

IMPORTANCE OF INNOVATION MANAGEMENT SYSTEM IN ORGANIZATIONS

*Branislava Bajić¹ [0009-0009-9463-5579], Marina Janković¹ [0000-0003-0519-197X],
Vijoleta Vrhovac¹ [0000-0003-2503-7654], Teodora Vučković¹ [0000-0001-5522-6558],
Srđan Vulanović¹ [0000-0002-0527-505X], Dušanka Dakić¹ [0000-0002-1707-7616]*

Abstract

In today's rapidly evolving technological landscape, organizations are under immense pressure to innovate. This paper explores the critical role of innovation in navigating the competitive modern market. As emerging technologies disrupt traditional business models, innovation becomes essential for survival and growth. Through the analysis of market dynamics and consumer expectations, this study reveals how innovation enables organizations to strengthen their market position and gain sustainable competitive advantages. Furthermore, the paper aims to outline practical implications for managers to foster a culture of innovation within their organizations, empowering them to drive transformative change and unleash the full potential of their teams. Additionally, it is necessary to emphasize the relevance of standards such as ISO 56001 in ensuring that effective innovation management practices are in place.

Key words: *innovation, innovation management system, standard ISO 56001*

1. Introduction

The market is increasingly oriented towards rapid growth and the constant development of new technologies, which imposes the need for organizations to respond agilely to these dynamic market challenges (Vrhovac et al., 2023). In order to maintain their competitiveness, organizations are obliged to continuously improve their processes, that is, to introduce innovations (Ivanova -Assoc, 2022). Innovations are born from the synergy of professional knowledge and personal skills, with creativity being a key factor. Contrary to the misconception that standards stifle creativity, modern management system standards have evolved to

¹ University of Novi Sad, Faculty of Technical Sciences, Serbia, bajic.branislava01@gmail.com;
marinazizakov@uns.ac.rs; violeta.vrhovac@uns.ac.rs; teodora.vuckovic@uns.ac.rs;
rdjanv@uns.ac.rs; dakic.dusanka@uns.ac.rs

become a source of best practices that can enhance organizational performance across various domains (Zizakov et al., 2020). In fact, recent trends in management system standards demonstrate that they can be leveraged to drive improvement and innovation in organizations (Tzvetelin Gueorguiev, 2021).

Since the eighties of the twentieth century, organizations have been increasingly striving to implement standards in the field of quality systems (Delić et al., 2014). ISO 9001 promotes a systematic approach to reviewing quality management systems, allowing organizations to continually enhance their processes using relevant data and insights from the system. The implementation of ISO 9001 establishes a framework for systematically collecting, analyzing, and applying data to pinpoint areas for improvement and optimization. In recent years, there has been an increasing focus on process improvement, which has become closely tied to an organization's ability to effectively implement innovations across all areas of its operations (M. Žižakov et al., 2023).

ISO 9001 – Quality Management System serves as the foundation for management systems, and other ISO standards can be built upon it. In September 2024, the International Organization for Standardization released the first version of a standard focused on innovation management – ISO 56001:2024 – which organizations can now be certified against (*ISO - International Organization for Standardization*, n.d.). This standard is designed to enhance an organization's ability to innovate consistently and effectively (International Organization for Standardization, 2024). In today's fast-paced and ever-evolving business environment, the capacity for innovation is essential for organizational survival and growth (Ivanova -Assoc, 2022; Tzvetelin Gueorguiev, 2021). The aim of this paper is to emphasize the importance of standardization of the management system, with a special emphasis on the Innovation management system. In addition, the goal is to provide support and encourage management to improve their management system. Finally, guidelines are given that will make it easier for managers to introduce the ISO 56001 standard.

The upcoming section provides a theoretical background on the key aspects of the research. Section 3 presents a literature review in the researched area. Section 4 presents a discussion with managerial implications. The paper concludes with the most important conclusions, limitations, and suggestions for future research.

2. Theoretical background

This chapter presents the theoretical foundations of the key aspects of the research.

2.1 Innovation performance

Innovation can be seen as a company's capacity to introduce changes and enhancements within its processes. Additionally, it reflects the organization's inclination to embrace new ideas that facilitate the development and launch of new products or services, management strategies, procedures, or technologies (Chang et al., 2017; Liao & Wu, 2010). More broadly, innovations refer to new applications of

knowledge, ideas, methods, and skills that can generate unique capabilities, thereby increasing the competitiveness of the organization (Kim et al., 2012).

Establishing an innovation management system signifies a significant transformation for any organization. Central to this system is the innovation process, which encompasses activities such as identifying change opportunities, gathering and analyzing data, developing conceptual solutions, assessing potential risks, outlining advantages and benefits, and determining overall value (Ivanova - Assoc, 2022).

2.2 Quality management system – ISO 9001

This standard defines the requirements that the organization must meet in order to establish, implement, and maintain an efficient quality management system. It is convincingly the most applied by all management system standards around the world and is an international reference for quality management system certification (Fonseca, 2015). The standard was created in an international framework in order to define the best quality practices to be adopted, with a central focus on the expectations of users and other interested parties from the organization. ISO 9001 adopts a process approach, which includes the PDCA cycle of continuous improvement and integrates risk-based thinking, enabling not only user loyalty but also the competitiveness of the organization based on the pillars of sustainability (*ISO - International Organization for Standardization*, n.d.). Any organization that wants to improve its quality management system, meet customer and applicable statutory and regulatory requirements, and enhance customer satisfaction can use the ISO 9001 standard. It is suitable for organizations of any size and applies to all sectors, including manufacturing, services, healthcare, education, government, and non-profit organizations.

2.3 Innovation management system – ISO 56001

However, innovation management system: ISO 56001 provides requirements and guidance for establishing, implementing, maintaining, and improving an innovation management system, aiming to enhance an organization's ability to innovate consistently and successfully (International Organization for Standardization, 2024; Ivanova -Assoc, 2022). This standard lays out a general guideline for all types of innovation, including products, services, processes, and business models. It is applicable to all types of organizations, regardless of their nature, size, or the products and services they offer, providing a systematic approach to promoting and managing innovation (*ISO - International Organization for Standardization*, n.d.).

Establishing an innovation standard through ISO 56001 is not about limiting creativity but rather about enhancing the innovation process. It fosters a culture that values creativity while ensuring a structured execution approach. Importantly, the workflow remains adaptable to each organization's unique style, allowing for a flexible framework that can be tailored to specific needs. This ensures that the creative spirit is preserved, enhancing both ideation and execution rather than

hindering them (<https://www.planbox.com/10-most-popular-iso-56001-questions-answered/>, n.d.).

Benefits of ISO 56001 (International Organization for Standardization, 2024):

- Enhances innovation performance and the capacity to manage uncertainty
- Increases the realization of value from innovations in products, services, and processes.
- Builds a culture of continuous improvement and sustained innovation capability.
- Improves reputation, attracting more customers, partners, and investors.
- Enhances collaboration capabilities and increases the potential to attract funding.

3. Literature review

Many studies have investigated the impact of quality management on innovation development in various countries. Consistent with theoretical frameworks, empirical research across the globe has consistently demonstrated a positive correlation between quality management and innovation development (Abu-Salim et al., 2019; Hamdoun et al., 2018; Honarpour et al., 2018; Lebedeva et al., 2019; Mokhlis et al., 2019; M. Žižakov et al., 2023).

Research conducted in Serbia in 2022 found that organizations that implement the ISO 9001 standard are successful in developing process innovations (M. Žižakov et al., 2021; M. Žižakov et al., 2023). The study included a diverse range of organizations across various types, activities, and sizes. Of the 264 organizations that participated in the research, which required certification to at least one standard, 238 organizations had a certified system according to the ISO 9001 standard, representing 90.2% of the sample population. This outcome is expected, as the ISO 9001 standard serves as the foundation for each system. In terms of certification frequency, the next most common standards were ISO 14001 (50.4%) and ISO 45001 (28%). These standards are often upgraded to ISO 9001 and subsequently integrate management systems (M., Žižakov et al., 2021; M. Žižakov et al., 2023). In the near future, it can be expected that the ISO 56001 standard will be one of the most common standards of the integrated management system precisely because of the increasing need for the development of innovations.

The results suggest that management systems cover most of the processes of firms, including firm innovation processes. In Spain, in 2022, a study was conducted on the impact of the Degree of Standardization and Innovation Capability Dimensions as Driving Forces for Innovation Performance, which also confirmed that the degree of standardization is a positive contributor to higher innovation performance.

Furthermore, the study's findings also corroborated the notion that the degree of standardization is a significant positive contributor to higher innovation performance, as suggested (Mir et al., 2022).

This study provides valuable insights for managers. The findings suggest that investing in implementing a management system is worthwhile, as the

implementation effort will yield a positive return. Furthermore, a higher degree of standardization across the organization can be a valuable complementary factor to the firm's innovation capability, enhancing innovation performance and ultimately driving better business outcomes (Hyland & Karlsson, 2021). They also provide support to organizations to standardize systems and encourage them to implement the requirements of the new standard ISO 56001 - Innovation Management System.

4. Discussion

Based on the review of the literature, it was determined that business standardization has a positive effect on innovation performance (Mir et al., 2022). The ISO 56001:2024 standard outlines requirements and guidelines for organizations to innovate efficiently and effectively, thereby enhancing their innovation capabilities and market competitiveness (International Organization for Standardization, 2024). Organizations should promptly start harmonizing their operations with the requirements of this standard in order to develop and apply good innovation management practices. The application of the requirements of the standard can significantly contribute to the improvement of operational efficiency and the market position of the organization, even without formal certification of the system (Mir et al., 2022).

ISO 56001 adopts a harmonized structure compatible with other management system standards, enabling seamless integration. Organizations can align or incorporate their innovation management system with other standards, creating synergies that enhance overall management efficiency (International Organization for Standardization, 2024).

Below are defined guidelines that will help managers to adequately approach the implementation of the requirements of the ISO 56001 standard, that is, the integration of the management system.

4.1 Managerial implication

Steps managers should follow:

1. Informing top management about the need, goals, and benefits of improving the system in accordance with the standard's requirements. The team, previously formed to be involved in the integration of the management system, should also be informed of these aspects.
2. Assessment, analysis, and evaluation of the system within the organization to determine the extent to which certain standard requirements are being met. Additionally, it is necessary to identify the starting elements for system improvement. During this step, the team familiarizes itself with the functioning of all processes and the existing documentation.
3. Develop an improvement program with proposals for new documentation that needs to be created and the redefinition of existing documentation. It would also be advisable to define the time required for the implementation of the entire program, i.e., the schedule.

4. Creating the documentation can involve trained employees or external consultants. Once the documentation is completed, a trial implementation is conducted to verify its quality and identify any potential shortcomings. After the trial phase and any necessary adjustments, the documents are finalized and put into practice.
5. Internal audit of the established system carried out by auditors, followed by the correction of any identified non-conformities. Finally, the system is certified by an accredited domestic or international certification body.

5. Conclusions

The paper emphasizes the importance of innovation, which is necessary for achieving a competitive advantage. One of the ways in which organizations can constantly improve their system is precisely by introducing certain standards, i.e. by standardizing good practices (Mir et al., 2022).

Various empirical studies have confirmed that the ISO 9001 standard has a positive impact on innovation performance, and it mainly represents the basis of any management system (Abu-Salim et al., 2019; Hamdoun et al., 2018; Honarpour et al., 2018; Lebedeva et al., 2019; Mokhlis et al., 2019; M. Žižakov et al., 2023).

In addition, the work emphasizes the new ISO 56001 standard, which focuses on the innovation management system, and it is expected that it should give even better results and an even greater contribution to innovation performance. Also, guidelines are given that make it easier for managers to implement the innovation management system, i.e., the integration of the management system.

The standard ISO 56001 was issued in September 2024, organizations will go through process of certification in the near future.

So, the proposal for future research is to carry out an empirical investigation of the impact of the innovation management system on the innovation effect because the standard ISO 56001:2024 is the first certifiable international standard for innovation management.

REFERENCES

- [1] Abu Salim, T., Sundarakani, B., & Lasrado, F. (2019). The relationship between TQM practices and organisational innovation outcomes: Moderating and mediating the role of slack. *The TQM Journal*, 31(6), 874–907. <https://doi.org/10.1108/TQM-11-2018-0160>
- [2] Chang, W.-J., Liao, S.-H., & Wu, T.-T. (2017). Relationships among organizational culture, knowledge sharing, and innovation capability: a case of the automobile industry in Taiwan. *Knowledge management research & practice*, 15(3), 471–490. <https://doi.org/10.1057/s41275-016-0042-6>

- [3] DeliĆ, M., Radlovački, V., Kamberović, B., Maksimović, R., & Pečujlija, M. (2014). Examining relationships between quality management and organisational performance in transitional economies. *Total Quality Management and Business Excellence*, 25(3–4), 367–382. <https://doi.org/10.1080/14783363.2013.799331>
- [4] Fonseca, L. M. (2015). From quality gurus and TQM to ISO 9001: 2015: A review of several quality paths. *International Journal for Quality Research*, 9(1), 167–180. <http://hdl.handle.net/10400.22/5740>
- [5] Hamdoun, M., Chiappetta Jabbour, C. J., & Ben Othman, H. (2018). Knowledge transfer and organizational innovation: Impacts of quality and environmental management. *Journal of Cleaner Production*, 193, 759–770. <https://doi.org/10.1016/j.jclepro.2018.05.031>
- [6] Honarpour, A., Jusoh, A., & Md Nor, K. (2018). Total quality management, knowledge management, and innovation: an empirical study in R&D units. *Total Quality Management and Business Excellence*, 29(7–8), 798–816. <https://doi.org/10.1080/14783363.2016.1238760>
- [7] Hyland, J., & Karlsson, M. (2021). Towards a management system standard for innovation. *Journal of Innovation Management*, 9(1), XI–XIX. https://doi.org/10.24840/2183-0606_009.001_0002
- [8] International Organization for Standardization. (2024). *Innovation management-Innovation management system-Requirements*. www.iso.org
- [9] ISO - International Organization for Standardization. (n.d.). Retrieved June 10, 2023, from <https://www.iso.org/standards.html>
- [10] Ivanova -Assoc, R. P. (2022). Innovations and ISO Standards Management in the Organizations. *Economic sciences series*, 2(11), 39–45.
- [11] Kim, D. Y., Kumar, V., & Kumar, U. (2012). Relationship between quality management practices and innovation. *Journal of Operations Management*, 30(4), 295–315. <https://doi.org/10.1016/j.jom.2012.02.003>
- [12] Lebedeva, T., Yakovlev, A., Kepp, N., & Ikramov, R. (2019). Possibilities and threats to TQM implementation in the innovation processes. *IOP Conference Series: Materials Science and Engineering*, 497(1). <https://doi.org/10.1088/1757-899X/497/1/012132>
- [13] Liao, S. H., & Wu, C. C. (2010). System perspective of knowledge management, organizational learning, and organizational innovation. *Expert Systems with Applications*, 37(2), 1096–1103. <https://doi.org/10.1016/j.eswa.2009.06.109>
- [14] Mir, M., Llach, J., & Casadesus, M. (2022). Degree of Standardization and Innovation Capability Dimensions as Driving Forces for Innovation Performance. *Quality Innovation Prosperity*, 26(2), 1–20. <https://doi.org/10.12776/qip.v26i2.1687>
- [15] Mokhlis, C. E., Elmortada, A., Sbihi, M., & Mokhlis, K. (2019). The impact of ISO 9001 Quality Management on organizational learning and innovation: Proposal for a conceptual framework. *Periodicals of Engineering and Natural Sciences*, 7(2), 944–951. <http://dx.doi.org/10.21533/pen.v6i2.590>
- [16] Gueorguiev, T. (2021). Innovation management systems–reality and perspectives. *Innovations*, 9(2), 48–50.

- [17] Vrhovac, V., Vasić, S., Milisavljević, S., Dudić, B., Štarchoň, P., & Žižakov, M. (2023). Measuring E-Commerce User Experience in the Last-Mile Delivery. *Mathematics*, 11(6), 1482. <https://doi.org/10.3390/math11061482>
- [18] Žižakov, M., Vasić, S., Delić, M., & Vulcanović, S. (2021). Uticaj menadžmenta kvalitetom na performanse organizacije: pregled literature i ključnih stavova u oblasti. *13. International Scientific Conference ETIKUM*, 49–52.
- [19] Zizakov, M., Vasic, S., Delic, M., Orosnjak, M., & Vulcanovic, S. (2020, August). The Interdependencies of Quality Management, Knowledge Management and Innovation Performance. A Literature Review. *In IFIP International Conference on Advances in Production Management Systems* (pp. 575-582). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-57993-7_65
- [20] Žižakov, M., Vuckovic, T., Vulcanović, S., Dakić, D., & Delić, M. (2023). Investigating the Key Factors Influencing the Process Innovation Capability in Organizations: Evidence from the Republic of Serbia. *Sustainability (Switzerland)*, 15(10), 8158. <https://doi.org/10.3390/su15108158>



© 2024 Authors. Published by the University of Novi Sad, Faculty of Technical Sciences, Department of Industrial Engineering and Management. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>).