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Accelerating enterprise decision intelligence with AI agents

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Introduction

In 2023, IDC and Aera Technology's paper *What Every Executive Needs to Know About AI-Powered Decision Intelligence* described how leading enterprises were beginning to transform their decision-making processes through AI. Those early deployments marked the start of a new era — one in which data, analytics, and automation began to converge into decision intelligence (DI) frameworks that improved speed, quality, and consistency. These AI benefits were mostly being leveraged by some of the largest enterprises in the world.

Two years later, the adoption of AI accelerated and has become integral to how organizations operate, plan, and respond. IDC forecasts that global AI spending will reach $1.3 trillion by 2029, with generative AI accounting for 56% of the overall market as enterprises embed intelligence not just into applications and analytics but also into the very decisions that define their performance and resilience.

Yet, even as AI has become pervasive, most organizations still face a critical gap between insight and action. Traditional AI systems excel at generating recommendations but rely on human intervention to interpret and execute them. The next phase of enterprise evolution is the rise of AI agents. IDC defines AI agents as software that *"perceives, makes decisions, and acts on those decisions by combining insights from large language models with the ability to execute through tools and data sources."* These agents will eventually extend AI's reach beyond analysis to reasoning and orchestration, enabling systems that can plan, decide, and act within defined parameters.

Leveraging AI for insight and action is evident among several early adopters, such as a leading fast-moving consumer goods (FMCG) company that generated over 12,000 AI-driven recommendations in a single month, with planners automatically accepting 74%, or a leading education institution where the faculty took action on more than 4,000 decisions, or another global FMCG company that was able to optimize product allocation across plants and distribution centers, achieving faster fulfillment and improved inventory balance. Each of these examples reflects a progression from AI-assisted analysis to AI agent–augmented decision execution, where technology and human judgment operate in concert.

As organizations shift toward AI agent–powered decision intelligence, it represents a structural change in how organizations think, decide, and act. It is no longer sufficient for AI to inform; it must also act — autonomously where appropriate, and collaboratively with people where oversight is essential.

IDC and Aera Technology set out to conduct a study to understand how organizations have been leveraging AI across the six competencies of decision-making. The research highlights how organizations currently engage in decision-making, the areas where they will benefit from AI, and their views on leveraging AI agents within decision intelligence. It also highlights that those organizations that are fully connected and automated across the six decision-making competencies are leaders, and these leaders have experienced improvements across key business metrics, including customer

satisfaction, employee retention, operational efficiency, and risk management, versus those that have yet to fully connect and automate all six decision-making competencies.

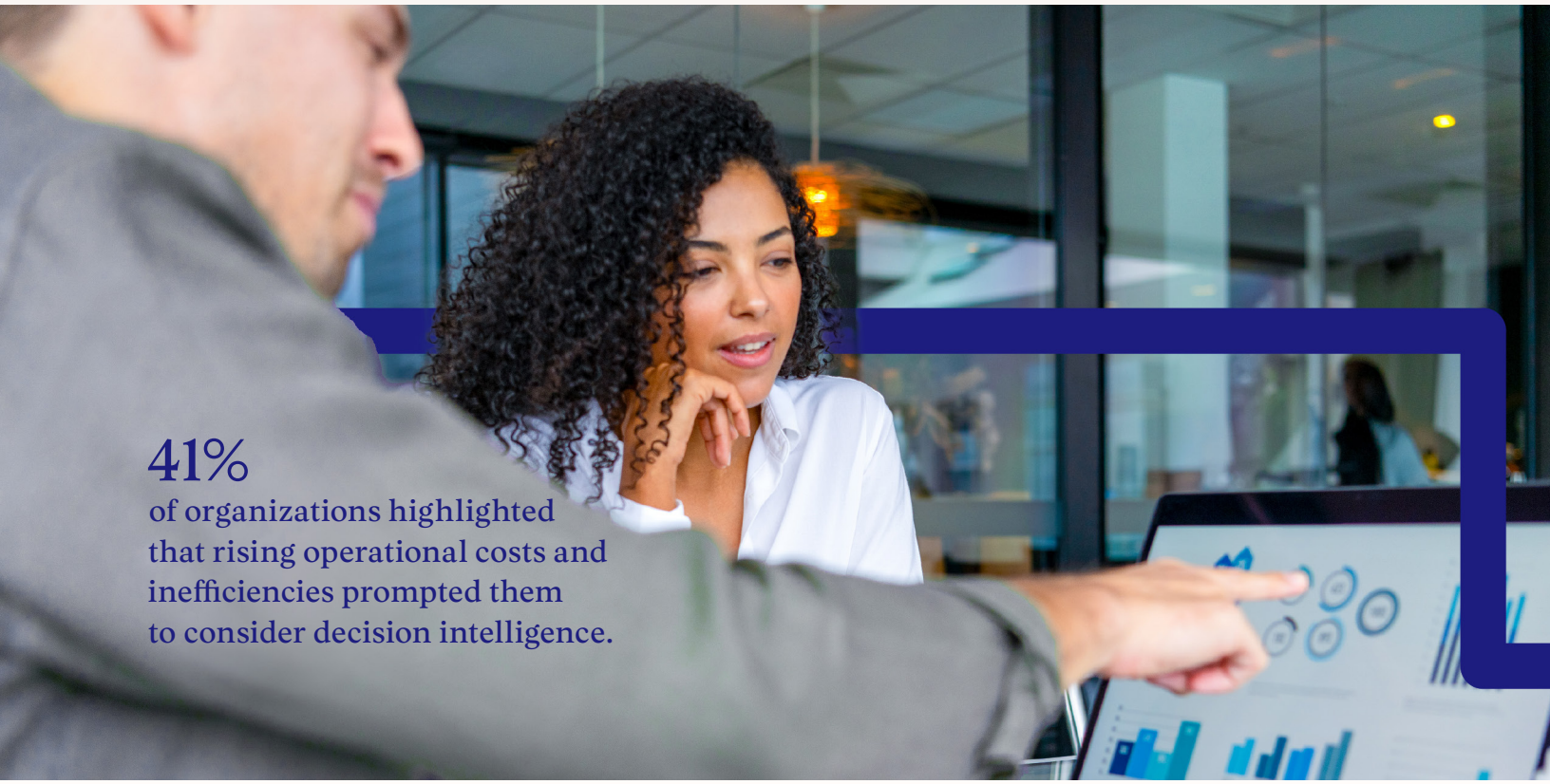
What is decision intelligence and why does it matter?

Decision intelligence allows enterprises to leverage continuous and intelligent decision cycles, where information flows seamlessly from data collection to execution and feedback. In essence, it is a set of competencies that fully or partially automates all aspects of the decision-making process, resulting in improved decision consistency and speed. The study provided the participants (representing business and IT decision-makers from 311 large organizations across 11 countries and six industries) with clarification that decision intelligence includes the six competencies shown below.

Six competencies of decision intelligence

1. **Acquisition and organization of data** into a form that makes data available for analysis
2. **Analysis of data,** including identifying trends and anomalies and reviewing KPIs, etc., using descriptive and predictive methods
3. **Performing simulations,** which involves performing what-if scenario analyses and simulations
4. **Recommending a decision** by predicting likely outcomes, evaluating, and recommending optimal alternatives
5. **Executing decisions** (i.e., acting based on the decision made)
6. **Monitoring, evaluating, and continuously learning** from decisions, actions, results, and simulations

n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025



When these six competencies connect in a closed loop, organizations gain consistency, speed, and quality when making and acting upon decisions. Decision intelligence will continue to grow in prominence as organizations navigate economic and geopolitical uncertainties, the introduction of new regulations, and changes to their business models. In the study, 40.8% of organizations highlighted that rising operational costs and inefficiencies prompted them to consider DI.

The top priorities of these organizations at this time of economic, geopolitical, and regulatory uncertainty are:

- Ensuring the availability of decision intelligence software/technology
- Empowering employees with agents to help them make decisions within a set of policies and procedures
- Automating some or all operational decisions
- Standardizing decision-making procedures and policies

These organizations further stated that review cycles across different business planning initiatives will need to take on a weekly cadence compared to the current monthly and quarterly review cycles.

This increased frequency around review times and planning will require organizations to leverage AI agents within their decision-making process, allowing for scalability and improved adaptability. AI agents can continuously sense changes in demand, risk, or opportunity, simulate outcomes, and execute approved actions in real time. For example, organizations that have used AI-driven decision intelligence have been able to adjust supply plans, shorten lead times, issue pricing changes, balance inventories, or identify order risks automatically. As these capabilities mature, the boundary between analytics, planning, and action will blur, ushering in a future where decision-making becomes continuous, collaborative, and self-improving.

25.5%

reported using a balanced approach that combines data and experience, while just over 10% stated that they leverage AI-generated recommendations.

How do most organizations make decisions?

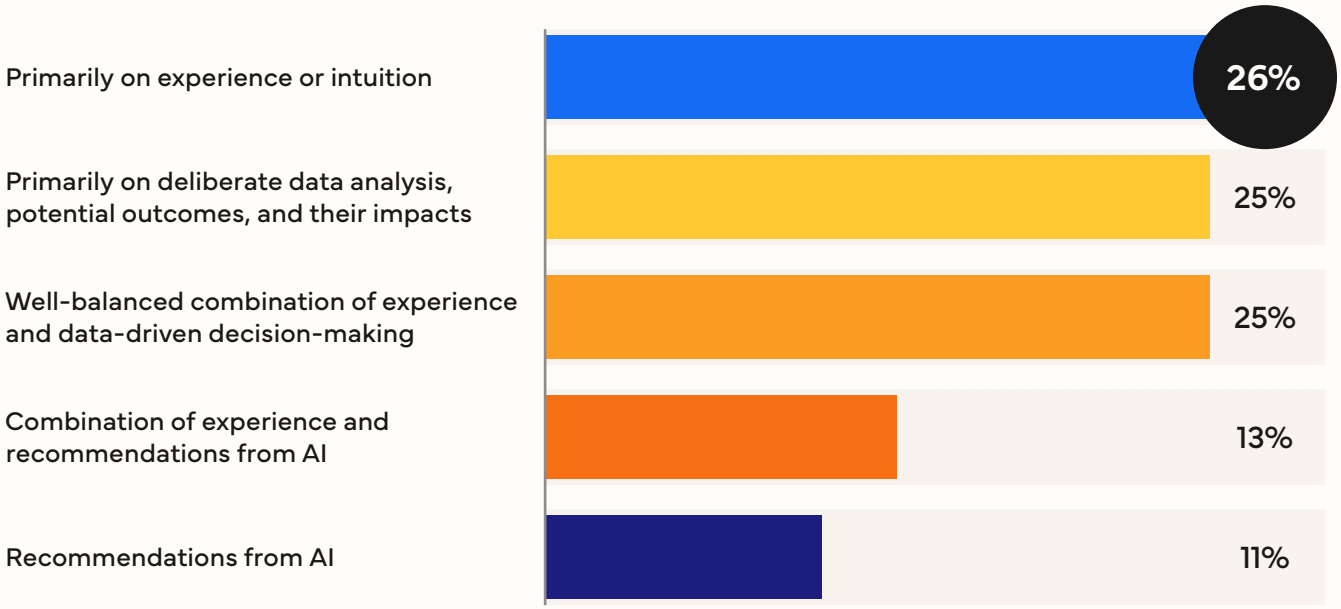
The IDC–Aera research highlights that decision-making within organizations leans toward a combination of experience, data insights, and AI-driven recommendations **(Figure 1, next page).** Roughly a quarter of organizations (25.5%) reported using a balanced approach that combines data and experience, while just over 10% stated that they leverage AI-generated recommendations. This highlights that organizations are in a transitional stage of using AI recommendations to inform choices but still depend on humans to validate and leverage their experience when it comes to outcomes (i.e., organizations can generate insights faster than they can act on them, creating a growing gap between information and execution).

Figure 1

How decisions are made in the flow of work

In your opinion, of all the decisions you make in your usual flow of work, what percentage do you make in the following ways?

(Percentage of respondents)



n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

These organizations also seem to be leveraging a combination of tools to support business decision-making, with a vast majority relying on spreadsheets (86.8%), data integration and governance software (75.6%), business intelligence/dashboards (74.0%), and planning applications (66.9%). This highlights that teams often leverage multiple tools to gather and interpret information, and in many instances, these are disconnected deployments. These fragmented workflows create delays and variability, particularly when time-sensitive choices must be made in supply chain operations, finance, or customer service. Choices in siloes prevent decisions from being measured or learned, resulting in poor decision quality and consistency. These realities underscore the urgency for a connected approach that embeds intelligence directly into the decision process.

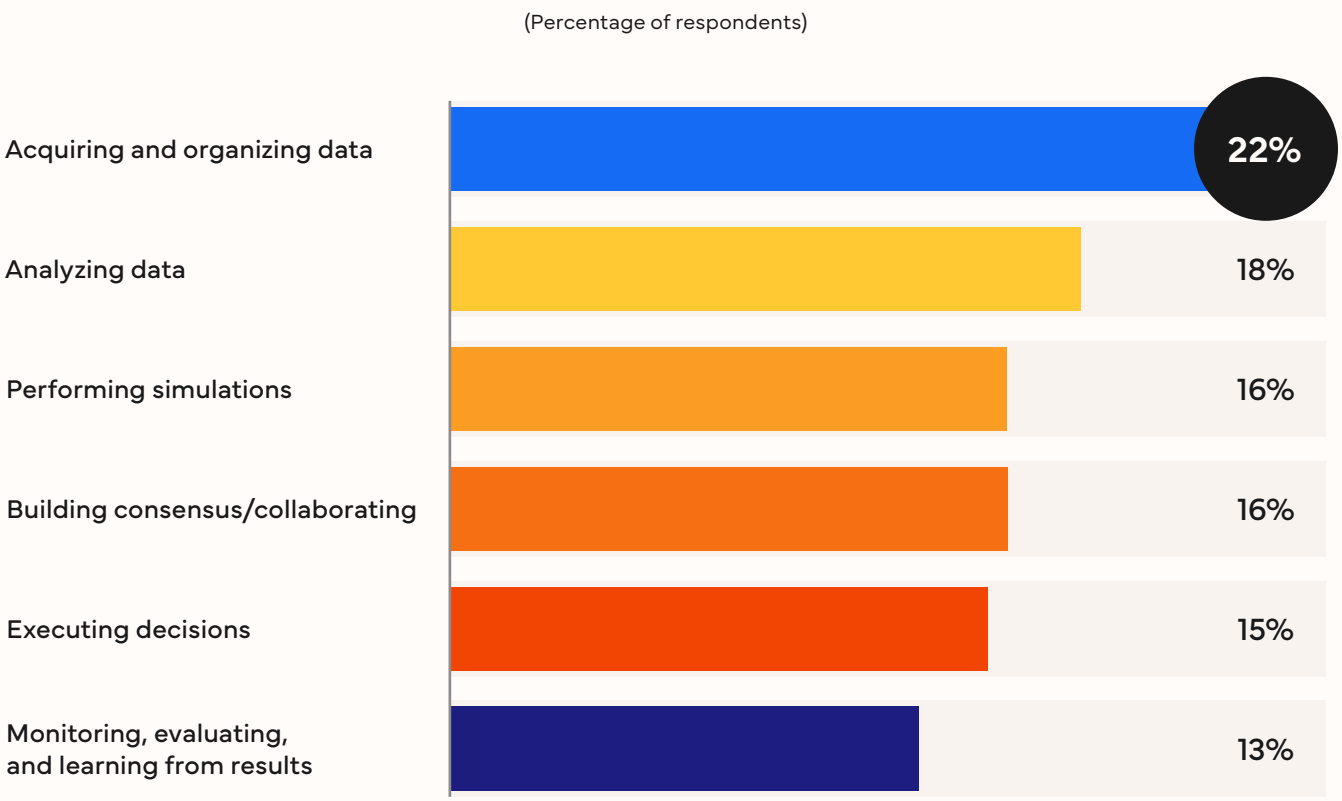
Even across the various activities that encompass decision-making, the research highlights that organizations spend more time, on average, executing decisions and analyzing data, highlighting the status quo of using a combination of insights

and experience **(Figure 2, below).** This further emphasizes the level of inconsistency that is prevalent because of organizations not being able to leverage all the data they need, and the fact that performing simulations can be cumbersome and is rarely standardized or automated. This also further constrains organizational learning. Without unified visibility across the decision cycle, outcomes are not systematically captured or leveraged in future analysis. The knowledge as to why a certain decision succeeded or failed often remains siloed within departments or individuals. Over time, this erodes institutional memory and prevents the enterprise from improving decision quality. The absence of an integrated feedback loop also makes it difficult to measure decision performance or understand its contribution to business results. Consequently, many organizations remain stuck in a pattern where data informs decisions but rarely transforms them.

Figure 2

Time spent on decision-making activities

Approximately what percentage of daily working time do you spend on each of these decision-making activities?



n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

Advancing decision intelligence: How AI and AI agents are transforming enterprise decision-making

The adoption of DI is gaining momentum, as organizations in the study highlight — 88.3% have either implemented or are planning to pilot DI initiatives.

More importantly, nearly 60% of respondents acknowledged that it would be extremely or very beneficial to have a unified platform for DI — a single connected environment that integrates all six competencies of decision-making. Such a platform enables scalability, consistency, and impact by connecting data, analytics, simulation, collaboration, execution, and monitoring within one continuous process.

AI is central to decision intelligence, and the research also highlighted the momentum around AI, with 83.2% of organizations stating that they were already on an AI transformation journey, while 5.5% stated that they are AI-native organizations. As enterprises embed AI deeper into their operations, decisions become more proactive, contextual, and data-driven, reducing latency between insight and action. AI agents represent the next step in the DI maturity curve, extending traditional AI by bridging insight and execution. As per the study, two in five organizations consider AI agents to be the enabling technology behind advanced decision intelligence.

According to the study, organizations expect AI agents to significantly improve four of the six core decision-making competencies, underscoring their expanding operational value. More than two-thirds of respondents believe AI agents will enhance data acquisition and organization (68.2%) and data analysis (67.5%), helping enterprises move from reactive reporting to continuous insight generation. Over half anticipate gains in simulation (59.2%) — where AI agents can run what-if scenarios and predict outcomes — and monitoring and learning (59.5%), where they can capture results and refine decision models over time. By embedding these capabilities directly into a unified DI platform, organizations can close the loop between data, decisions, and execution and turn insights into immediate, measurable actions.

Trust will play a critical role when it comes to the adoption of AI agents — trust in the accuracy of the insights and trust through transparency and explainability when it comes to these insights. As per the study, today most organizations consider AI agents to be more like assistants, with 33.1% of respondents indicating that AI agents should assist with tasks but not have decision-making authority, while 30.5% say agents can support decisions provided that humans approve all actions **(Figure 3, next page).** Over the next 18–24 months, that balance begins to shift. Twenty-six percent of organizations expect to allow AI agents to make decisions in routine, low-risk areas, and 19.6% anticipate agents managing most decisions under human oversight for critical issues. Only 10.6% envision AI agents acting with full autonomy in all decisions; a sign that while trust grows, a "human in the loop" will remain to govern agents in the near term.

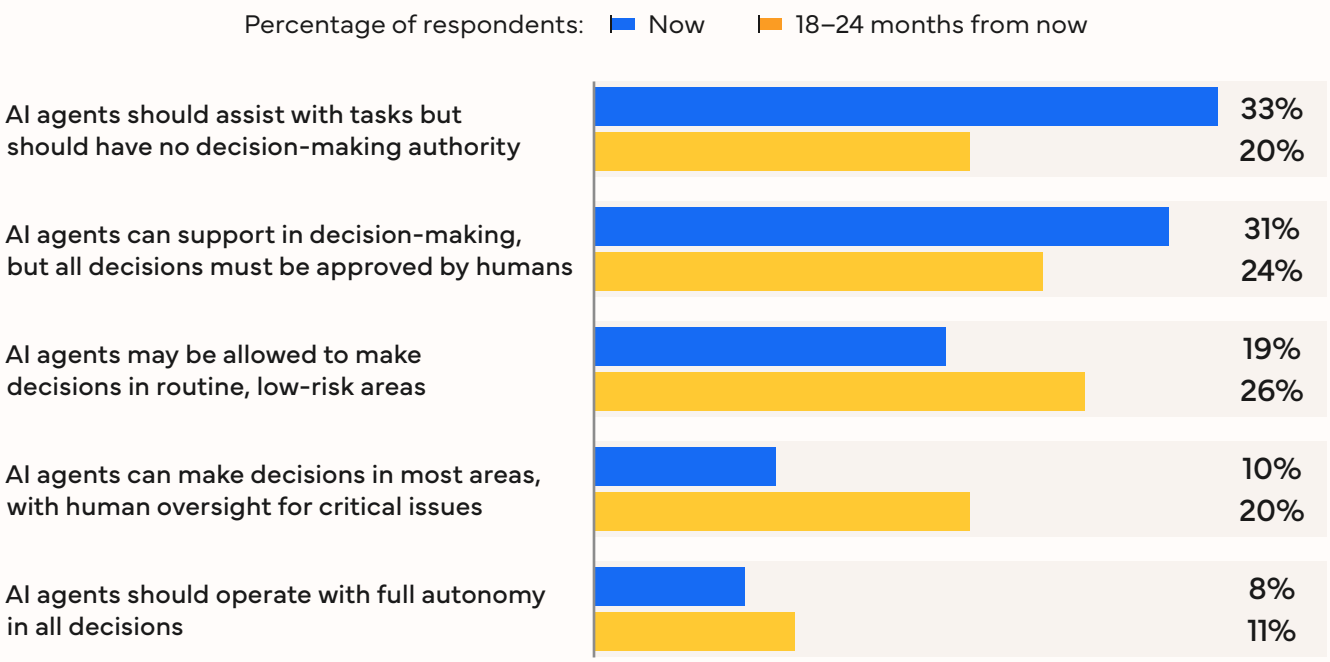
As confidence and governance structures mature, organizations will move toward a hybrid model in which human and AI agents will operate side by side. A unified DI platform can serve as the foundation for this collaboration, ensuring that every AI-enabled decision — whether assisted, augmented, or automated — is transparent, traceable, and aligned with enterprise objectives.

Figure 3

Using AI agents for decision-making (now versus 18–24 months)

Which best represents your view of using AI agents for decision-making within your organization now? How about 18–24 months from now?

See the figure data in an accessible table format.



n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

Benefits of decision intelligence

The study found that by leveraging decision intelligence, organizations were able to improve the consistency, speed, governance, and control of decisions.

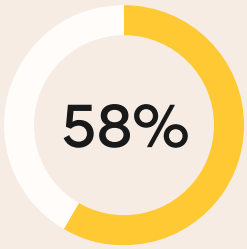
Organizations also highlighted that the finance, sales, operations, and supply chain functions within organizations would benefit the most from implementing and advancing their use of decision intelligence. The way organizations engage around the six competencies of decision-making also has an impact on the benefits they experience and their business metrics.

As part of our analysis, we segmented participating companies into four groups:

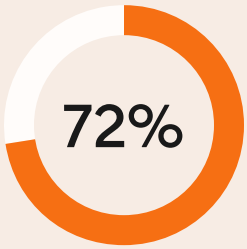
Group A	Groups B and C	Group D
fully connected and automated the majority of the six competencies of the decision-making process	companies where some competencies are connected and automated, while other competencies are fully connected and automated	some of the competencies are connected and automated, while others are not

We can view Group A organizations as being DI leaders and those in Group D as DI followers.

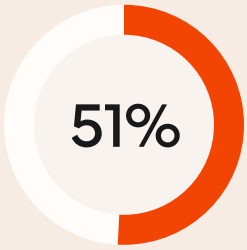
The following study findings set DI leaders apart:



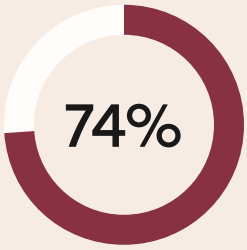
use AI when it comes to business decision-making.



stated that they have deployed DI in one or more functions.



indicated that they have a program for ongoing monitoring, review, and transformation of decision-making processes.



stated that they consider a unified DI platform to be extremely/very beneficial.

n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

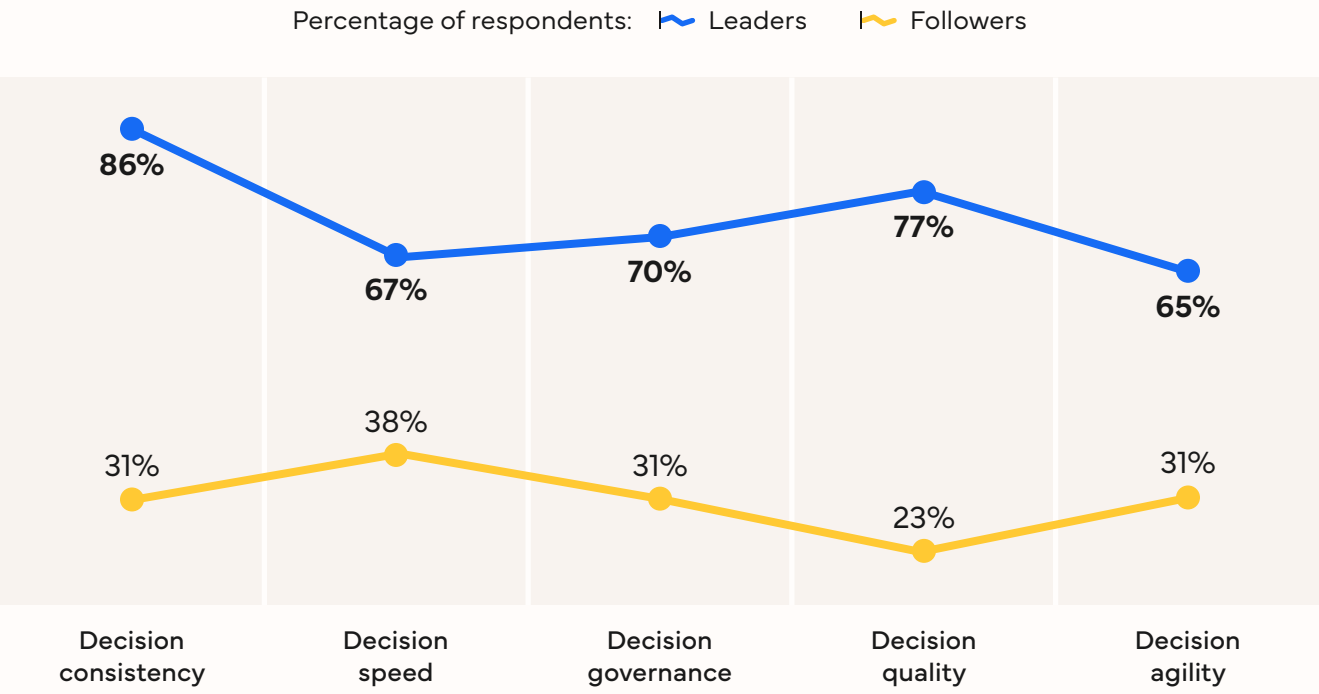
DI leaders experienced better outcomes when it came to the benefits of DI compared to followers **(Figure 4, next page).** On average, DI leaders did better than DI followers by 40 percentage points across all five benefits. This highlights that organizations that leverage a unified decision intelligence platform, where decisions are continuously monitored and refined through feedback loops, not only make better decisions, but they make them faster and with greater confidence and impact.

Figure 4

Decision intelligence benefits widen the gap between leaders and followers

How have the following decision intelligence benefits improved since implementing a decision intelligence solution?

See the figure data in an accessible table format.



Note: Data represents the percentage of decision-makers who responded 4 or 5 on a scale of 1–5, where 1 = no improvement and 5 = significant improvement.
n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

Finally, when asked about changes to operational metrics in the last fiscal year, both groups also exhibited noteworthy differences. For example, 78% of leaders compared with 61% of followers experienced an increase in customer satisfaction/loyalty, and 34% more leaders compared with followers (75% versus 41% in **Figure 5, next page**) experienced an improvement in operational efficiency.

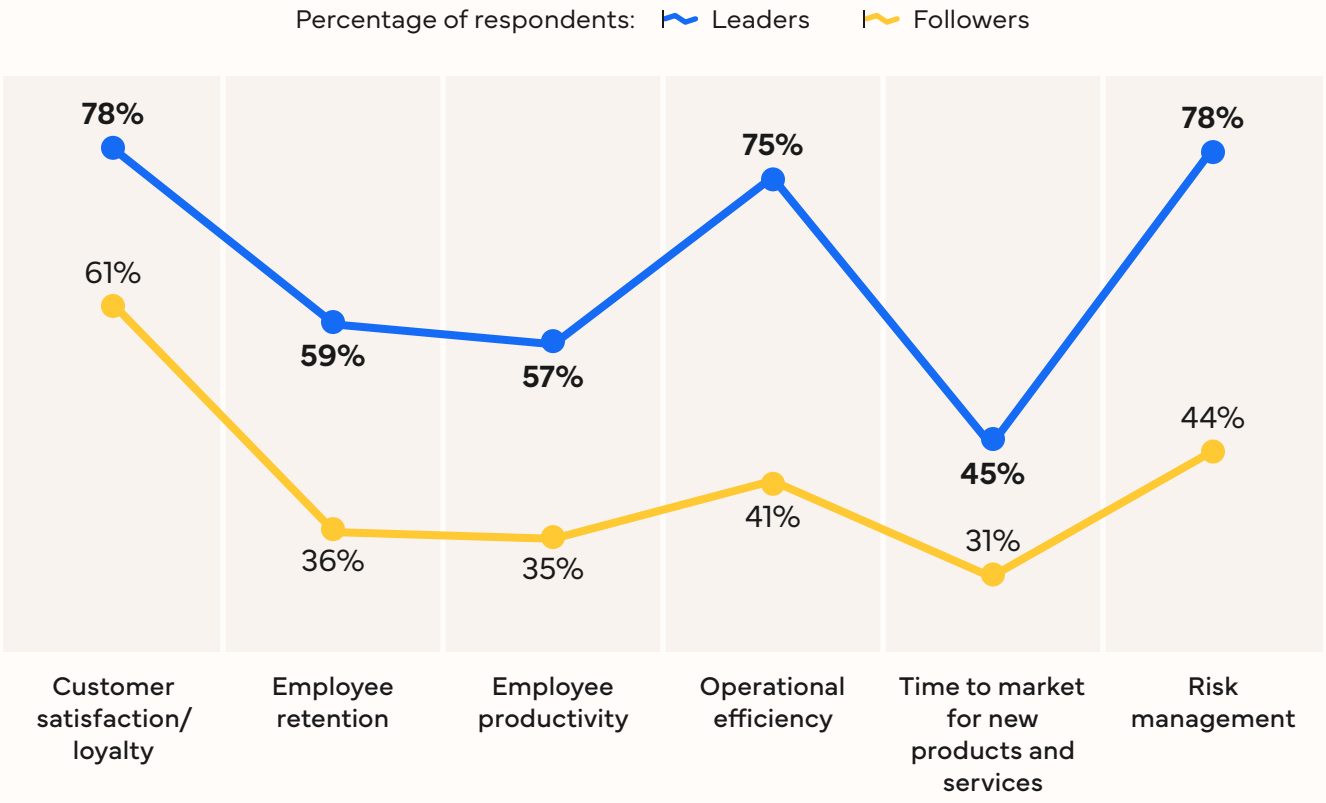
Figure 5 (next page) shows the differences in the level of improvement between leaders and followers in the various operational metrics (note that this research question used the following scale: decreased by 20%+, decreased by 10% to 19%, decreased by 1% to 9%, no change (0%), increased by 1% to 9%, increased by 10% to 19%, and increased by 20%+).

Figure 5

Companies with improvements in listed business metrics during the last fiscal year

How did the following business metrics change in your organization in the last year?

See the figure data in an accessible table format.



Note: Data represents the percentage of decision-makers who responded 4 or 5 on a scale of 1–5, where 1 = no improvement and 5 = significant improvement.
n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

Essential guidance

The adoption of decision intelligence and AI agents is reshaping how organizations think about data, analytics, and execution. However, success requires more than technology — it demands a structured approach that aligns use cases with governance and culture.

Based on the research and observations of leading enterprises, several key considerations will guide organizations as they expand their AI-powered decision intelligence capabilities.

Start with high-impact use cases within each department.

Decision intelligence delivers the greatest value when applied to specific, measurable problems. Organizations should begin by identifying business functions where decisions are frequent, time-sensitive, and data-rich, such as supply chain planning, pricing, finance, or customer operations. Prioritizing use cases where decision velocity and quality directly influence outcomes ensures early wins and builds confidence in the use of not just DI but also AI. As adoption scales, enterprises can extend decision intelligence into more complex or cross-functional decisions that require deeper collaboration and integration.

Automate routine decisions to enable humans to focus on collaboration and innovation.

AI and AI agents should first target repetitive, low-risk decisions that consume significant time but require limited judgment. Automating these activities, such as demand adjustments, resource allocation, or scheduling, reduces operational friction and frees decision-makers to focus on strategic priorities and creative problem-solving. Over time, as trust in AI agents grows, they can expand into higher-value areas under human oversight, improving efficiency and engagement.

Invest in a unified decision intelligence platform integrated with AI agents.

Fragmented tools and disconnected data sources remain major barriers to achieving decision consistency, quality, and speed. A unified platform that combines data ingestion, analytics, simulation, execution, and learning within a single environment ensures that intelligence flows seamlessly from insight to action. Platforms that have AI agents embedded within them allow for continuous monitoring, scenario simulation, and autonomous action across functions. This integration not only accelerates decisions but also strengthens transparency and traceability around the decisions that have been made and allows for scalability across the enterprise. Another important factor is that DI platforms help capture institutional knowledge and processes, which can be used to leverage and guide decisions, allowing for scalable knowledge transfer.

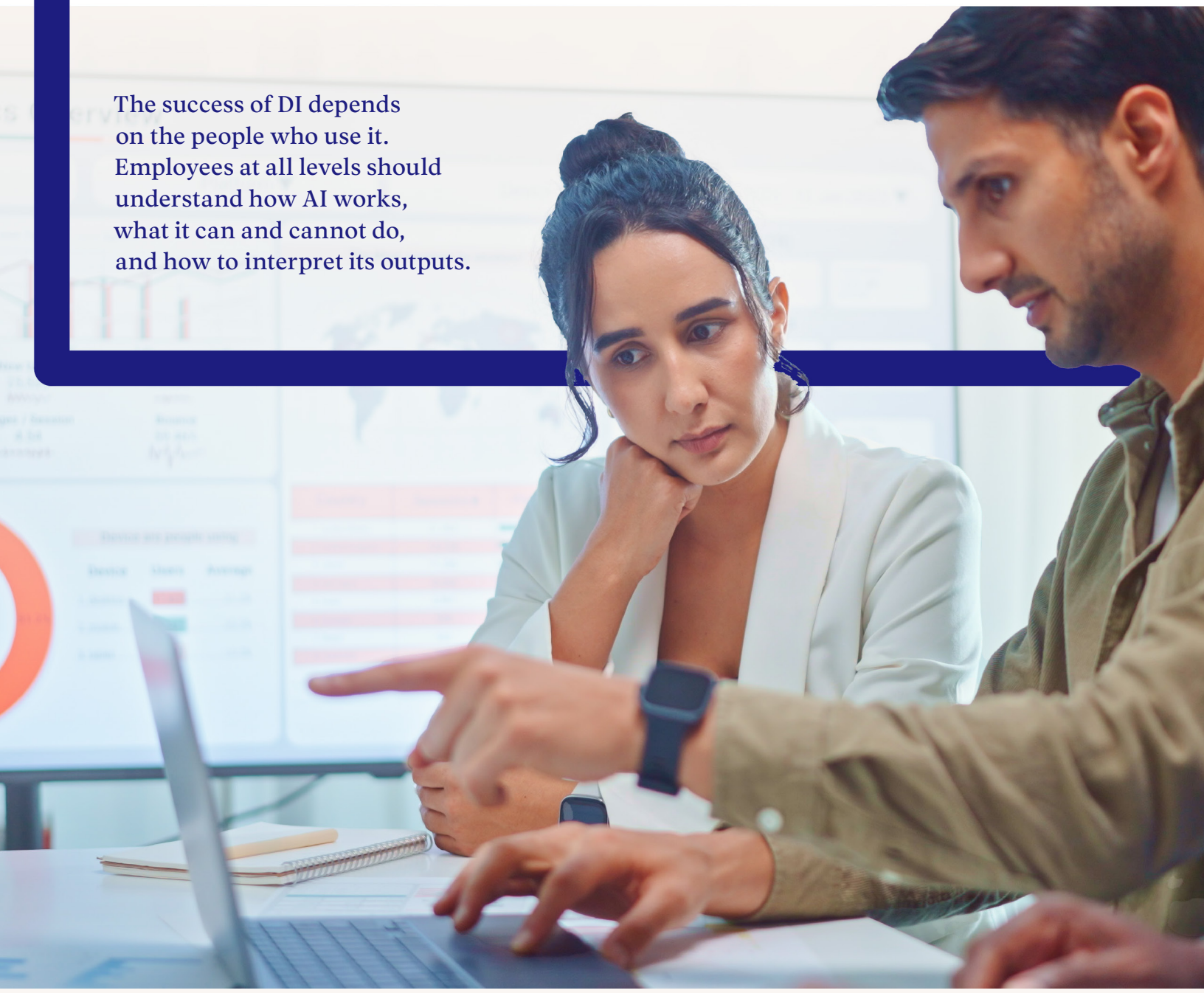
Maintain human oversight and build trust as AI maturity increases.

AI agents will increasingly support and execute decisions, but human oversight remains critical. Clear governance structures, explainable models, and ethical frameworks ensure that AI decisions align with business strategy, regulatory requirements, and societal expectations. Whether an organization continues with a human-in-the-loop protocol or progresses to human-on-the-loop, establishing checkpoints for review and intervention helps balance automation with accountability. As organizations accumulate experience and evidence of success, they can expand the level of autonomy that they grant to AI agents in a controlled and trusted manner.

Promote data and AI literacy across the organization.

The success of DI depends on the people who use it. Employees at all levels should understand how AI works, what it can and cannot do, and how to interpret its outputs. Training programs that build data literacy, critical thinking, and cross-functional collaboration will increase user confidence and adoption. Empowering decision-makers with the knowledge to question, validate, and improve AI recommendations will be crucial for driving AI trust and adoption.

The success of DI depends on the people who use it. Employees at all levels should understand how AI works, what it can and cannot do, and how to interpret its outputs.



Conclusion

Decision intelligence has become a strategic imperative for organizations navigating an increasingly complex and dynamic business environment. Organizations that embrace AI-powered decision intelligence and the emerging capabilities of AI agents are in a better position to achieve greater agility, innovation, and competitive differentiation. By connecting data, analytics, execution, and monitoring in a unified decision framework, decision-making transforms into a proactive, continuous, and measurable capability.

The path forward requires intentional transformation — investing in technology that unifies decision workflows, fostering a culture of trust, data and AI literacy, and redefining how humans and AI agents collaborate. DI will help organizations to continuously learn, adapt, and thrive in the agentic AI era.

Appendix A: Accessible data tables

This appendix provides an accessible version of the data for any complex figures in this document. Click "Return to figure" to get back to the original figure.

Figure 3

Using AI agents for decision-making (now versus 18–24 months)

View of using AI agents	Now	18–24 months from now
AI agents should assist with tasks but should have no decision-making authority	33%	20%
AI agents can support in decision-making, but all decisions must be approved by humans	31%	24%
AI agents may be allowed to make decisions in routine, low-risk areas	19%	26%
AI agents can make decisions in most areas, with human oversight for critical issues	10%	20%
AI agents should operate with full autonomy in all decisions	8%	11%

n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

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Appendix A: Accessible data tables (continued)

Figure 4

Decision intelligence benefits widen the gap between leaders and followers

Decision intelligence benefits	Leaders	Followers
Decision consistency	86%	31%
Decision speed	67%	38%
Decision governance	70%	31%
Decision quality	77%	23%
Decision agility	65%	31%

Note: Data represents the percentage of decision-makers who responded 4 or 5 on a scale of 1–5, where 1 = no improvement and 5 = significant improvement.
n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

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Figure 5

Companies with improvements in listed business metrics during the last fiscal year

Decision intelligence benefits	Leaders	Followers
Customer satisfaction/loyalty	78%	61%
Employee retention	59%	36%
Employee productivity	57%	35%
Operational efficiency	75%	41%
Time to market for new products and services	45%	31%
Risk management	78%	44%

Note: Data represents the percentage of decision-makers who responded 4 or 5 on a scale of 1–5, where 1 = no improvement and 5 = significant improvement.
n = 311; Source: *IDC-Aera Decision Intelligence Survey,* September 2025

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Megha Kumar is research vice president within IDC's Worldwide AI, Automation, Data, and Analytics organization and the global research lead for business analytics, enterprise intelligence, and decisioning solutions. Her research is focused on providing insights on business analytics, enterprise performance management, and decision intelligence technology trends, adoption, and vendor strategies. It includes best practices around enterprise intelligence and aspects of building a data-driven organization, such as data culture and personas.

More about Megha Kumar →

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