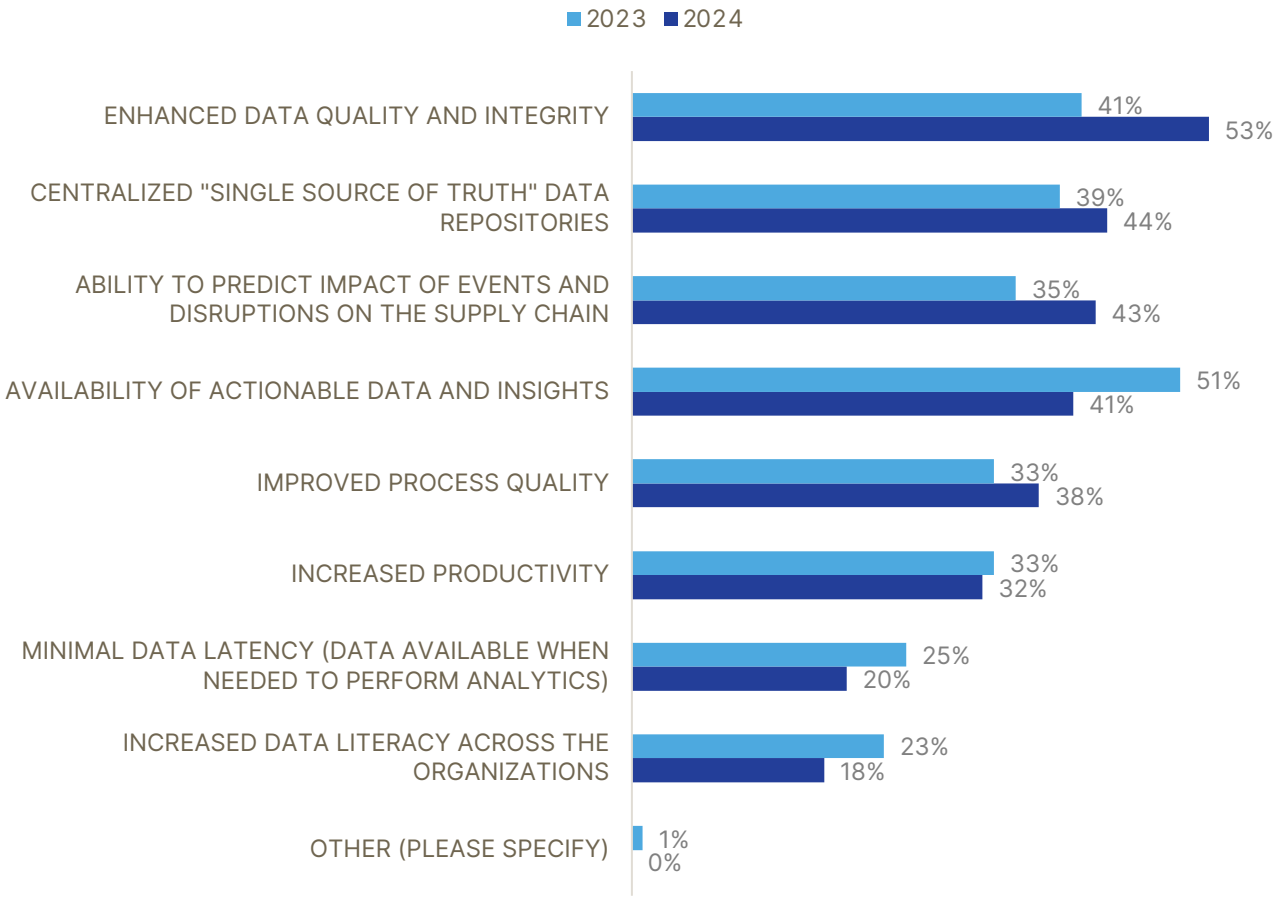
The research highlights a clear preference for accurate and actionable data as the primary determinant of success in implementing data, analytics, and automation solutions within organizations' supply chains. Over half of surveyed organizations identified enhanced data quality and integrity (53%) as a crucial measure of success, followed by establishing centralized "single source of truth" data repositories (44%)

There is also an emphasis on the importance of data accuracy and the model's predictive capabilities in assessing the impact of events and disruptions on the supply chain (43%) and having actionable data and insights available (41%) as additional success criteria for solution implementation. These findings underscore the significance of reliable data and predictive analytics in maintaining supply chain resiliency and agility.

Success Criteria for Data, Analytics and Automation Solution Implementation



DETAILED FINDINGS

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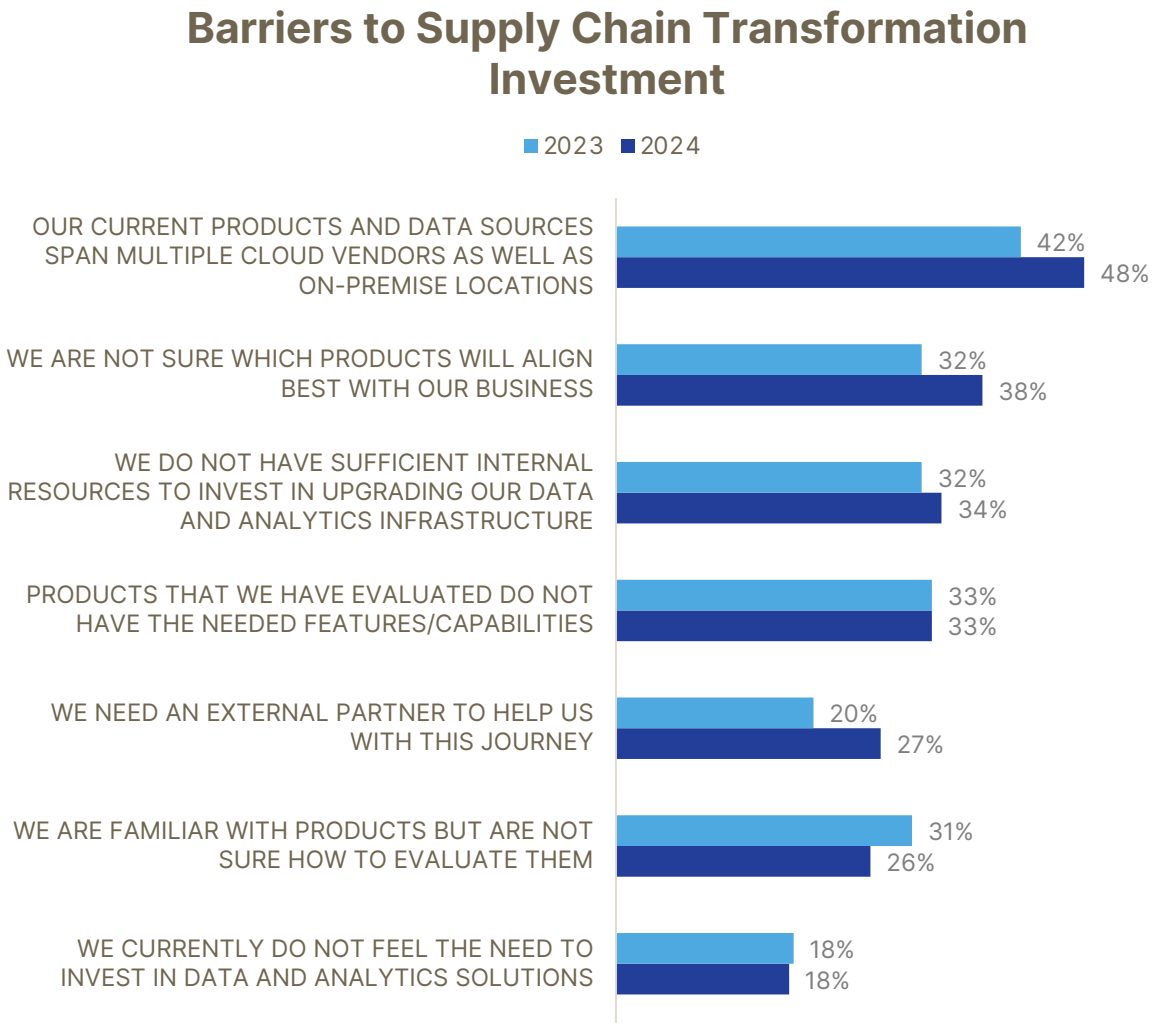
Organizations identified several barriers to investing in supply chain transformations. The primary obstacle cited is the challenge posed by products and data sources scattered across multiple cloud vendors and on-premise locations, with 48% of respondents identifying this as the top barrier. Following this, uncertainty regarding product and business alignment (38%) and insufficient internal resources to invest in data and analytics infrastructure (34%) were identified as significant challenges.

Notably, nearly half of respondents whose barrier involves disparate data sources emphasize the importance of the cloud in their strategy to transform their portfolio of data, analytics, and automation solutions (49%). This highlights the perceived value of cloud-based solutions in addressing the complexities associated with managing and integrating diverse data sources across various platforms.



DETAILED FINDINGS

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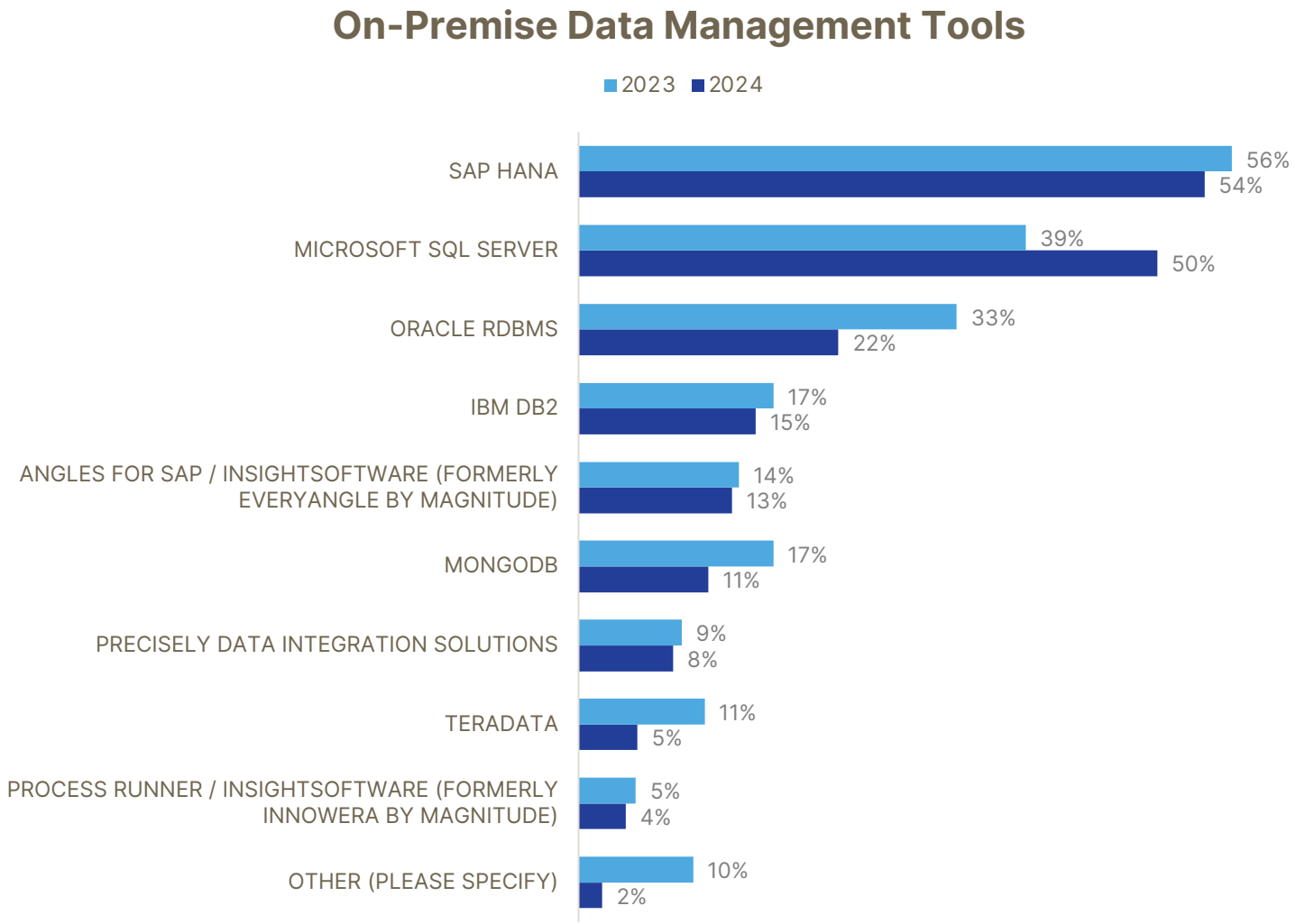
Like in 2023, SAP HANA is the most common on-premise database and data management tool used in SAP organizations' supply chain operations for data and analytics initiatives (54%).

SAP HANA is evolving as a key enabler of data and analytics initiatives, offering a comprehensive platform that combines data management, advanced analytics, and integration capabilities. SAP HANA integrates closely with SAP's broader analytics portfolio, including SAP Analytics Cloud and SAP BusinessObjects BI Suite. SAP HANA incorporates advanced analytics capabilities, including predictive analytics, machine learning, and natural language processing.



DETAILED FINDINGS

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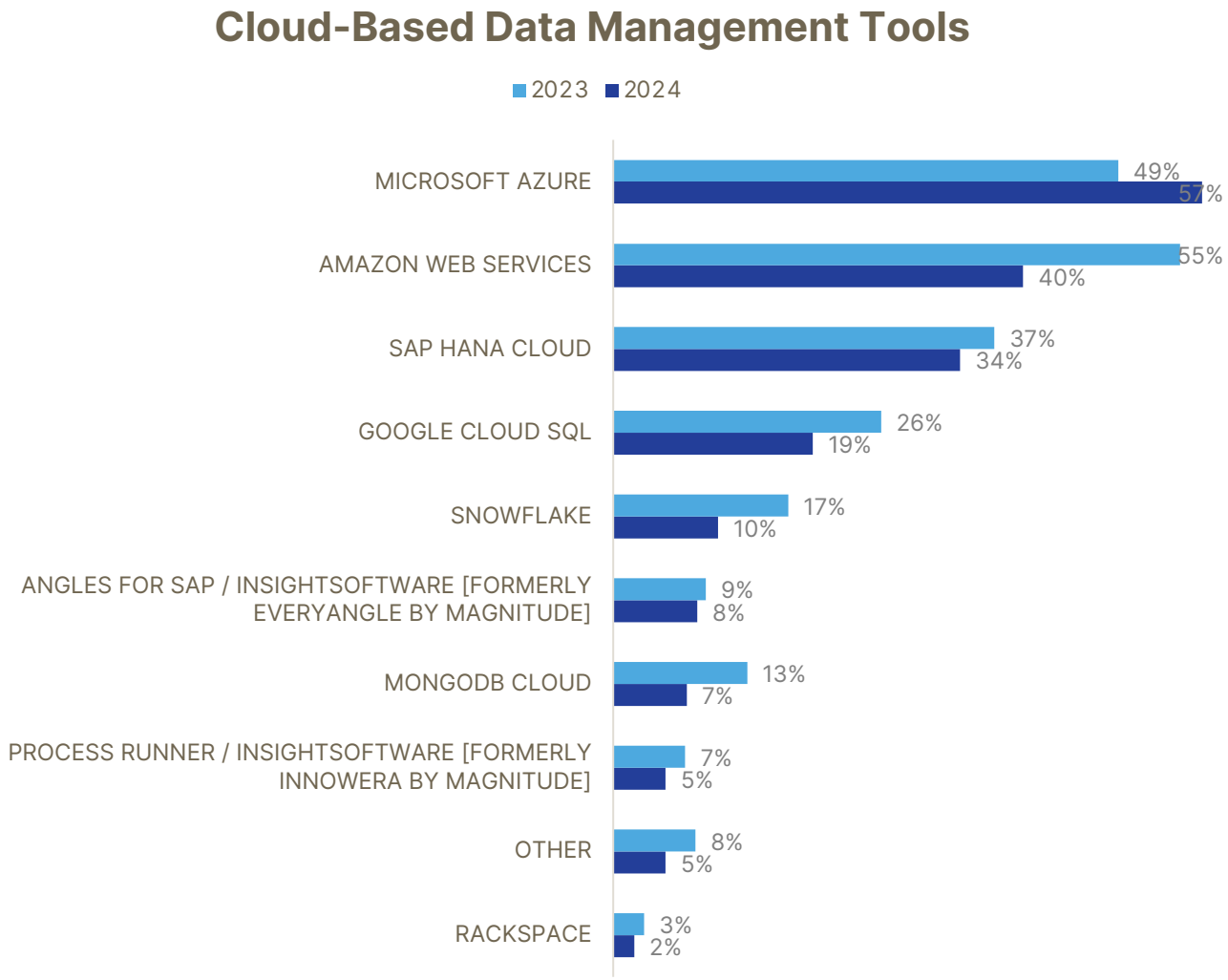
Microsoft Azure took the top spot from AWS as the most common cloud-based data management tool for supply chain management, capturing 57% of the surveyed population, as compared to 40% for AWS.

Microsoft's data management capabilities include:

- **Azure Data Lake Storage (ADLS): Azure Data Lake Storage is a scalable and secure data lake solution that allows SAP supply chain customers to store and analyze large volumes of structured and unstructured data.**
- **Azure Synapse Analytics is a cloud-based analytics service that combines big data and data warehousing capabilities. SAP supply chain customers can leverage Synapse Analytics to perform advanced analytics, run complex queries, and derive insights from their supply chain data in real-time.**



DETAILED FINDINGS

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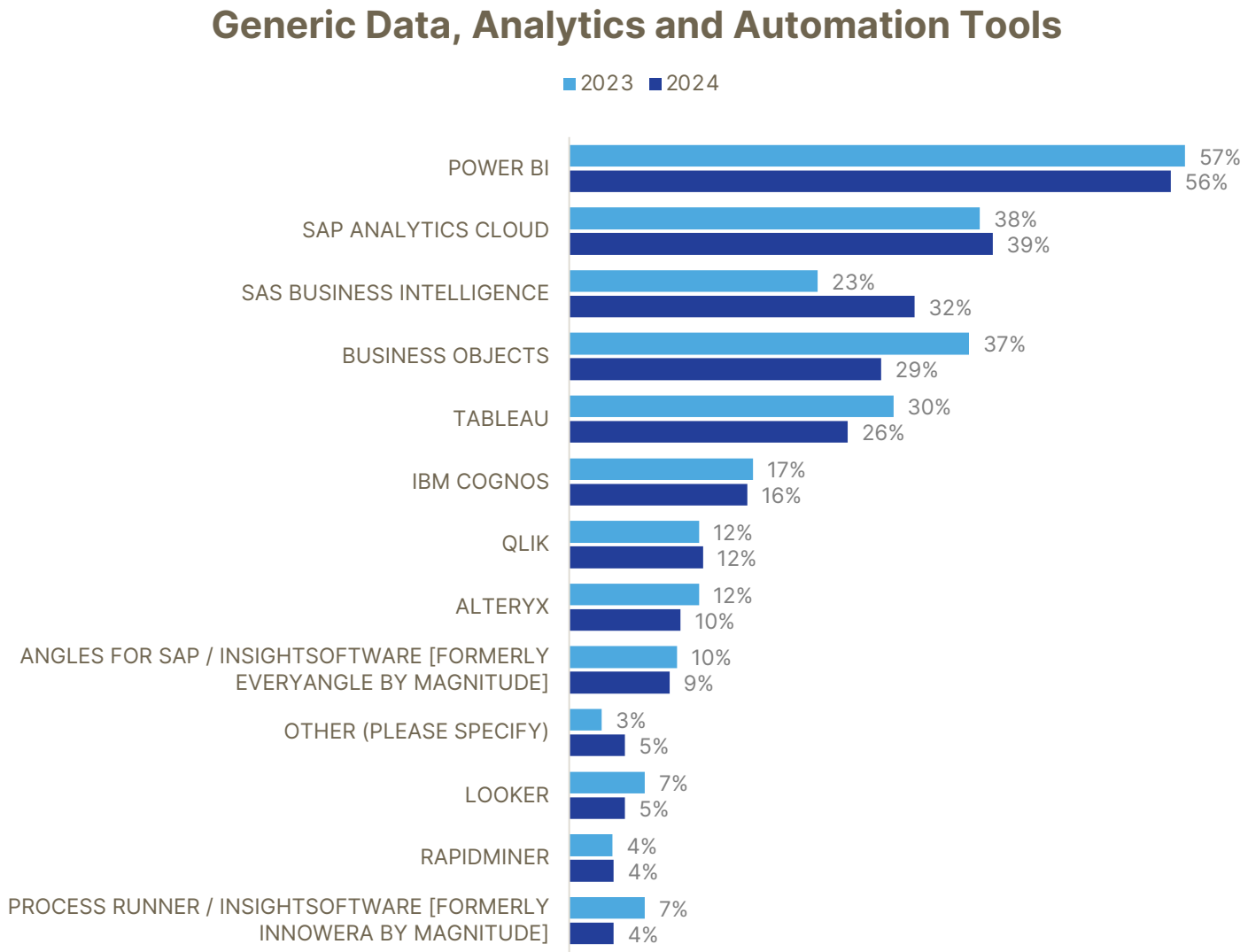
For the second year in a row, Microsoft Power BI is the most widely used data and analytics tool among SAP supply chain organizations, capturing 56% of respondents, even more than SAP Analytics Cloud with 39% of respondents.

Microsoft Power BI offers SAP supply chain organizations a flexible platform for visualizing, analyzing, and optimizing their supply chain operations, driving efficiency, and enabling data-driven decision-making across the organization. Power BI also offers advanced analytics capabilities such as predictive analytics, anomaly detection, and clustering, enabling SAP supply chain organizations to forecast demand, identify potential supply chain disruptions, and optimize inventory levels.



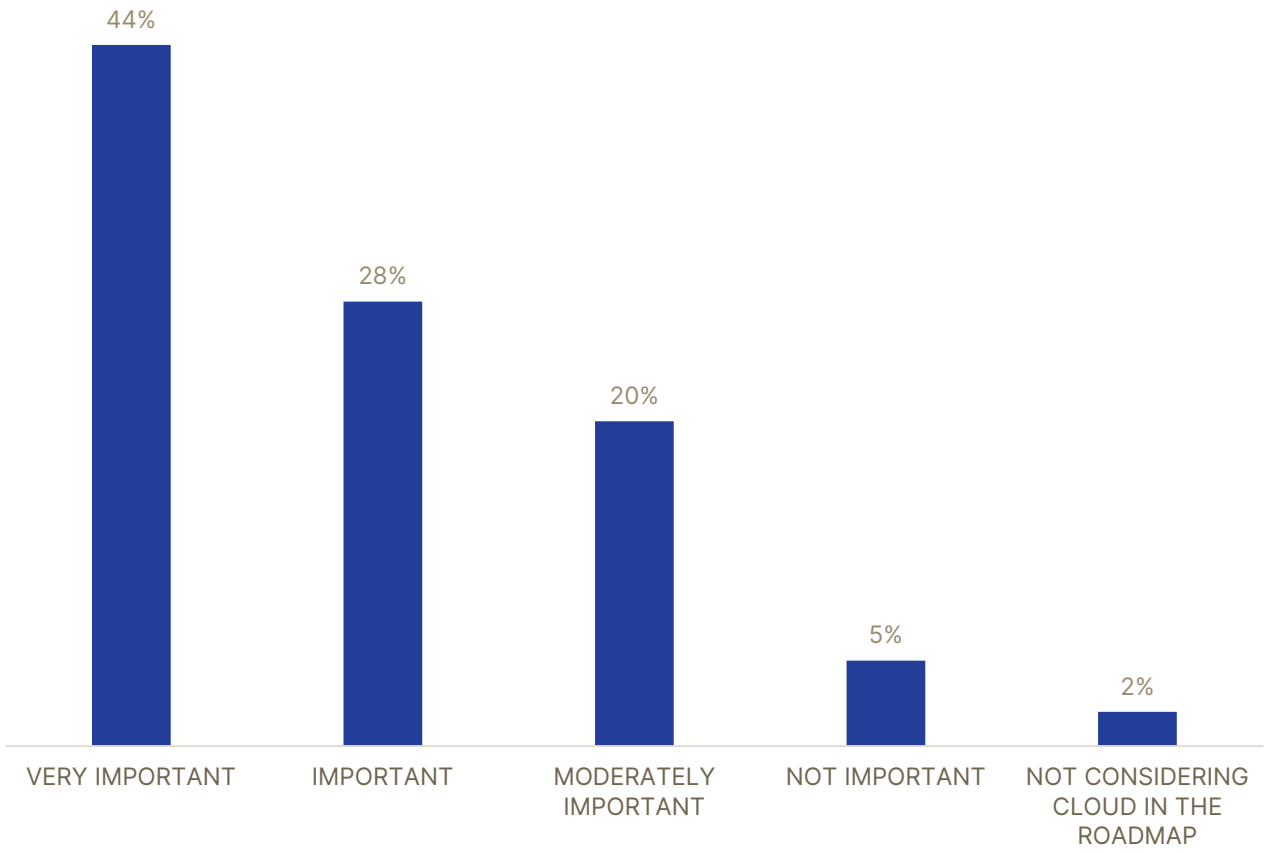
DETAILED FINDINGS

15

Fully three-quarters of surveyed companies said that cloud is important or very important in their strategy for data, analytics and automation in the supply chain.

The cloud plays a critical role in modern supply chain management by providing scalable, flexible, cost-efficient, and innovative solutions for data management, analytics, and automation. Cloud platforms facilitate seamless integration of data from disparate sources across the supply chain, including ERP systems, IoT devices, sensors, and third-party applications. This integrated data ecosystem enables supply chain organizations to gain a holistic view of their operations, improve data accuracy, enable resiliency and agility, and drive informed decision-making.

Importance of Cloud in Supply Chain Transformation



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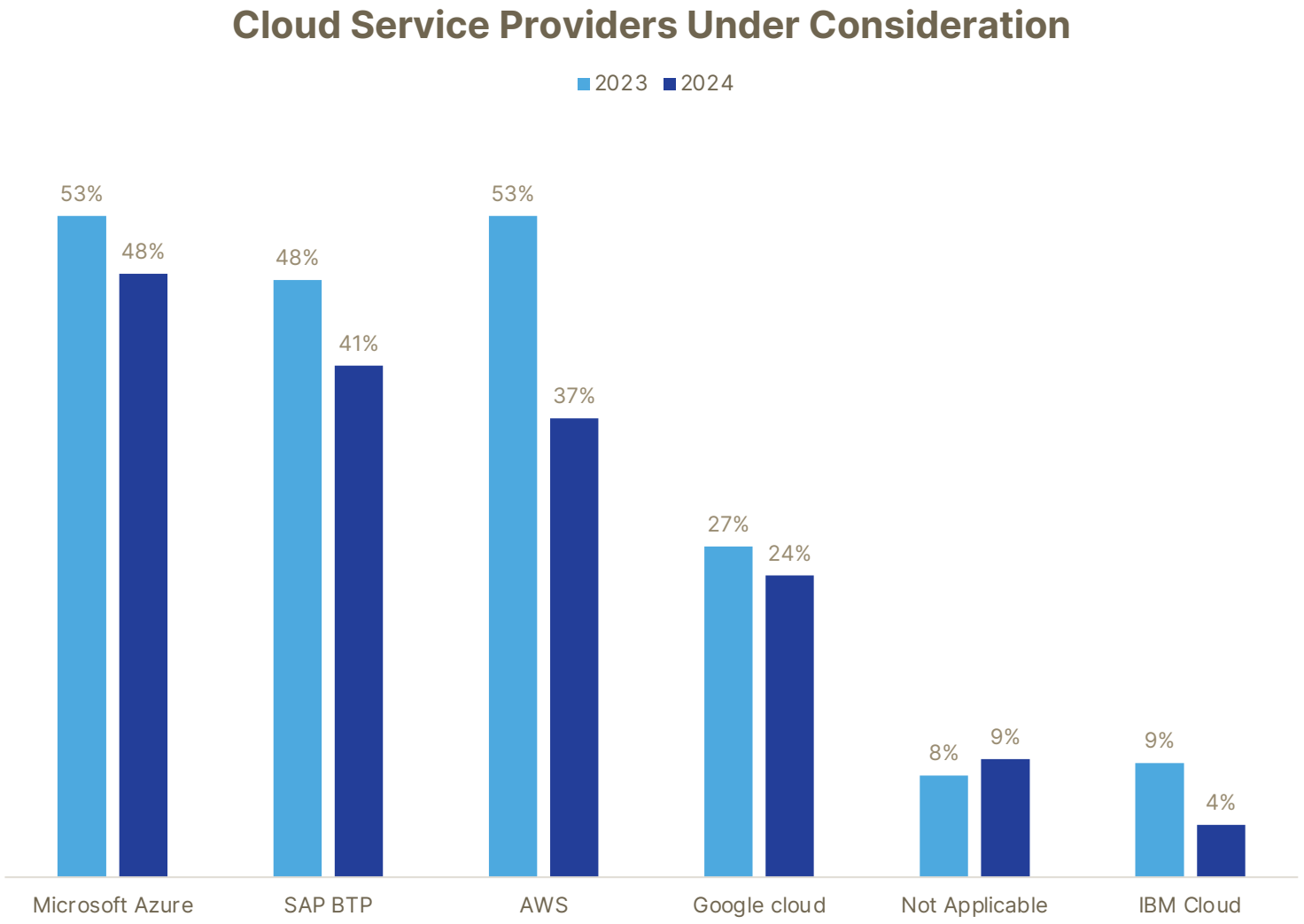
Among the cloud service providers surveyed companies are using for their supply chain transformations, Microsoft Azure pulled ahead of AWS, with 48% of the vote versus 37% for AWS.

Azure's global network of data centers ensures low latency and high availability for SAP's digital supply chain applications, providing reliable performance and responsiveness for users worldwide. This performance is crucial for real-time decision-making, contingency planning in the face of disruptions and operational efficiency in supply chain management.



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THANK YOU

Mark Vigoroso

Chief Content Officer

Mark.Vigoroso@sapinsider.org

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SAPinsider.org

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