IMPROVING INNOVATION-ORIENTED MANAGEMENT OF ENTERPRISES IN THE DIGITAL ECONOMY ENVIRONMENT

Saipova Dilnoza Shuxratovna
Lecturer at Tashkent University of Applied Sciences

Abstract

This article examines how enterprises can improve innovation-oriented management in the digital economy environment. The problem is no longer limited to introducing new technologies; it is increasingly about redesigning managerial logic, organizational capabilities, and decision-making systems so that firms can continuously generate, test, scale, and commercialize innovations. Recent international evidence shows that although technological progress and adoption continue in areas such as connectivity, robotics, and digital infrastructure, innovation investment has become more uncertain and uneven, while productivity gains still depend heavily on firms' internal capabilities and management quality. Firm-level evidence from developing countries also shows that enterprises using digital technologies more intensively tend to be more productive, more innovative, and faster growing. Based on a structured review of peer-reviewed studies and major international reports, this paper develops an integrated framework for innovation-oriented enterprise management in the digital economy. The analysis identifies five core pillars of such a system: digital strategic governance, data and technology infrastructure, dynamic capabilities, open innovation ecosystems, and agile performance management. The paper argues that enterprises achieve better innovation outcomes when they move from rigid, function-based administration toward flexible, data-driven, cross-functional, and learning-based management. The article contributes a practical analytical model and a set of managerial

indicators that can be used in enterprise diagnostics, strategic planning, and transformation programs.

Key words: digital economy, innovation management, digital transformation, enterprise competitiveness, dynamic capabilities, data-driven management, open innovation, agile governance

Introduction

The digital economy has fundamentally changed the environment in which enterprises operate. Competition is increasingly shaped by data, platform logics, connectivity, software-based processes, and the speed with which firms can convert knowledge into new products, services, and business models. In this context, innovation is no longer a periodic activity performed only by R&D units. It has become a systemic managerial function that must be embedded in strategy, operations, human capital development, customer interaction, and inter-organizational cooperation. OECD and World Bank materials show that digitalization is spreading across economies, but its benefits remain uneven because firms differ substantially in digital maturity, organizational readiness, and access to skills, infrastructure, and finance.

At the same time, the global innovation context has become more demanding. WIPO reports that innovation investment slowed in 2023 compared with the previous boom years, and the outlook for 2024–2025 remained uncertain, even though technological progress and technology adoption continued in several fields. This means that enterprises can no longer rely on resource expansion alone; they must learn to manage innovation more intelligently, allocate investments more selectively, and increase the efficiency of transformation processes. In other words, the challenge is not only “how to digitalize,” but “how to manage innovation under digital conditions.”

Firm-level evidence further confirms that digital technology adoption matters for enterprise performance. World Bank research based on firms from 82 developing countries found that greater digital technology adoption is associated with higher productivity and stronger innovation-related outcomes. This suggests that digital tools create potential value, but managerial systems determine whether that potential is actually realized. Therefore, improving innovation-oriented management should be regarded as a strategic necessity for enterprise competitiveness, resilience, and long-term growth.

The aim of this article is to develop a comprehensive view of how enterprises can improve innovation-oriented management in the digital economy environment. The paper synthesizes major theoretical approaches and practical evidence, identifies the main components of innovation-oriented management, and proposes an integrated framework for application in enterprise practice.

Literature Review

The modern literature treats digital transformation as more than the adoption of information technologies. Vial (2019) defines it as a process in which digital technologies trigger significant changes in organizations, value creation, and structures, requiring strategic and organizational responses. This understanding is important because it shifts attention away from technology as an isolated asset and toward management as the mechanism that aligns technology, structure, culture, and competitive intent.

A second major line of literature emphasizes dynamic capabilities. Warner and Wäger (2019) argue that digital transformation requires an ongoing process of strategic renewal built on the organization’s ability to sense changes, seize opportunities, and reconfigure resources. Ellstrom et al. (2021) similarly show that dynamic capabilities are central to digital transformation because firms need not only technical tools, but also leadership, coordination, experimentation, and

adaptation capabilities. This perspective is especially relevant for innovation-oriented management because innovation in digital environments is continuous, uncertain, and cross-functional.

Another important body of literature focuses on enterprise competitiveness and digitalization gaps. OECD publications emphasize that digitalization can improve productivity, innovation, market access, and resilience, but many enterprises–especially smaller ones–lag behind due to limited skills, weak internal resources, lack of finance, and insufficient managerial preparedness. These findings are important because they show that innovation performance depends not only on market conditions, but also on managerial capacity to organize change.

Recent empirical studies also strengthen the link between capabilities and performance. For example, research published in the Journal of Open Innovation finds that dynamic capabilities significantly influence digital transformation and innovation performance. Although sectoral contexts differ, the broader implication is clear: enterprises that combine strategic flexibility, technological readiness, and organizational learning are more likely to transform digital investments into innovative outcomes.

Research Methodology

This article uses a qualitative, review-based research design. The study is based on a structured analysis of peer-reviewed academic literature and major institutional publications related to digital transformation, innovation management, enterprise competitiveness, and digital capability development. The source base includes conceptual studies, empirical papers, and policy-oriented international reports published mainly between 2019 and 2025.

The methodological procedure consisted of four stages. First, relevant literature was selected according to three criteria: direct relevance to enterprise management, explicit focus on digital transformation or innovation, and practical

usefulness for organizational improvement. Second, the sources were coded thematically around recurring issues such as governance, capabilities, data use, organizational culture, ecosystem partnerships, and performance measurement. Third, the coded themes were compared to identify converging patterns across theoretical and empirical sources. Fourth, an integrated analytical framework was developed to explain how enterprises can redesign management systems for innovation under digital conditions.

The study does not rely on an original enterprise survey or econometric dataset. Its contribution is conceptual and analytical: it brings together fragmented findings from the literature and organizes them into a coherent model that can be used for academic analysis and managerial practice. This makes the paper especially suitable for strategy formulation, enterprise diagnostics, and transformation roadmaps.

Analysis and Results

1. Why traditional management is insufficient in the digital economy

Traditional enterprise management models were designed for relatively stable environments. Their main strengths lie in standardization, control, hierarchical supervision, and efficiency in repetitive operations. However, the digital economy is characterized by rapid technological change, short product life cycles, customer co-creation, data abundance, and frequent business model disruption. Under these conditions, enterprises must constantly scan external changes, experiment with new solutions, learn from data, and reconfigure internal resources. This makes rigid management structures less effective for sustaining innovation.

Innovation-oriented management therefore requires a shift from static control to adaptive orchestration. The manager’s role changes from supervising fixed tasks to coordinating knowledge, technology, teams, and partnerships in a

way that accelerates idea generation and commercialization. In this sense, the digital economy does not eliminate management; it makes management more strategic, more integrative, and more innovation-centered.

Table 1.

From Traditional Management to Innovation-Oriented Management

Dimension	Traditional management	Innovation-oriented management
Strategic logic	Efficiency and stability	Adaptability, renewal, and value creation
Organizational design	Functional hierarchy	Cross-functional and agile structures
Decision-making	Periodic and top-down	Real-time, data-driven, iterative
Role of technology	Support tool	Core driver of innovation and business model change
Employee role	Task execution	Knowledge creation, experimentation, collaboration
Performance focus	Cost, output, compliance	Learning, speed, innovation yield, scalability
External relations	Transactional supplier links	Ecosystem partnerships and open innovation

Source: Author's synthesis.

2. The core pillars of innovation-oriented management

The literature synthesis suggests that innovation-oriented management in the

digital economy rests on five interrelated pillars.

First, digital strategic governance. Enterprises need a clear strategic direction that links digital investments to innovation objectives. Without governance, digital projects become isolated initiatives with weak business impact. Strategy should define where innovation is expected, how resources are prioritized, and what risks are acceptable. Governance must also ensure that innovation is not limited to IT departments, but embedded across the enterprise.

Second, data and technology infrastructure. Innovation management increasingly depends on the capacity to collect, integrate, interpret, and apply data. Cloud systems, analytics, digital platforms, customer data systems, and workflow automation are not valuable only as technologies; they are enablers of faster learning and better innovation decisions. When such systems are fragmented or weakly integrated, enterprises struggle to scale innovation.

Third, dynamic capabilities and organizational learning. Enterprises must develop the capacity to sense opportunities, seize them through timely action, and reconfigure assets, processes, and competencies. This pillar includes leadership quality, digital skills, experimentation routines, and a culture that tolerates learning-based failure. Studies on dynamic capabilities consistently show that these features are decisive for successful transformation.

Fourth, open innovation and ecosystem cooperation. In digital environments, knowledge is distributed across customers, universities, start-ups, technology vendors, digital platforms, and even competitors. Enterprises that rely only on internal knowledge often innovate too slowly. Innovation-oriented management therefore requires partnership capability: the ability to collaborate, absorb external knowledge, and coordinate innovation across networked relationships. OECD materials on SME digitalization likewise stress that digital tools can improve access to markets, knowledge, and strategic resources.

Fifth, agile performance management. Traditional performance systems focus heavily on accounting indicators and short-term output control. Innovation-oriented management needs broader metrics: speed of experimentation, digital adoption depth, share of revenue from new products, customer learning cycles, and innovation portfolio balance. Enterprises should treat performance management as a learning mechanism rather than a purely control mechanism.

3. Integrated analytical framework

Table 2.

Framework for Improving Innovation-Oriented Management of Enterprises

Pillar	Managerial content	Typical tools	Expected result
Digital strategic governance	Align digital transformation with innovation goals	Digital strategy, innovation committee, portfolio reviews	Coherent transformation and better resource allocation
Data and technology infrastructure	Build integrated digital backbone for decisions and experimentation	ERP, CRM, cloud, analytics, AI tools, dashboards	Faster decisions and stronger innovation intelligence
Dynamic capabilities	Improve sensing, seizing, and reconfiguration capacity	Leadership development, digital skills, agile teams, pilot projects	Higher adaptability and innovation speed
Open innovation ecosystem	Use external networks for knowledge and co-creation	Partnerships, incubators, platforms, customer feedback	Access to new ideas, markets, and technologies

		loops	
Agile performance management	Measure both outcomes and learning processes	KPI dashboards, stage-gate reviews, innovation metrics	Better control of innovation quality and scalability

Source: Author's development based on the literature review.

4. Main analytical results

The synthesis conducted in this article produces four main results.

The first result is that digital technology adoption alone is insufficient. Firms may invest in software, platforms, or automation and still fail to improve innovation performance if management systems remain fragmented, slow, and functionally isolated. The World Bank's findings imply that technology creates potential, but organizational and managerial factors shape realized outcomes.

The second result is that innovation-oriented management depends on managerial integration. Strategy, data, people, processes, and partnerships must be managed as a connected system. This explains why leading literature increasingly combines digital transformation with capabilities, governance, and business model thinking rather than with IT adoption alone.

The third result is that dynamic capabilities are the central mechanism of transformation. Enterprises that can detect market and technology shifts early, mobilize resources quickly, and redesign internal routines are in a stronger position to sustain innovation. Recent empirical work supports the conclusion that dynamic capabilities positively affect both digital transformation and innovation performance.

The fourth result is that innovation-oriented management requires broader performance measurement. In periods where global innovation investment becomes more constrained or uncertain, enterprises need disciplined portfolio

governance and clear innovation metrics. WIPO's recent observations on slowing innovation investment reinforce the importance of using limited resources more selectively and productively.

5. Suggested managerial indicators

Table 3.

Indicative KPI System for Innovation-Oriented Management

Area	Indicator	Managerial meaning
Strategy	Share of digital projects linked to strategic priorities	Measures alignment between transformation and enterprise goals
Innovation output	Revenue share from new products/services	Shows commercialization effectiveness
Process agility	Average time from idea to pilot	Reflects speed of experimentation
Capability development	Share of employees with digital/innovation training	Measures organizational readiness
Data maturity	Percentage of key decisions supported by dashboards or analytics	Indicates degree of data-driven management
Ecosystem performance	Number of active innovation partnerships	Captures openness and collaboration intensity
Portfolio quality	Ratio of scaled innovations to pilot initiatives	Evaluates innovation conversion efficiency
Customer learning	Frequency of customer feedback integration into development cycles	Measures market responsiveness

Source: Author's proposal.

These indicators are not universal or exhaustive, but they provide a useful basis for enterprise diagnostics. Their main value lies in combining strategic, organizational, technological, and market dimensions into one managerial dashboard.

Conclusion

Improving innovation-oriented management of enterprises in the digital economy environment requires a fundamental shift in managerial philosophy. Enterprises can no longer rely on traditional administrative logic centered only on control, standardization, and short-term efficiency. The digital economy rewards firms that can learn faster, coordinate across functions, use data intelligently, cooperate through ecosystems, and continuously renew products, services, and business models.

The article has shown that innovation-oriented management should be built on five pillars: digital strategic governance, data and technology infrastructure, dynamic capabilities, open innovation ecosystems, and agile performance management. These elements operate not separately but as an integrated system. When one of them is missing, the enterprise's ability to convert digital resources into innovation outcomes weakens significantly.

The main practical implication is clear: enterprise leaders should treat innovation as an управленческий architecture issue, not simply as a technology issue. Strategic leadership, organizational design, learning culture, and performance systems must all be redesigned to support innovation under digital conditions. The main academic implication is that future research should increasingly connect digital transformation studies with enterprise management theory, capability theory, and performance evaluation models.

In sum, enterprises that want to remain competitive in the digital economy must not only digitalize operations; they must redesign management around innovation itself. That is the real basis of long-term competitiveness and sustainable growth.

References

1. Abdurrahman, M. I., Al-Dmour, A. H., Al-Dmour, R. H., Tarhini, A., & Masa'deh, R. (2024). Impact of dynamic capabilities on digital transformation and innovation performance in the banking industry. Journal of Open Innovation: Technology, Market, and Complexity, 10(3), 100370. doi:10.1016/j.joitmc.2024.100370

2. Alaassar, A., Mention, A.-L., Helge, G., & Salimbeni, M. (2026). Digital innovation: A bibliometric review and research agenda. Review of Managerial Science, 20, 331–377. doi:10.1007/s11846-024-00811-9

3. Cusolito, A. P., Lederman, D., & Peña, J. (2020). The Effects of Digital-Technology Adoption on Productivity and Factor Demand: Firm-Level Evidence from Developing Countries. World Bank Policy Research Working Paper No. 9333.

4. Ellström, D., Holtström, J., Berg, E., & Josefsson, C. (2021). Dynamic capabilities for digital transformation. Journal of Strategy and Management, 15(2), 272–286. doi:10.1108/JSMA-04-2021-0089

5. Liu, Y., & Qiang, Z. (2024). Digital Progress and Trends Report 2023. Washington, DC: World Bank. doi:10.1596/978-1-4648-2049-6

6. OECD. (2021). The Digital Transformation of SMEs. Paris: OECD Publishing.

7. OECD. (2024). OECD Digital Economy Outlook 2024 (Volume 1): Embracing the Technology Frontier. Paris: OECD Publishing. doi:10.1787/a1689dc5-en

8. OECD. (2025). SME digitalisation for competitiveness: The 2025 OECD D4SME Survey. Paris: OECD Publishing.

9. Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144. doi:10.1016/j.jsis.2019.01.003

10. Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52(3), 326–349. doi:10.1016/j.lrp.2018.12.001

11. WIPO. (2024). Global Innovation Index 2024: Unlocking the Promise of Social Entrepreneurship. Geneva: World Intellectual Property Organization.

12. WIPO. (2025). World Intellectual Property Indicators 2025: Highlights. Geneva: World Intellectual Property Organization.