

September 2025

ENTERPRISE AI AND THE DATA PROBLEM

A Global Survey of AI and Data Professionals and Executives



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Introduction

This paper reviews key findings from a global primary research survey to understand the utilization and deployment of AI over the next 12 months. It also investigates the impact of data quality and timeliness on AI and adoption trends for data pipeline automation and orchestration.

Executive Summary

This research finds that 98% of companies are expecting to deploy new AI solutions over the next 12 months. 98% also plan to use Agentic AI solutions, with 42% having already deployed them. In fact, the momentum around Agentic AI appears to be growing, with 8 out of 10 companies expecting to use multiple Agentic AI solutions. In just 24 months, nearly half of all companies will have more than three AI platforms operational. Although AI has seen rapid early adoption, the continued momentum indicates companies are realizing strategic business and competitive advantages from their initial AI deployments.

AI expertise, security, data quality, and governance lead the top barriers for AI. Data quality and visibility are the top data automation tasks, which not only fuel AI but also enable security and governance requirements. Extracting data from other applications and systems, however, remains a key obstacle for 85% of companies. The critical nature of the data pipeline can't be overstated, as 96% state pipeline performance issues delay AI initiatives and, perhaps more importantly, directly affect AI accuracy. Thus, AI professionals cite that data pipeline reliability, accuracy, and resiliency are critical for AI success. The top challenges for data pipelines are ensuring data quality and managing the volume of data which will only be increasing with the additional AI solution deployments noted above.

Most data and AI professionals today are using 4 or more data pipeline tools, which they report are consuming valuable time. This appears to be an impending AI roadblock for most companies, which are already short of needed expertise but must continue to divert resources to extracting, cleaning, and maintaining pipelines while providing visibility to security and compliance teams. The growing number of AI solutions and platforms is increasing the complexity of pipeline challenges. However, 93% of companies are expecting to rely on orchestration for their numerous Agentic AI platforms, and a staggering 98% state that centralizing AI pipeline orchestration will improve overall data reliability. For the 98% of companies with plans for more AI, a focus on a centralized AI data pipeline orchestration tool appears to be a key foundation for running numerous AI platforms by reducing the load on limited expert resources and providing quality data with visibility.

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Key Findings

- **Nearly Every Company Plans New AI Deployment Over the Next Two Years**

- 98% of companies are deploying new AI solutions over the next 12 months
- 98% plan to have Agentic AI, with 42% in production already
- 86% expect to utilize multiple Agentic AI solutions
- In just 24 months, 48% of companies plan to have 4 or more AI platforms

- **Expertise, Data Quality, and Visibility Remain Top Hurdles for AI Ambitions**

- The leading AI challenges are lack of expertise, security, data quality, and governance
- Data quality and visibility top data automation tasks for AI
- 85% revealed that extracting data from other applications and systems is creating problems for AI initiatives
- 96% share that data pipeline performance issues affect AI objectives, led by delays and reduced AI accuracy
- The majority state that data pipeline reliability, accuracy, and resiliency are critical for AI success

- **Centralized Data Pipeline Automation and Orchestration is Critical to Supporting AI**

- 83% share that 10% or more of AI and data experts' time is spent managing data pipeline tools and a third (34%) say it takes more than a quarter of their day.
- 93% plan to use orchestration solutions to manage Agentic AI solutions
- 98% state that centralizing data pipeline orchestration would improve data reliability

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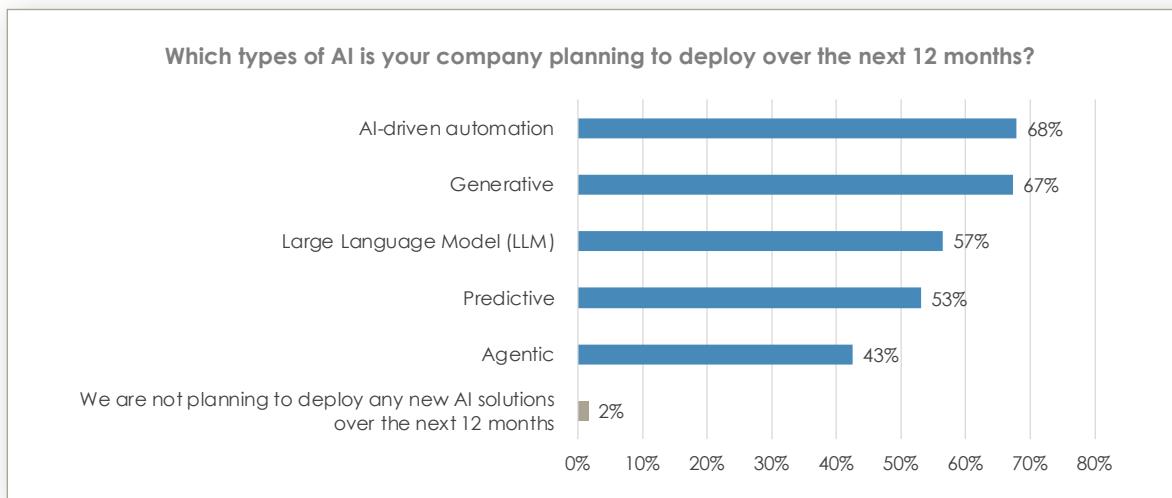


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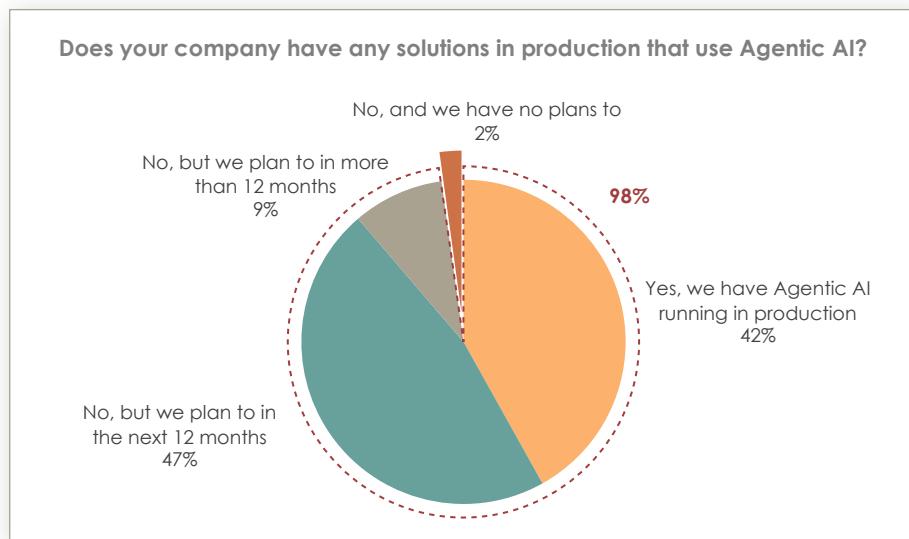
Detailed Findings

Companies Continue Rapid Deployment of AI

AI hype has been pervasive over the last few years, and this research sought to understand if focus and interest in AI is waning. However, 98% of all companies surveyed stated they will be deploying additional AI solutions over the next 12 months. This information indicates that, regardless of the hype, AI is delivering business value, spurring companies to make further investments in AI.



At the top of the hype cycle is Agentic AI, which deploys sophisticated goal-oriented AI Agents to accomplish tasks. Similar to overall AI adoption, 98% of respondents shared that they are planning to utilize Agentic AI, with 42% confirming they already have solutions in production. This data reveals that companies are confident in AI technology. Although Agentic AI is typically considered to be more complex, it is able to deliver increased value to customers, partners, and employees over other types of AI.



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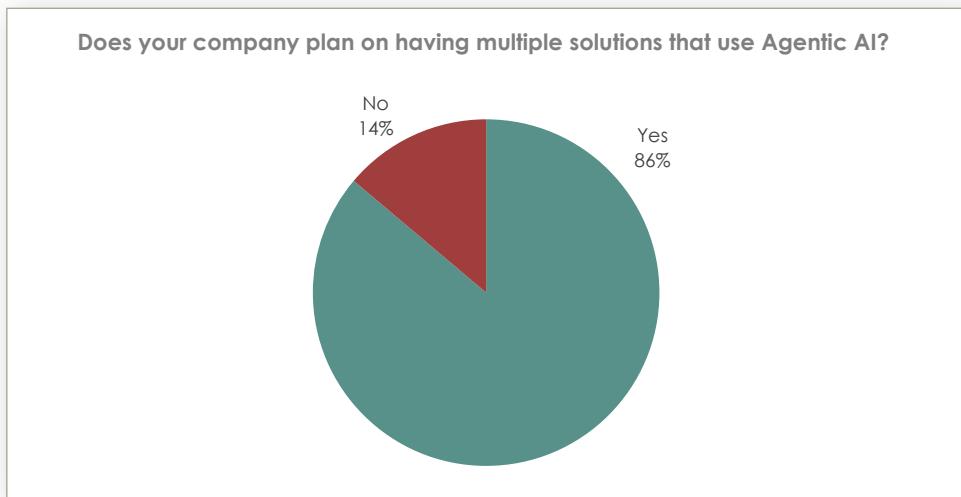
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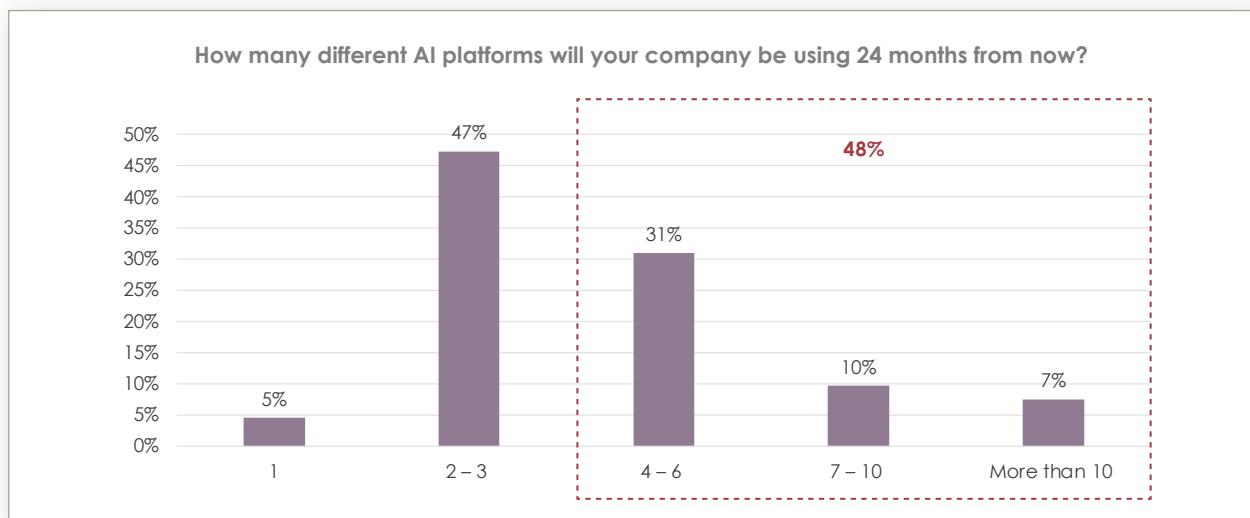
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Nearly All Will Be Supporting Multiple AI Solutions and Platforms

A focus of the research was not just understanding the adoption and deployment rates of AI, but how companies intend to deploy and support AI. One key finding is that 86% of companies plan on using multiple Agentic AI solutions. This provides insights that companies are not just deploying AI agents from the same platform for different teams or departments, but rather that each will have a dedicated solution, such as one for customer support, one for development, one for marketing, and so on.



To further understand the solutions and environments needed to support AI initiatives, participants were asked how many different AI platforms they plan to operate and support over the next 24 months. Nearly half (48%) will have 4 or more platforms. With only 5% running just a single AI solution, that means 95% will be running multiple AI solutions.



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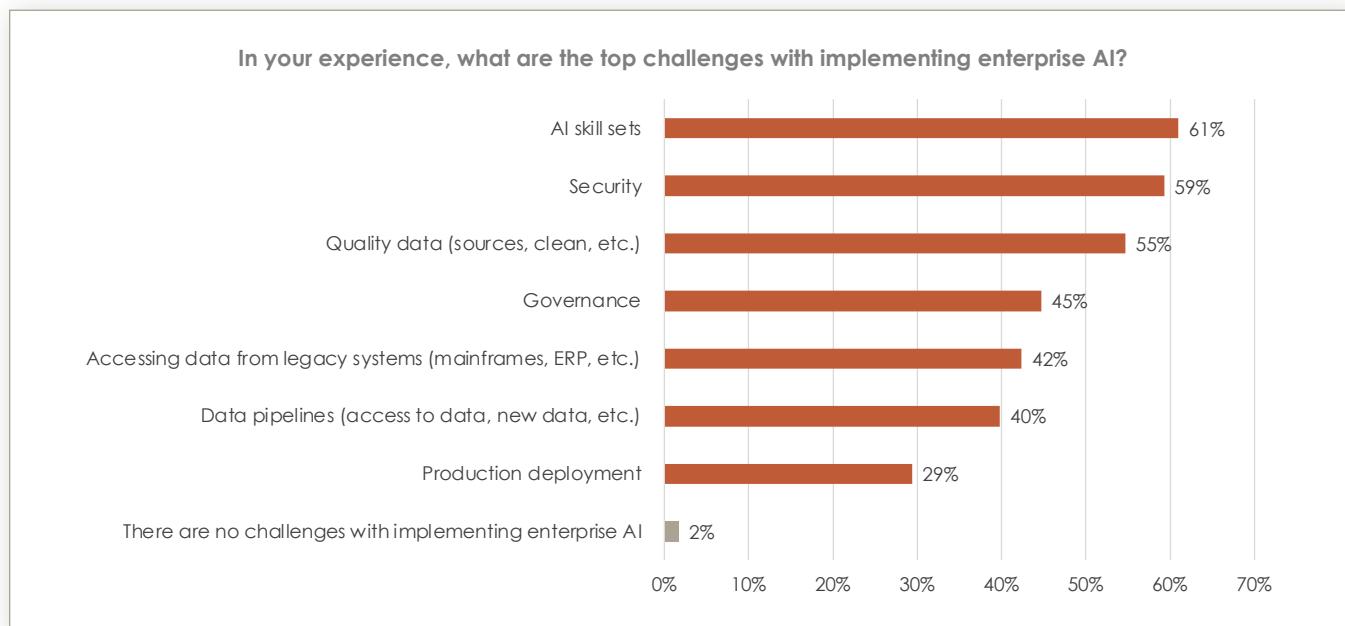
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Lack of Expertise, Security, and Data Quality Lead AI Challenges

With the continued adoption and deployment of AI, the research sought to capture the current challenges surrounding AI. Leading all challenges was a lack of AI expertise and skills (61%), and while completely understandable, this limited resource can serve as a key roadblock for AI deployment schedules. Security (59%) ranks second, due to the constant accessing and sharing of information as a primary task. Just four percentage points below that we see data quality (55%), the fuel that powers AI. In fact, data issues for AI implementation occur in several other challenges, such as accessing data from legacy systems (42%) and data pipelines (40%). Also impacted by data issues is governance (45%), as much of governance around AI involves controlling what data is accessed and shared with whom.



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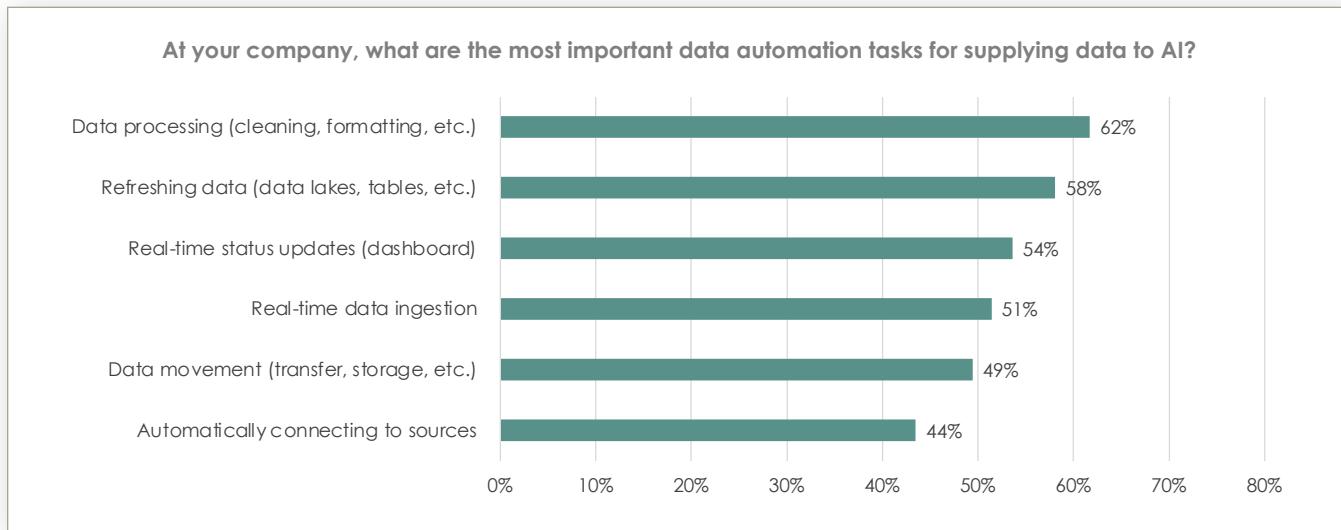
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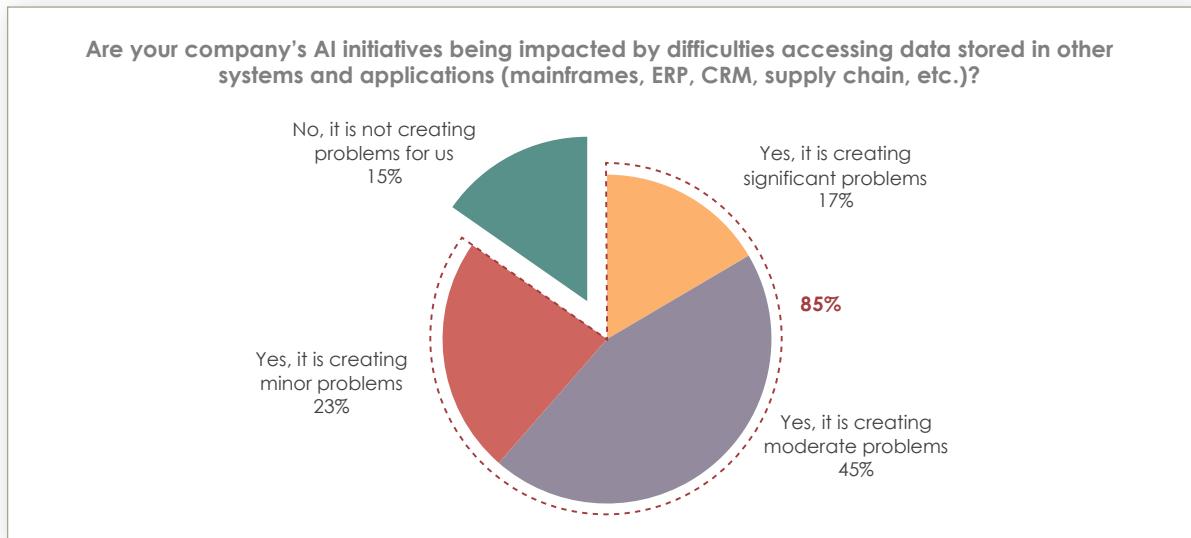
Data Quality and Visibility Key for Automation Tasks

With many of the AI challenges centered around data and a shortage of resources, it is reasonable to expect data automation tasks to be a critical aspect of supporting the growing number of AI solutions. To further illustrate the point, the survey provided the following answer option, “no data automation tasks are key for AI,” which was never selected. The top three data automation tasks reported are data processing (62%), refreshing data (58%), and real-time status (54%), indicating that data quality and visibility are key requirements.



Extracting Data from Other Applications and Systems is Problematic

As more sophisticated AI solutions are deployed and are no longer an “easy” beginning AI project, the ability to access more business information becomes increasingly important. However, this research finds that key data stored in ERP, CRM, supply chain systems, and mainframes is difficult to access for 85% surveyed. More than half (62%) report it is creating material problems for their AI initiatives, reinforcing the data challenges cited earlier in this report.



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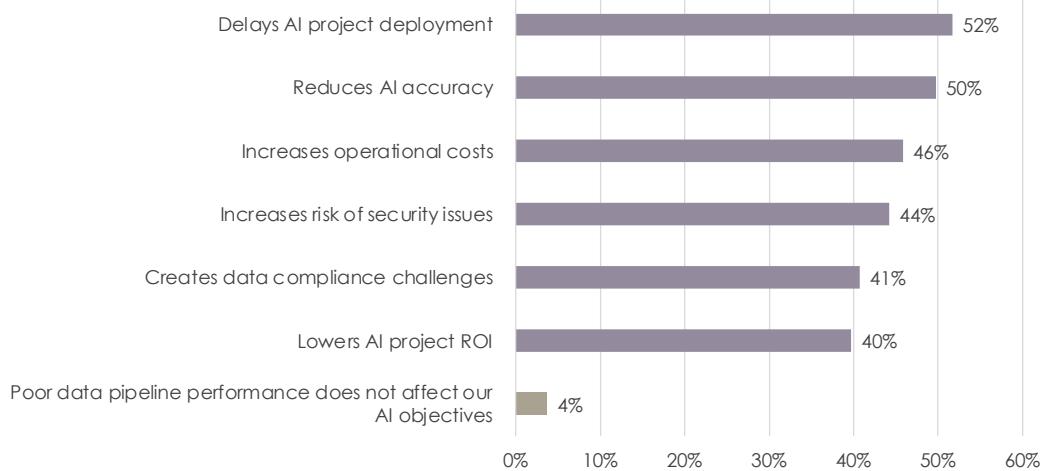
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AI Agent Governance is Critical to Enterprise Security

It is straightforward to understand how issues of poor data quality, reliability, and access can affect AI operations. However, AI and data professionals were explicitly asked about the impact of poor pipeline performance.

Interestingly, the top answer is that it impedes AI projects and their deployments (52%). Given that 98% of companies are expected to deploy more AI over the next 12 months, it is reasonable to conclude that competitors are also utilizing AI, and thus delays in AI implementation can result in a competitive disadvantage. At the second position, and of paramount importance, is the finding that data pipeline issues reduce AI accuracy (50%), meaning the information customers, partners, and employees are using may be outdated or missing key information. Clearly the accuracy and delay risks create several other issues mentioned such as increased security issues (44%), compliance challenges (41%), and lower ROI (40%).

How does poor data pipeline performance (e.g., speed, reliability) affect your company's AI objectives?



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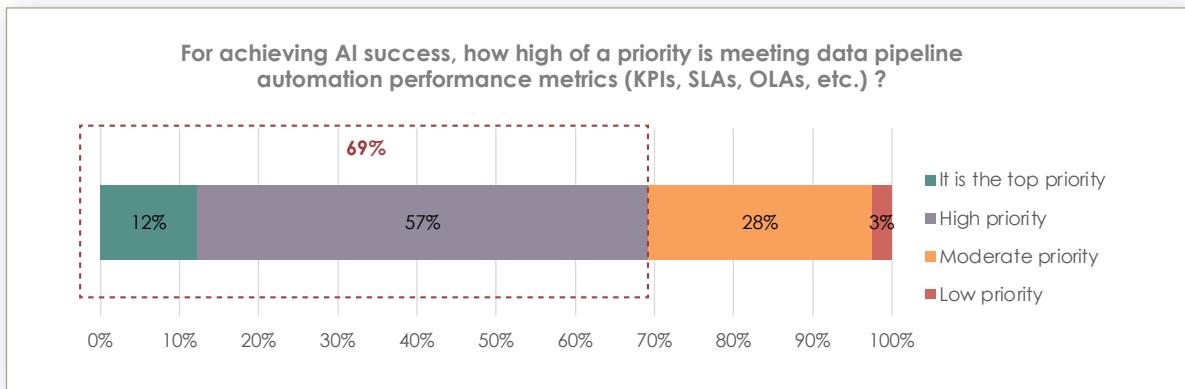
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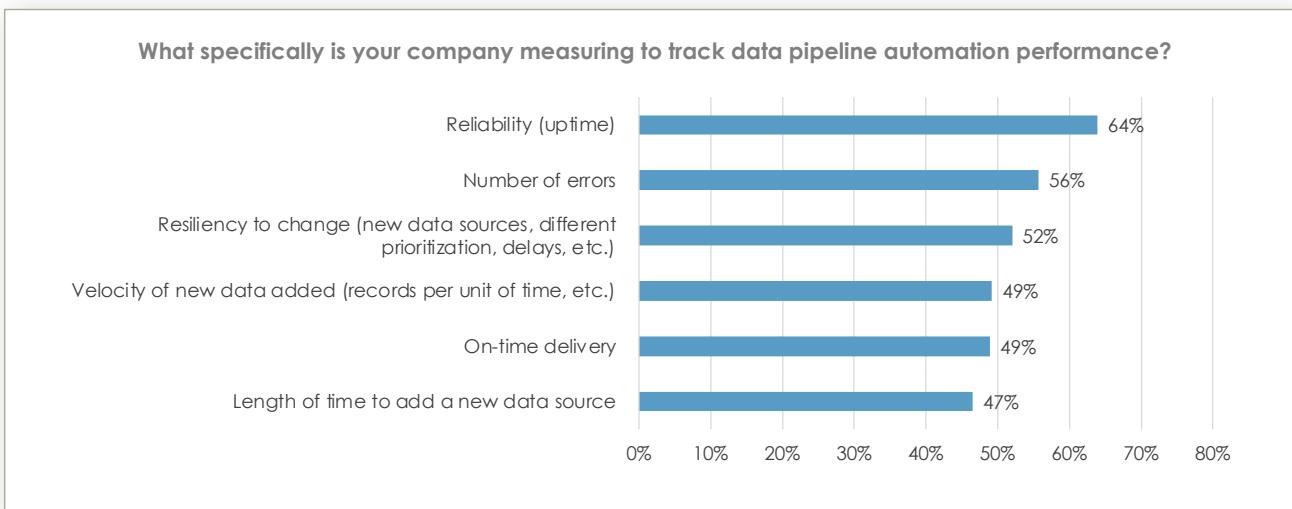
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To Achieve the Desired AI Performance, It Must be Measured

Given the direct impact of data pipeline performance on AI initiatives and accuracy, it is not surprising that 69% revealed that meeting pipeline performance metrics is critical. In fact, 79% of companies are tracking data pipeline automation performance using KPIs, SLAs, and OLAs today. This data builds the impression that companies are consciously aware of the impact timely quality data delivery has on their overall AI strategy.



Given the pervasive focus on pipeline automation performance metrics, the research asked what is specifically being tracked. Leading all metrics is reliability (64%), followed by number of errors (56%), and resiliency to change (52%). These three metrics indicate that AI is not static and experienced AI practitioners track not only what is working but what isn't. Rounding out the top six metrics are velocity of new data added and on-time delivery, both at 49% and, finally, time to add a new data source (47%). The last three provide predictability and better planning for new AI solutions and AI Agents.



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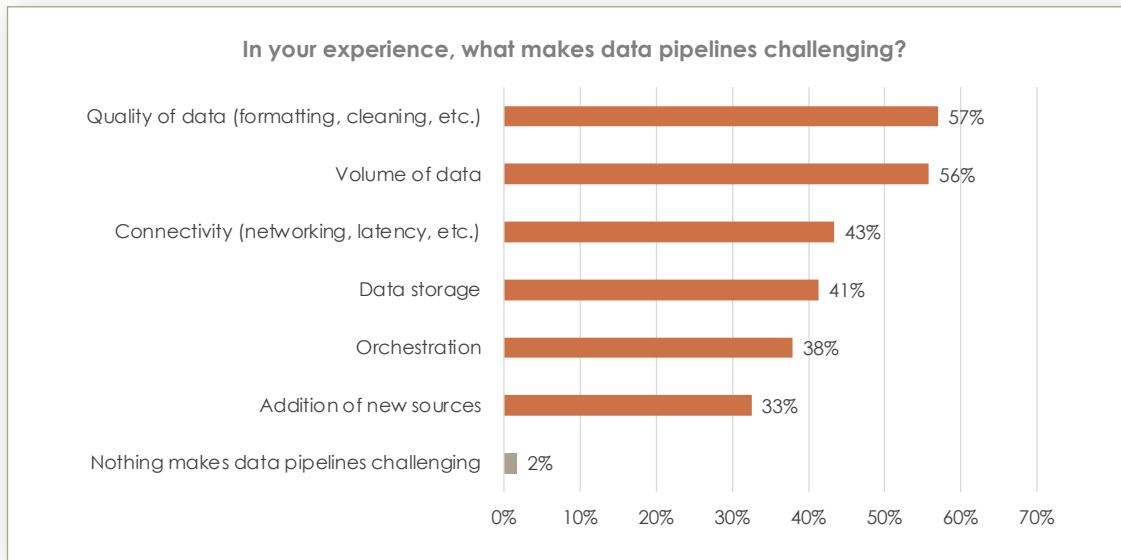
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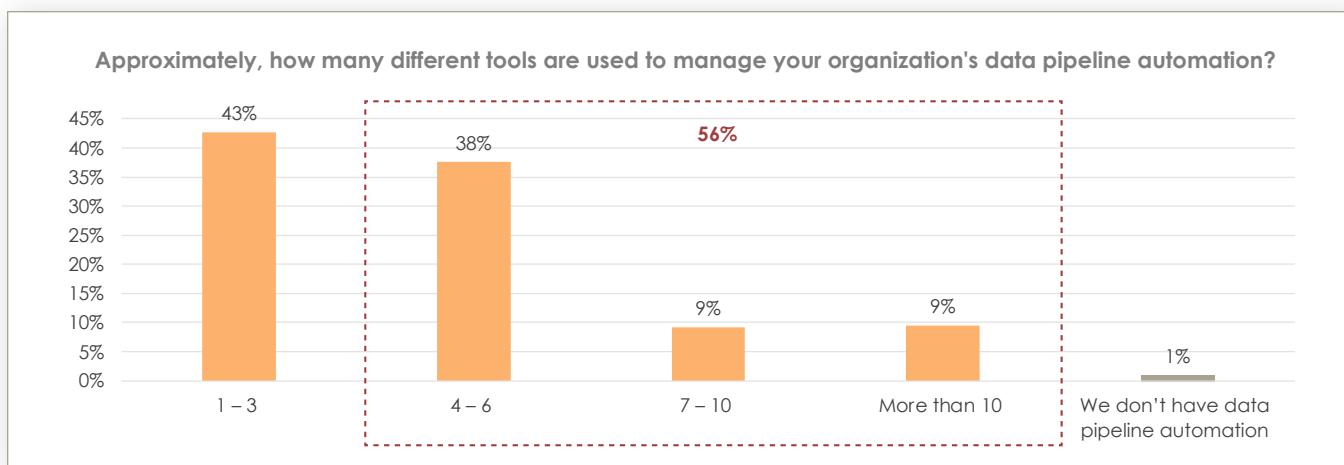
Data Quality and Volume Are the Top Issues for Data Pipelines

With the correlations between data pipeline performance and AI operations, participants were asked what makes managing data pipelines challenging. Perhaps expected, data quality (57%) and data volumes (56%) are the leading challenges. Connectivity (43%) takes the third spot, followed by storage (41%) and orchestration (38%). With numerous new AI deployments in the works, these challenges will not be getting easier.



Limited AI Resources Being Wasted on Tool Management

With data pipeline performance tied to AI success and the growing number of data sources and AI deployments, it was prudent to gain a deeper understanding of the tools used to support data pipeline automation. More than half (56%) are using 4 or more tools to manage pipeline automation. While often the findings of reliance on numerous tools results in an opportunity to consolidate, that may be difficult for AI, where specific AI platforms or data sources force reliance on specific data pipeline technology.



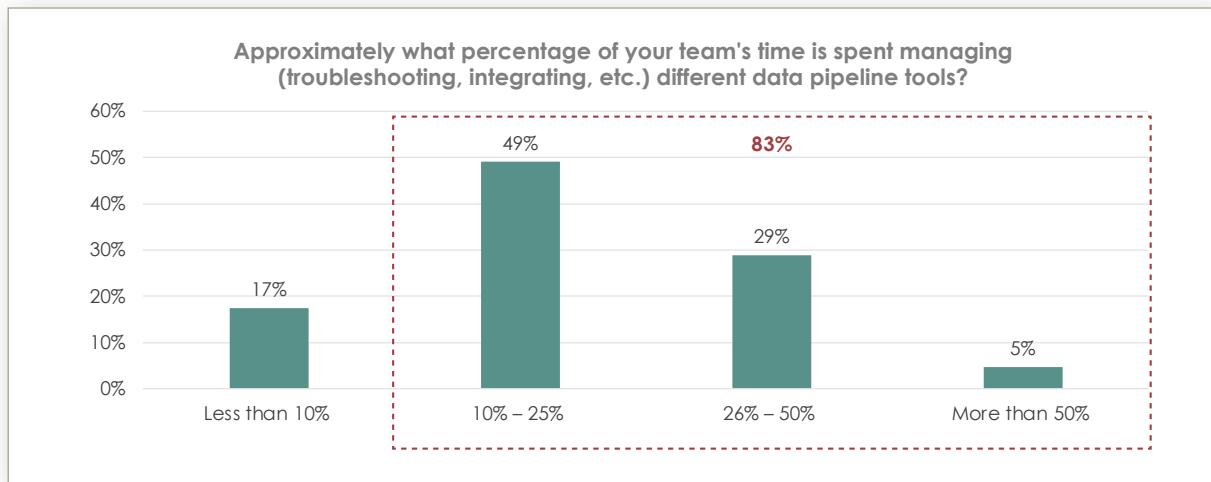
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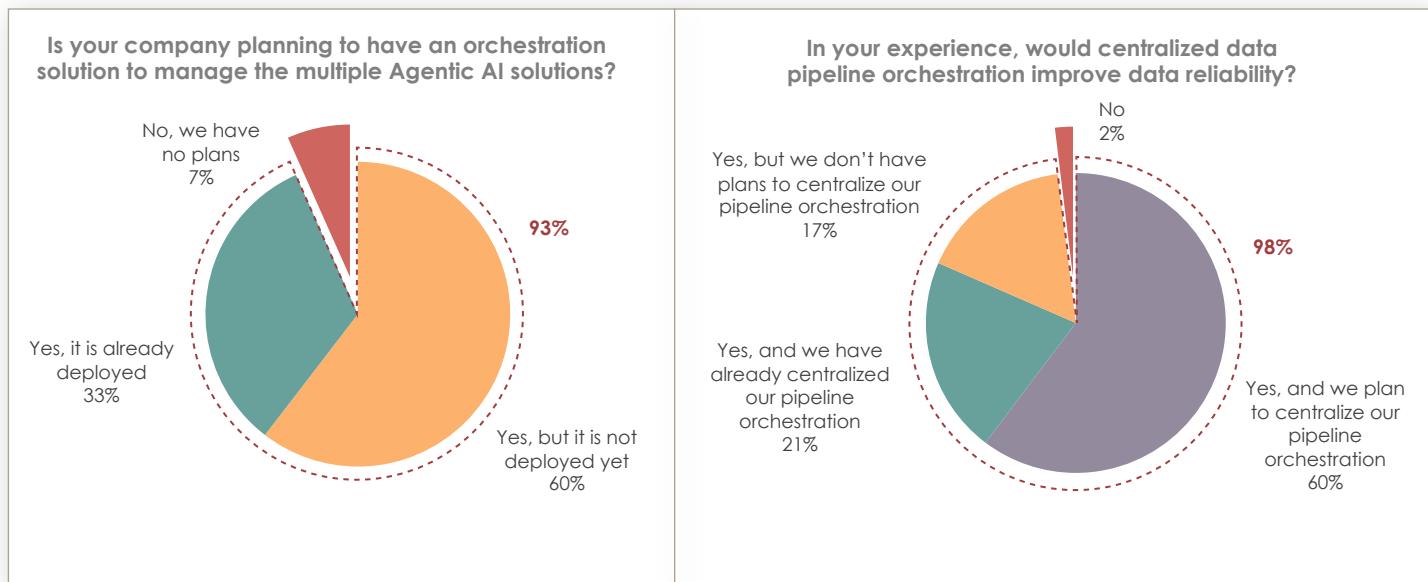
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As noted earlier in the report, the top AI challenge is a shortage of AI expertise, and using and managing numerous tools wastes those resources. From the chart below, we see that for 83% of companies that just managing pipeline tools consumes at least 10% of AI and data professional time, but a third (34%) say it takes more than a quarter of the day. It's a problem that will only get worse with additional AI deployments requiring more access to timely, quality data.



Orchestration and Centralization Are Critical To AI

This research finds that companies have learned from their initial AI deployments and clearly see the problems and challenges with scaling AI and data. As such, 93% are looking to implement automation and orchestration to manage their Agentic AI solutions. While today only 33% have an orchestration solution deployed for Agentic AI, a staggering 98% state that centralizing data orchestration would increase data reliability, the fuel AI depends on.



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Conclusion

The fact is that AI is delivering real and material business value, driving 98% of all companies to deploy even more AI over the next 12 months. However, companies are short on experienced resources and highly reliant on timely, high-quality data. While it's obvious that AI relies on data, this report finds that data pipeline issues slow AI deployments, creating competitive disadvantages, but perhaps even more alarmingly, increases AI accuracy risks. Those risks translate into business risk if customers, partners, or employees are utilizing inaccurate AI results, and that risk cascades into security and compliance issues.

The same personnel resources required to spend their time maintaining data quality and accurate AI are also being tasked to build and deploy new AI solutions. Those limited resources are losing time managing data pipeline tools and those tools are not making it easy to extract data from mainframes and business applications. Perhaps one of the most encouraging aspects of this report is that AI and data professionals' eyes are wide open, and they know this is an issue.

Most have already acknowledged they have plans to adopt orchestration and centralized data pipeline automation. While the 'pipes' that flow information are typically not thought of when AI is mentioned, they are critical to the success of a company's AI initiative. If a company can commit to top data pipeline automation and orchestration, they not only free up critical personnel resources but they also drive increased accuracy and speed of AI deployment. Those benefits directly translate to business value and competitive advantage, which is exactly why most companies are deploying AI today.

Survey Methodology

Executives, AI, and data professionals at medium to enterprise-size companies representing all seniority levels were invited to participate in a survey on their company's AI initiatives and data pipeline management.

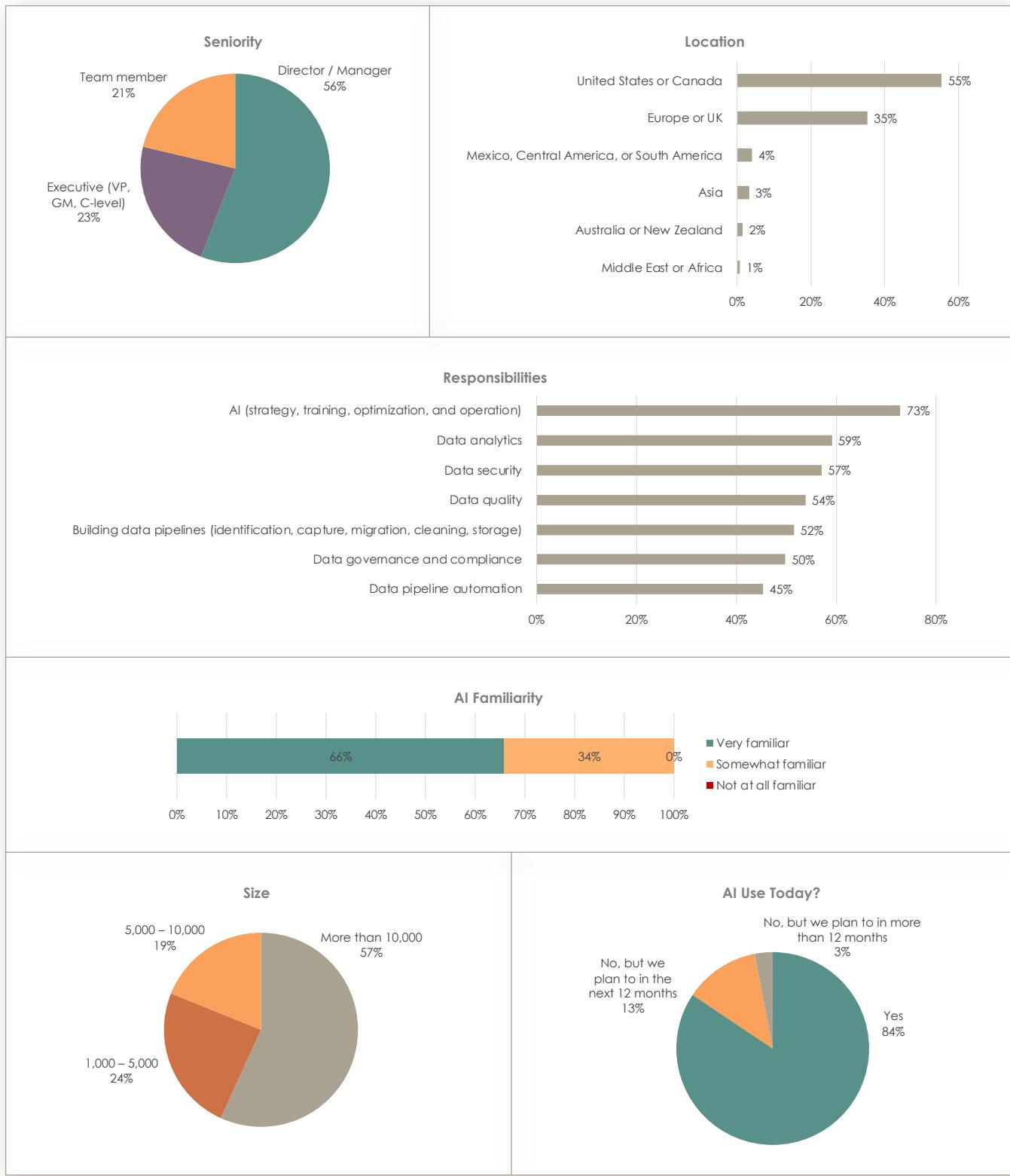
A total of **503 qualified participants** completed the survey. All participants had AI or data responsibilities related to AI initiatives. Participants were from 5 continents, providing a global perspective. The survey was administered electronically, and participants were offered token compensation for their participation.

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