

## Feature Articles

### This month's focus: Over the 2025 Digital Cliff - For the Full-fledged Advancement of DX

#### Essential Factors behind the "2025 Digital Cliff"

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The "2025 Cliff" refers to the phenomenon where legacy systems within companies hinder the promotion of digital transformation. The background to legacy systems lies in many Japanese companies' unique working methods, with vague and non-standardized business processes and data names. This situation contributes to slow progress in business reform, inability to create new business, and lack of flexible inter-company collaboration, ultimately resulting in insufficient benefits from digital technology.

#### Japanese Companies Advancing Towards Higher-Level Creation and Innovation in DX: Current State, Issues, and Further Challenges from the IT Trends Survey

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The Japan Users Association of Information Systems (JUAS) conducts an annual "Corporate IT Trends Survey," with 976 companies responding in the fiscal year 2023. This survey analyzes the current state and direction of digital transformation (DX) in Japanese companies as follows:

**Trend of Increasing IT Budgets:** The DI value, indicating the ratio of increasing to decreasing IT budgets, has sustained its highest level in the past ten years, reflecting an active stance towards IT investment.

**Relationship Between Corporate Value and IT Budgets:** The increase or decrease in IT budgets and their allocation significantly relate to a company's growth stages and monetization phases, impacting the process of forming corporate value.

**Progress in Promoting DX:** The proportion of companies promoting DX is increasing, with about 30% of companies agreeing strongly or somewhat that they are advancing DX.

**Current State of Data Utilization:** While structured data usage is progressing, the utilization of unstructured data is still developing. Notably, the use of text data accumulated within companies is progressing.

**System Development and Information Security:** Reducing maintenance and operation costs of IT infrastructure and strengthening security measures continue to be critical issues, with the use of cloud services expanding.

**Challenges of IT Human Resources and Organizations:** Japanese companies face severe shortages in both the quantity and quality of IT human resources, particularly those responsible for transformation processes.

**Long-term Trends and Perspectives:** Observing the transitions in DI values since 2000, it's evident that the emphasis on IT investment focuses on creating corporate value through transformation.

**Conclusion:** For Japanese companies to advance DX, it is essential to visualize the current state, formulate a roadmap for transformation, utilize cloud infrastructure, and secure digital talent.

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### The Trends in Talents for Digital Transformation and Policy in Japan

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The “DX Trends 2024” survey by the Information-technology Promotion Agency, Japan (IPA) indicates that, as digital transformation activities spread among Japanese companies, the shortage of DX talents is becoming increasingly serious, significantly affecting the promotion of DX. This section discusses the development and securing of talents to promote DX, the importance of clarifying DX human talents and skills, and provides an overview of digital skill standards, contributing to the clarification of DX human talents and policies for securing DX talents.

### Digitalization and the Japanese Economy Over the Long Term: Challenges and Opportunities from a Global Perspective

*Akihiko Shinozaki*

Maximizing digital dividends requires not only investment in digital technology but also investments in analog complements such as corporate reforms, human resource development, and institutional reforms. Successful digital transformation relies on the effective integration of these investments, an area where Japan has faced challenges. This paper examines the challenges and opportunities for DX in Japan from both global and historical perspectives, focusing on developments since the 1990s.

### DX Companies and Corporate Value

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This paper analyzes the performance of DX stocks selected by METI and fails to confirm the superiority of DX stocks concerning financial and equity performance. Investment simulations did not produce excess returns with portfolios composed of DX stocks. The analysis suggests that Japanese firms may struggle to compete in the current environment where DX is actively promoted.

### Automated Evaluation of Integrated Reports Using Artificial Intelligence (AI): Nikkei Integrated Report Awards 2023: An Approach with Large Language Models and Deep Learning

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This paper proposes an AI-based automated evaluation method for integrated reports and validates its effectiveness using companies participating in the Nikkei Integrated Report Awards 2023. By integrating large language models (LLM) with deep learning, the study introduces an innovative approach that objectively and efficiently evaluates both textual and visual aspects of these reports. Specifically, it employs LLM to generate evaluation scores and rationale based on the Nikkei award criteria, alongside image analysis via Amazon Rekognition API to detect faces and assess expressions within report visuals. Results demonstrate high consistency and reliability in LLM-based evaluations, revealing statistically significant differences between awarded and non-awarded companies. Furthermore, logistic regression analysis identifies key factors influencing award likelihood, offering insights for companies to enhance future report preparation. This study contributes to advancing the quality of corporate disclosure and the efficiency and automation of report evaluations.