FUJITSU

Decision Intelligence

Beyond the limits of Data-driven management

"Are our actions truly the best they can be?"

Geopolitical risks, accelerating innovation, volatile markets, and diversifying customer needs. These factors define the "BANI" era, Brittle, Anxious, Nonlinear, and Incomprehensible, making the business environment more complex than ever.

Decision Intelligence (DI) has emerged as a key to guiding businesses toward sustainable growth amid this volatility. DI isn't merely about adopting data analytics tools or ad hoc adoption of AI. It derives from the natural integration of data resources, autonomous AI agents capable of independent reasoning and action, and human intelligence grounded in deep business insight.

This means a radical transformation of practical processes related to decision-making, such as corporate planning and investment management. In other words, it redefines the very norms of how decisions are made.

AI agents continuously learn and formalize various implicit knowledge from management and frontline operations. They instantly present multiple scenarios into a digital twin drawing from real-time market and operational data. Orchestrator agents synthesize these findings to deliver optimal solutions. The collaboration between each AI agent aggregates to form a unified framework achieving greater autonomy, adaptability and coherence than individual AI agents.

Despite this autonomy, these AI agents remain partners to humans. Management wisdom remains at the core, aligning organizational purpose with human intelligence to balance economic and social value. But to deliver on this and to take advantage of how the technology can accelerate decision making, requires organizations to transform their structures and processes. By proactively embracing and running trials with advanced DI technologies leaders can unlock the organizational potential and fundamentally shift the trajectory of corporate value creation.

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Section 1

What is DI: A New Norm for Decision-Making Woven from Data, AI, and Human Intelligence

Decision Intelligence (DI) isn't just a new version of data analytics. It's a way to change how an organization thinks, decides, and acts. Traditional data-driven management can only take you so far. DI pushes past those limits and helps teams reach their full potential. But what does this actually mean?

Where conventional data analytics looks for patterns in historic data, DI uses powerful AI to predict what's coming and to run realistic simulations of what might happen next. But it's not only about technology transformation. DI also draws on the organization's purpose, and on human insight and judgement, to ensure a focus on outcomes that matter. This creates a new way to make decisions - faster, sharper, and more meaningful.

And it goes even deeper. DI helps shape how the organization itself works. It builds structures and decision-making flows that make quick action possible. Once a decision is made, it ensures the company can adapt fast, adjust course, and keep moving.

DI brings together data, AI, and human insight into one powerful force, reshaping how decisions are made from start to finish. The process centers on five simple questions:

1. **"What is happening?":** Accurately grasp the current situation from objective historical data.
2. **"Why did it happen?":** Uncover deep causal relationships through advanced analysis.
3. **"What will happen next?":** AI models predict and anticipate risks and opportunities.
4. **"What should be done?":** AI agents propose optimal actions by forecasting multiple options and outcomes.
5. **"What have we learned?":** Feedback from the results of execution into the next decision-making cycle.

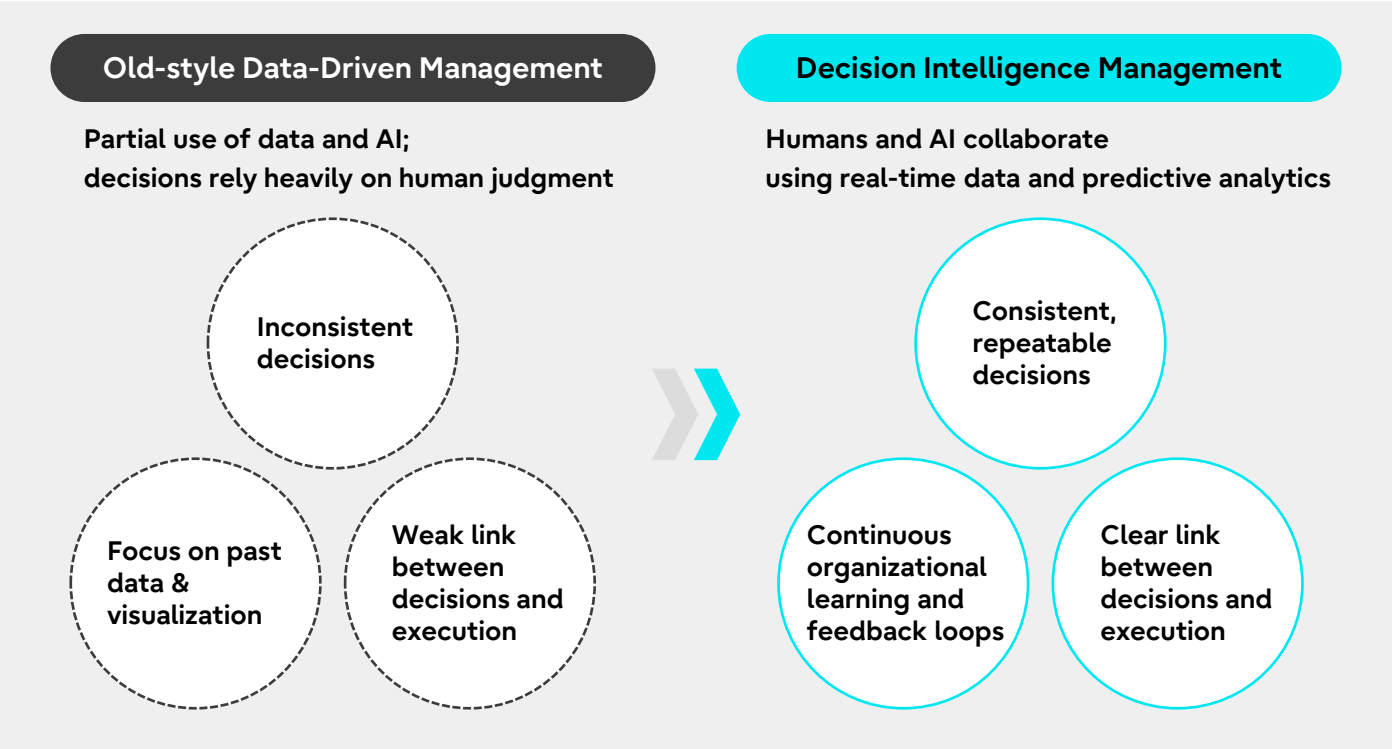
Data-driven management has been advocated for more than a decade.

While many organizations are using AI, it's often the case that they focus on gathering scattered data, and don't get much further. Few use data and AI effectively for decision-making and to deliver subsequent improvements in corporate value.

In contrast, DI drives reform based on the premise that the AI system itself is deeply embedded in the decision-making process.

While humans still make judgments and decisions, DI supports optimal decision-making that combines both objectivity and flexibility by merging AI's rational information with human non-rational thinking. Furthermore, it doesn't set decision-making itself as the goal but rather advances reforms in mechanisms for immediate execution of decisions, and in organizational structures and processes themselves for continuous trial and error and organizational learning (Figure 1).

Figure 1: DI further evolves conventional data-driven management.



Created by Fujitsu.

A major characteristic of DI is that humans and AI share a purpose, swiftly deriving optimal solutions through dialogue with AI, based on accumulated domain knowledge scattered across the field and vast real-time data and predictive analytics. It establishes a mechanism to embed into management the ability to survey the entire decision-making landscape, integrate human experience, intuition, ethics, and strategic vision with insights from data and AI, leading to higher quality "judgments" and "actions" that go beyond mere fact-finding or prediction.

But in order to achieve this, the organization must transform its processes to enable this effective use of AI.

If companies continue to adhere to old-style data-driven management, improving corporate value will remain elusive. As we will see in the next chapter, even getting basic benefit from data can be a challenge.

Section 2

Rapidly Growing DI Market: Data Quality Improvement is a Challenge

Investment in data is crucial for DI. However, the reality is that many challenges persist regarding data quality. A survey*[1] conducted by Wavestone, a business consulting service provider, targeting CDOs (Chief Data Officers)/CDAOs (Chief Data & Analytics Officers) and data/AI leaders worldwide, revealed that only 37.0% responded that "efforts to improve data quality have been successful" (Figure 2).

A report*[2] by SoftServe, an IT consulting and digital service provider, surveyed 750 business leaders globally, and 58% of respondents indicated that "critical business decisions are most often based on inaccurate or inconsistent data."

Figure 2：Current Status of Data & Analytics Investment and Business Outcomes

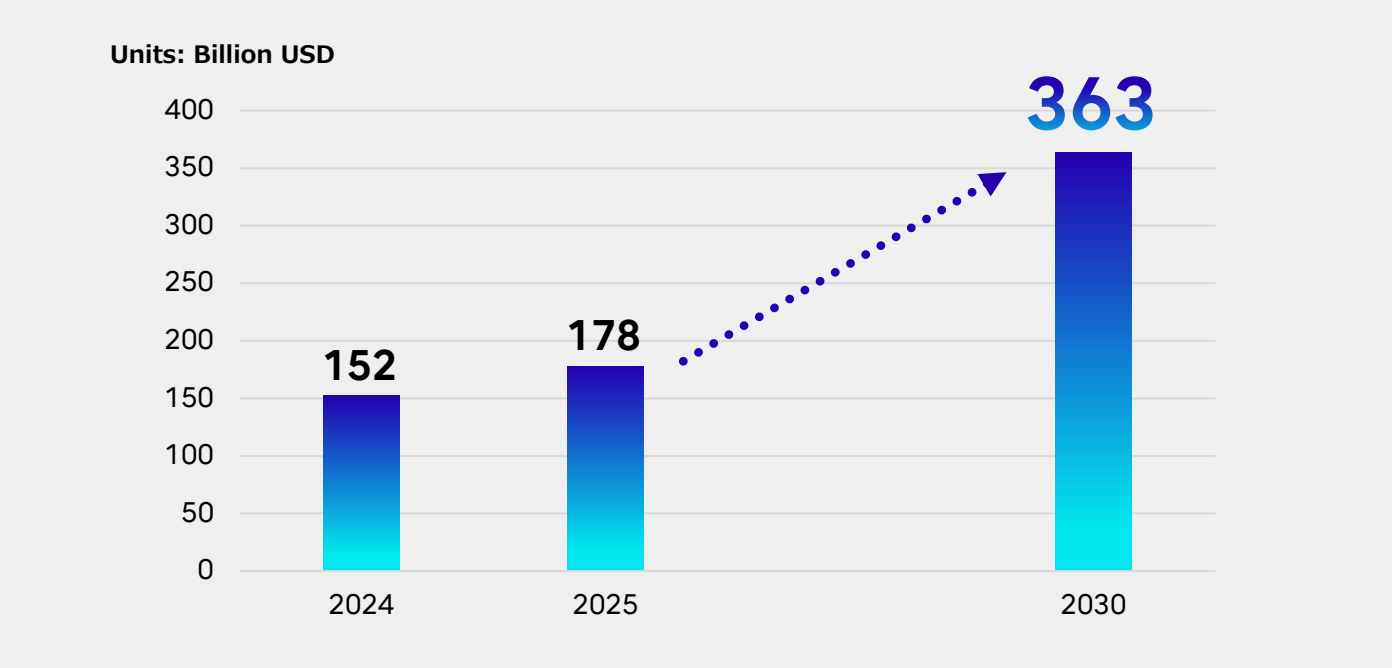
Created by Fujitsu based on Wavestone's report.

These findings show that a reliance on data collection is ineffective, and data integration platforms alone rarely deliver strong returns. The real driver is data quality, enabled by AI. Spending enormous amounts of money and time just on building a data integration platform isn't a wise strategy.

Leading global companies already view DI as an investment for establishing sustainable growth and future corporate value improvement. According to Gartner, one-third (33%) of the organizations surveyed for the 2024 Gartner CDAO Agenda Survey have already deployed DI, with 17% committed to pilot within six months, 19% considering deployment in six to 12 months, and 25% investigating deployment in 12 to 24 months. Only 7% stated no interest*[3]. This suggests that DI is already becoming a key pillar of transformation for companies.

According to a report*4 by research firm Grand View Research, the global DI market size was estimated at $15.22 billion in 2024. It is projected to reach $36.34 billion by 2030, with a compound annual growth rate of 15.4% from 2025 over five years (Figure 3). Regionally, North America is the largest, accounting for 45.1% of the total in 2024. The report notes that Europe and Asia Pacific are also expected to experience significant growth. This indicates that the DI market is becoming one of the fastest-growing sectors globally.

Figure 3：DI Market Expected to Continue High Growth



Created by Fujitsu based on Grand View Research's survey.

The essence of DI is an approach that resolves common "data bottlenecks" faced by companies and unleashes the true potential of AI. Advanced companies are already actively working on this. Establishing an environment where AI can always perform optimal learning and judgment, not just by increasing the quantity of data but by thoroughly enhancing its quality, is what leads to establishing competitive advantage in the BANI era.

*1 https://www.wavestone.com/en/insight/data-ai-executive-leadership-survey-2024/

*2 https://www.globenewswire.com/news-release/2025/02/06/3022005/0/en/Bad-Data-Makes-Bad-Decisions-58-of-Leaders-Report-Companies-Using-Inaccurate-Data-for-Big-Decisions.html

*3 Gartner®, Market Guide for Decision Intelligence Platforms, Erick Brethenoux et al.18 July 2024
https://www.gartner.com/en/documents/5599159 (Gartner Subscription Required)

2024 Gartner Chief Data and Analytics Officer Agenda Survey. This study was conducted to determine the agenda and strategic challenges of the chief data and analytics officer (CDAO) role and/or the office of the CDAO for 2024, inform agenda planning or potential research topics for the data and analytics (D&A) practice, and track the progress of the CDAO role in organizations. The research was conducted online from September through November 2023 among 479 respondents from across the world. Respondents were required to have the official CDAO, chief data officer (CDO) or chief analytics officer (CAO) title, be the highest-level D&A leader, or have the highest-level D&A leader reporting to them, or the leader with D&A responsibilities in IT or in a business unit outside of IT.
The survey sample was gleaned from a variety of sources (including LinkedIn), with the greatest number coming from a Gartner-curated list of over 4,770 CDOs and other high-level D&A leaders. The study was developed collaboratively by Gartner D&A analysts and the primary research team.
Disclaimer: The results of this survey do not represent global findings or the market as a whole but reflect the sentiments of the respondents and companies surveyed.

*4 https://www.grandviewresearch.com/industry-analysis/decision-intelligence-market-report

Section 3

Four Perspectives for Establishing DI and Uvance Approach

Traditionally, the view was that leveraging data required building a robust data foundation first, a process that could take years. This often turned the means into the end, with many companies focusing on organizing data before considering how to use it. Today, data foundations have already evolved. The focus is shifting to rapidly implementing fit-for-purpose data and AI solutions, guided by the question: 'What data do we need to make which decisions?

The idea that building a data integration foundation takes years is now outdated. Uvance, working with global partners, has developed the technology and expertise to achieve effective data integration for customers in just a few weeks. In this chapter, we highlight four foundational elements of DI : ‘data hygiene,’ ‘AI technology,’ ‘human intelligence and governance,’ and ‘security and business continuity,’ and outline the Uvance approach to implementing them.

1. Making the data work better for you

The foundation of DI is a reliable and robust data infrastructure, characterized by data cleanliness, accuracy, and high quality (data hygiene). Data is the fuel for DI, and its quality and accessibility therefore determine the quality of decision-making. Integrating diverse, scattered data and transforming it into reliable information usable for decision-making is essential. But how?

①"Knowledge Collaboration" Across Departmental Barriers

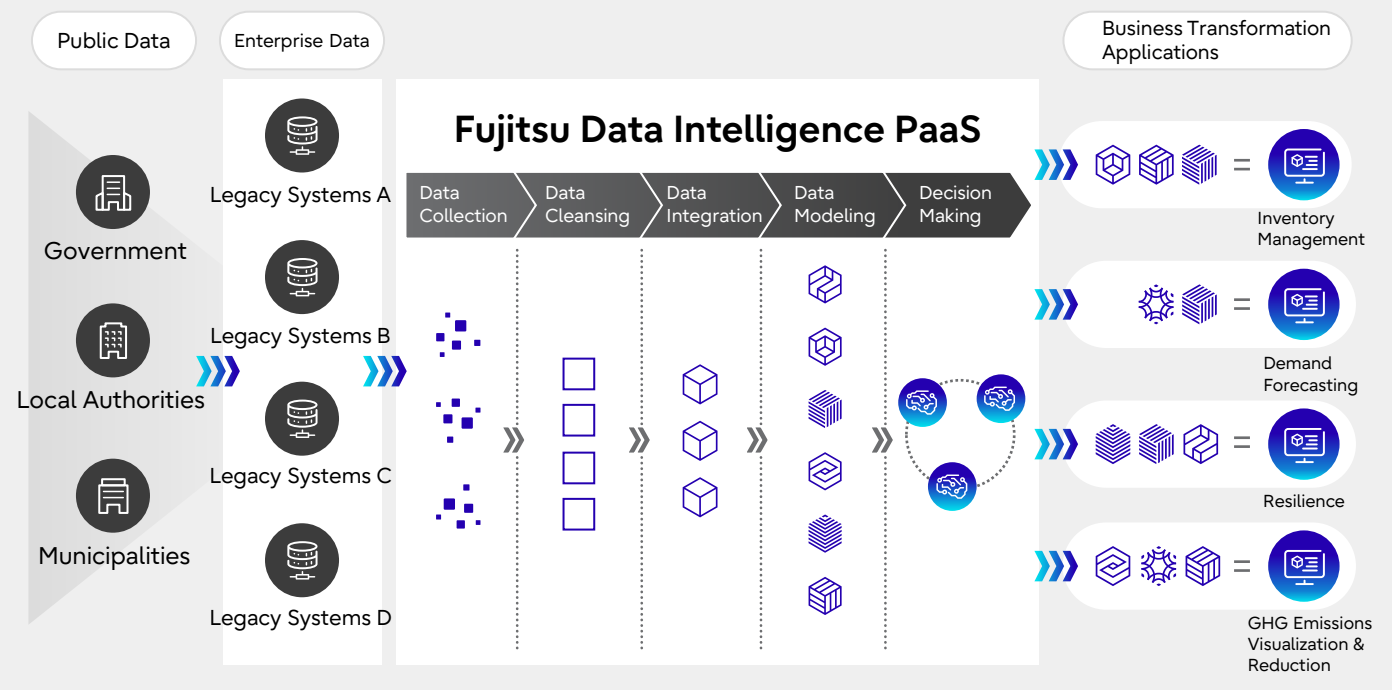
The true value of DI lies in breaking down departmental data silos to foster 'knowledge collaboration' across the organization. Many companies suffer from siloed information, where departments like sales, marketing, manufacturing, and accounting maintain separate systems. Without centralized management and analysis of this data, both executives and frontline leaders struggle to make optimal decisions for the organization as a whole.

Through 'Fujitsu Data Intelligence PaaS (DI PaaS)*[5]' (Figure 4), a platform designed to support customer decision-making, Uvance is driving management transformation rapidly without disrupting existing systems. For instance, a global manufacturer integrated supply chain data from around 20 production sites worldwide in just weeks, streamlining business processes and cutting workloads by 50%. By collaborating with customers, Uvance envisions a 'desired future' and transforms data into actionable information that can be used 'anytime, by anyone, and accurately,' with a forward-looking perspective.

Insight: Are critical decisions concentrated within specific departments or individuals? DI revitalizes the entire organization as a "knowledge network," fostering inter-departmental collaboration.

*[5] https://www.fujitsu.com/jp/innovation/data-driven/capabilities/

Figure 4：Fujitsu Data Intelligence PaaS



Created by Fujitsu.

②Driving the Cycle of Execution and Learning through Feedback Loops

The true value of DI lies in the fact that decision-making isn't a one-time event. It continuously drives a feedback loop that monitors the results of actions proposed by DI, automatically analyzing success factors and areas for improvement. AI analyzes the discrepancies between predicted and actual outcomes, automatically updating and improving its prediction models for future cycles. DI itself continually self-improves, steadily enhancing the accuracy of decision-making. Through this iterative process, optimal solutions are refined.

This is precisely about externalizing the implicit knowledge scattered across management and the field into explicit knowledge, and then acquiring new implicit knowledge, thereby securely and rapidly cycling through the SECI model** of knowledge creation management, which fosters innovation, by leveraging AI. The major challenge for future management will be whether an organization can embed a loop that elevates individual and organizational "knowledge" into corporate value.

Insight：Do you often proceed with decisions "somehow" without validating their results? Through a data- and AI-driven feedback loop, you can transform decision-making into "a cycle of continuous learning and growth."

**: An organizational knowledge creation theory advocated by Professor Ikujiro Nonaka. It is a concept that enhances an organization's knowledge creation capabilities by externalizing individuals' implicit knowledge into explicit knowledge, sharing and practicing it, and thereby turning it into other individuals' implicit knowledge.

2. Using Advanced AI Technology

Second, AI technology analyzes complex business situations and recommends optimal actions using vast amounts of high-quality data from a solid data foundation. Leveraging advanced AI that can learn, reason, and act autonomously can significantly accelerate decision-making and improve its quality.

③Building Autonomous Decision-Making Processes with AI Agents

It will be necessary to establish a process where multiple business-specific AI agents make rational judgments based on their specialized expertise and perspectives. Then, an orchestrating AI agent consolidates these judgments impartially. Finally, humans make the ultimate decision based on this comprehensive input. The sovereignty of AI must always remain with people. Of course, security in using AI and ensuring the reliability of AI's judgments (discussed below in 4.) are prerequisites for AI utilization.

Uvance has developed many use cases of collaboration with AI agents. A key feature is the inclusion of an orchestrator agent that consolidates proposed answers from multiple domain-specific AI agents to make rational judgments, and an evaluator agent that assesses these judgments and, if necessary, escalates to humans for their decision*[6]. This design incorporates functions for agents to evaluate each other's work and for humans to evaluate agents' performance. In the future, AI will likely also learn "human-like judgment."

Insight：Do you continue to rely on individual human experience and intuition for decision-making? AI agents have the potential to scientifically bolster your experience and exponentially increase the accuracy and speed of decision-making.

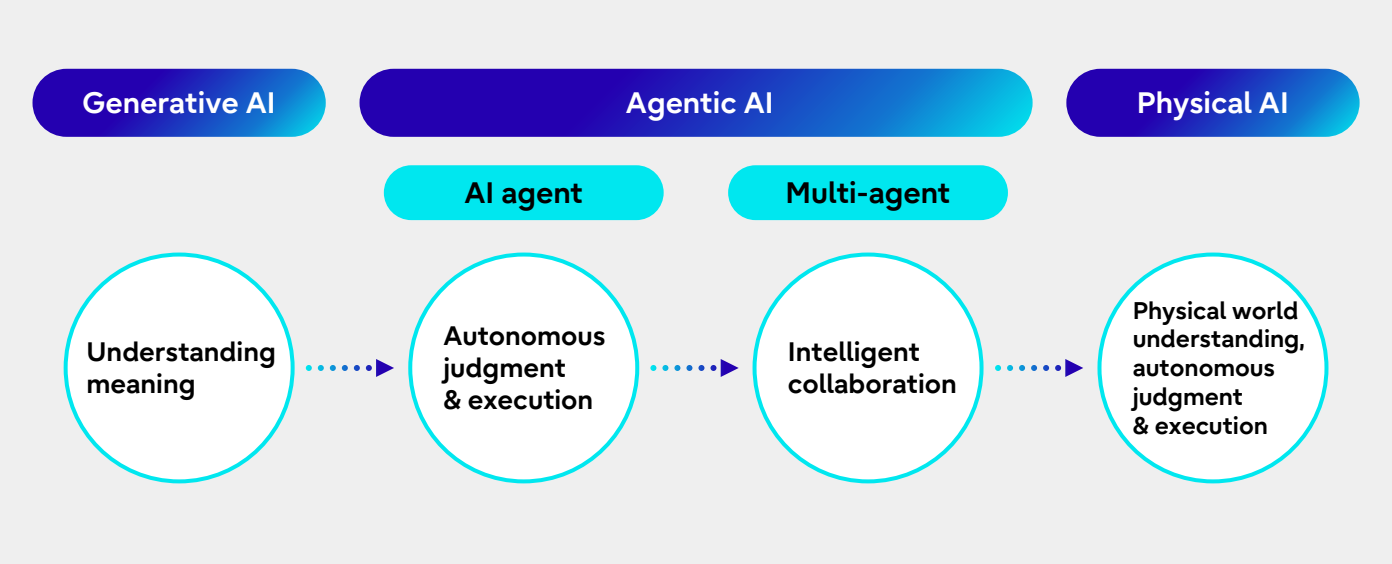
*[6] Fujitsu AI Agent's Autonomous Inventory Management
https://www.youtube.com/watch?v=G4rP1ShnvZU&t=4s

④"Physical AI" Implementing Agentic AI in the Physical Space

By embedding Agentic AI into robotics and IoT devices and developing it into "Physical AI" (Figure 5) that executes autonomous actions in the real world, the entire flow from decision-making to execution and feedback learning can be extended into the physical space. Examples include autonomous control of production processes in assembly plants, optimization of power supply and demand in grids and power generation infrastructure, and ultra-high-speed material exploration and automated experimentation for new materials. As AI directly intervenes in the real world and acquires "Embodied Intelligence" through continuous learning and improvement, the scope and effectiveness of DI are dramatically expanded.

Insight：Is AI something you only associate with digital spaces? Integration of real-world actions and AI-driven learning will become possible in the near future. Preparing now for this new era will be a step towards sustainable growth.

Figure 5: AI technology evolves to enable autonomous judgment and execution in the physical world.



Created by Fujitsu.

Fujitsu announced in October 2025 that it would collaborate with NVIDIA and Yaskawa Electric to develop autonomous robots for practical use. By leveraging Fujitsu's computing, AI, and networking technologies with NVIDIA's AI-related technologies, they are making concrete progress in exploring what effects can be generated with Yaskawa Electric's AI robots. As Physical AI matures, the application range of robots will further expand. Fujitsu is challenging itself to advance manufacturing innovation led by AI, utilizing the technological assets, frontline implicit knowledge, and "Kaizen" know-how that have supported Japan's manufacturing sector.

⑤Co-creation as "Augmented Intelligence AI" that Extends Human Intelligence

The role of AI in DI is by no means to take decision-making away from humans. It functions as "Augmented Intelligence AI," compensating for human information processing limitations and cognitive biases, and supporting more advanced decision-making. Co-evolution of collaboration between humans and AI, enables people to concentrate on more strategic and creative work.

Insight : Do your employees perceive AI as a threat? Opportunities for co-creation with AI are within reach. Co-creation with AI is an excellent opportunity for new capability development, further enhancing human creativity and judgment.

3. Strengthening Human Intelligence and Organizational Governance

Third, DI isn't merely the introduction of technology. For it to function properly requires a supporting organizational culture, the right human mindset, and strong leadership from management.

⑥Strong Commitment and Leadership from Management

To succeed with DI, leaders must deeply understand the value of data-driven decision-making and continuously communicate its importance as a clear message throughout the company. Using data and insights from DI as evidence in setting agenda items for executive meetings and during the decision-making process can be an effective use case. By fostering a culture where data is the common language, companies can gradually enhance the data literacy of each employee and create opportunities to transform business processes towards a data-driven approach.

Insight: Are management discussions centered around experience and opinions rather than data? DI embeds "fact-based" management in the organization, enhancing transparency and trust.

⑦Literacy Education and Skill Development to Foster DI Thinking

DI is a system that allows human expertise and creativity to be exercised at a higher level. Even when implementing explainable AI or causal inference AI, blindly accepting AI's predictions and optimal solutions is dangerous. The responsibility for making final judgments must lie with humans, who integrate their experience, industry knowledge, critical thinking skills along with AI's insights. As a result, building 'data literacy' and developing 'AI collaboration skills' across all employees becomes crucial. This includes mastering BI tools and DI cockpits, appropriately interpreting results presented by AI, and understanding the limitations of AI use. Accumulating such education and skill development refines the DI mindset across the entire organization.

Furthermore, rethinking organizational structures to adapt to the AI agent era should also be considered. Take NVIDIA as an example: its organizational structure isn't a traditional pyramid but rather cylindrical. It focuses on building a flat structure and fostering a culture of transparency and knowledge sharing, enabling employees to act more autonomously.

In traditional pyramid organizations, decision-making and execution tend to be time-consuming. Autonomous AI has the effect of expanding the scope of employees' self-driven activities. To permeate this effect throughout the organization, not only the organizational structure but also the roles of executives and managers must evolve to assume "AI agent utilization." This means using AI to grasp the risks of problematic judgments and actions, while empowering small teams to broaden the base of decision-making, lower hurdles, and increase speed. This democratization of decision-making that lies beyond these transformations holds the potential to bring flexibility and agility to the entire organization.

Insight: Are your employees fully utilizing the latest DI tools and AI? Even with AI introduced, is your organizational structure still rigid and siloed? Is decision-making treated as an "important management matter reserved for important people"? Investment in education and skill development, along with updating organizational structures, are crucial issues for unleashing the true value of DI.

4. Security and Business Continuity

Finally, a business environment where AI agents operate, requires a rethinking of security.
A comprehensive re-establishment of a new security system, predicated on the full utilization of data and AI, is needed.

⑧Data Security and Privacy Protection

As the volume, types, and frequency of data usage dramatically increase, the risks of data breaches and unauthorized use also rise. Complex data analysis by AI can enable the identification of individuals from anonymized data, further increasing the potential for new privacy infringement risks. Thorough access control based on zero-trust principles, the introduction of advanced data anonymization and encryption technologies, and the establishment of a privacy protection framework that complies with relevant laws in each country and region are essential.

Insight: DI significantly expands the scope of data utilization. Is this data thoroughly protected with the latest security measures and privacy safeguards?

⑨Ensuring the Reliability, Safety, and Robustness of AI Systems

In a business environment where AI agents operate autonomously, the risks of malfunction and learning unintended by humans also increase. Vulnerabilities to AI poisoning and cyberattacks by malicious third parties can severely damage a company's credibility. It is essential to enhance the robustness of AI models themselves across all business and operational processes, incorporate anomaly detection systems, and implement mechanisms for monitoring AI behavior. Implementing security in individual components of the IT architecture is also an important perspective. Naturally, it is also necessary to clearly define AI ethics guidelines and thoroughly ensure safe and reliable AI operation.

Insight: Do you understand the risks that autonomous AI agents create? The design of robustness and safety for AI systems determines the stable operation of DI.

⑩Continuous Security Monitoring and Establishment of a Resilient Incident and Business Continuity System

Continuous monitoring, anticipating vulnerabilities and attack vectors against constantly evolving cyber threats, is essential. A system that automatically detects anomalies by real-time monitoring of AI operational logs, DI platform behavior, and data access status is required.

Developing a Business Continuity Plan (BCP) to prepare for DI downtime due to large-scale failures or cyberattacks is extremely important. It is necessary to define alternative measures for emergencies, data recovery procedures, and a timeline for business resumption, share them internally, and confirm their effectiveness through regular training. In some cases, storing critical data on-premises rather than in the cloud may be more effective. In addition to fostering a specialized DI security team, it is also important to establish a system that can quickly identify, contain, restore, and comprehensively address incidents from prevention to recurrence.

Insight: In the event of an AI system attack, have you anticipated the scope of impact and the recovery time? Threats are constantly evolving. Continuous monitoring and a rapid response system will protect DI and ensure business continuity even in unexpected situations.

Section 4

Conclusion

DI introduces a paradigm shift for businesses that goes beyond simply adopting the latest technology. It serves as a compass for moving past data-driven methods, transforming decision-making norms, and advancing toward a desired future.

Economic and social uncertainty has become the new normal. For companies to continue growing and persistently enhance corporate value in an uncharted business environment, they must be able to adapt flexibly to discontinuous changes while building resilience. DI will be a powerful foundation for achieving this.

The DI introduced in this paper is, in fact, just the first step. DI is inherently a concept that extends beyond in-house corporate initiatives. "Data Space," which Uvance has been working on for many years, enables data collaboration across companies and industries, and is evolving into "AI Space," leading to new value creation through combination with AI. By driving DI in AI Space, we foresee a future where problem-solving at industrial and societal levels will further accelerate.

There are as many entry points to transformation, priority issues, and specific paths to a desired future as there are companies. We know the journey ahead is steep and winding. Yet, technology holds the power to flatten or straighten the path. The more complex the challenge, the greater the potential for technology to provide solutions. Let’s take the first step together, moving beyond data-driven thinking to redefine decision-making and shape the future you envision.

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More information

Transforming Executive Decision-Making with Data & AI in Uvance