

# The Role of Innovation Management System ISO 56002 Standard in the Competitive Edge toward Sustainability

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## Abstract

In today's current business world, innovation management has discovered a significant competitive edge. ISO 56002:2019 Innovation Management System is a key to standing out from the competition with this newest international standard. The ISO 56002:2019 guiding framework assists businesses in improving their capacity to manage innovation activities, adapt to volatility, enhance consumer satisfaction, involve and motivate staff, and boost corporate reputation and revenue. The purpose of this paper is to describe and introduce the ISO 56002 standard as the landscape of providing an effective innovation management system to achieve sustainable development, as well as their relationship. As a result, this research investigates a theoretical method to show the link between these three notions. According to the findings of the study, companies should be worried about implementing the new ISO 56002 standard, especially if they already have the ISO9001 quality management system in place, to accelerate the innovation process. Organizations must also have a robust innovation system to implement the pillars of sustainable development.

**Keywords:** Innovation management; ISO56000; Competitiveness; Sustainable development.

## 1. Introduction

Innovation is a critical component of a company's business activities of resources for facing the challenges of the global economy in the twenty-first century. Previously the domain of R&D teams, many firms now have organization-wide innovation management programmes. This is due to a growing realisation of the importance of innovation in driving corporate growth and preserving a competitive edge. Organizations, particularly trade organisations, must increase their levels of innovation and technological advancement to maintain global competitiveness and consumer relationships (Bogachov *et al.*, 2021).

Nevertheless, innovation can impact individuals, organisations, and communities in ways that promote sustainability (Silvestre and Îrcă, 2019). A rising corpus of research is exploring numerous strategies to integrate sustainable development and innovation (Kimpimäki *et al.*, 2022).

The ISO 56000 standard was developed to adopt a common understanding of the concept of innovation and lay the groundwork for a systematic and consistent international definition. As a result, the emphasis of this endeavour extended beyond just maintaining consistency within the Technical Committee or the innovation management system, which was published as ISO 56002:2019 (Alice de Casanove, 2018).

This new standard, which will be finished and released in 2021 and 2022, will give guidelines and a certification framework for businesses who want to ensure that they are employing the most up-to-date innovation processes and

concepts. The ISO56002 standard was created by a diverse group of stakeholders, including consultants and professional associations, and thus includes the majority of the components we might well anticipate from an elevated, generic approach: strategy, organisation, leadership, planning, support, process, performance evaluation, and improvement (Tidd, 2020).

It's not sufficient to get a passion and an aptitude for putting things into practice.

It also necessitates the ability to implement each management system in line with ISO standards.

Furthermore, absorption into a single system necessitates an accompanying structure and management systems to coordinate organisational activities and, as a consequence, increase employee engagement and organisational sustainability (Lopes *et al.*, 2022).

The World Commission on Environment and Development defined sustainability in 1987 as "the successful meeting of present social, economic, and environmental needs without compromising the ability of future generations to meet their own needs" (Gobble, 2013).

As a consequence, in current history, the concept of sustainable development has evolved significantly, to protect economic, social, and environmental issues (Chofreh *et al.*, 2018). Similarly, sustainable development works extremely well with innovation models in terms of updating goods and also quantifying their influence on the planet since it truly plays a significant part in providing commercial advantages for firms and improving their behaviour.

This is why, regarding product renewal, sustainable development works extremely well enough with models and frameworks.

Businesses may encourage inclusion and social justice by implementing measures such as respecting diversity and equal opportunities, health and safety at work, ethical and transparent acts, philanthropy, and social help to the community in which they operate, among other things (Nunhes *et al.*, 2021).

As a result, the purpose of this research is to analyse the function of the innovation management standard in increasing commercial and productive competitiveness to achieve sustainable development. The guiding research question is: **"how can ISO 56000 standards be a stimulator of competitiveness for applying sustainability?"**

Based on this guiding question, it is hoped that this study will answer the following questions:

1. What is the relation between innovation management and competitiveness?
2. What is the aim of the innovation management system ISO 56002 standard?
3. How is the link between ISO 56000 standard and sustainability to increase competitiveness in business companies?

This existing research may be organised as follows: the theoretical framework is created in the first section, which discusses innovation management and sustainable development. The second section provides a brief overview of the ISO 56000 series of innovation management standards, with a focus on the ISO560002 standard. Following that, an investigation into the relationship between the ISO 56000 standard and sustainability to boost competitiveness in business firms was conducted. Finally, at the end of the task, a conclusion will be presented.

## **2. Literature Review**

### **2.1. Innovation Management and Sustainable Development**

Yang characterises two management techniques as complimentary if the advantages of adopting one practice boost the benefits of adopting the other. As a result, management strategy must take into account a variety of complementarities inside the firm (Quinn and Scur, 2021). Leader supporting behaviour is one of these management techniques, in which leaders strive to assist and enhance the service quality of their subordinates to attain competitiveness (Bourini *et al.*, 2019a).

Uzunidis (2009) highlighted the background that occurred during the preparation of the drafting worldwide standard for innovation management, and even the conditions for implementing an innovation dynamic in an organisation. It demonstrates how the experts engaged in the drafting process made decisions that resulted in a recommendation standard that takes into account the organisational agility needed to deploy any innovation management system.

The authors of one research, reforming innovation for sustainability, concluded that self-innovation is more important than creating technology and policy. Furthermore, the incorporation and combination of the three dimensions: Direction, Diversity, and Distribution is to make effective choices about conserving the environment and individual rights in terms of sustainable development (Leach *et al.*, 2012).

According to Uzunidis (2009) in his paper, the aim is to identify the relationship between innovation and sustainable development and to propose some processes and some alternatives policies in the case of the sustainable development issue. It is highly discussed in almost cases where the ecological side is respected by companies as same as economic growth.

So, there is a direct corporation of the concept of sustainability into the work of business processes whereas innovation is considered the perfect way to concretise the strategy of applying the durability by using technology.

Truffer and Coenen (2012) have examined a new approach to Sustainability transitions which become attached directly to innovation studies. And then, their study identifies prospective research opportunities at the intersection of the two fields.

According to a study, integrating the major characteristics of innovation and sustainability in a single concept like "sustainable innovation" might result in the emergence of a new issue and new research paths in the vast field of innovation as well as the current and upcoming subject of sustainability (Maier *et al.*, 2019).

The authors of a recent study specifically found the impacts of innovation on organisational sustainability performance, and even the ecological, social, and economic dimensions, discovered that innovation had a positive

effect on sustainability performance. Economic innovation and sustainability performance had the largest and most beneficial relationships, followed by environmental innovation and sustainability performance (Kuzma *et al.*, 2020).

## **2.2. ISO 56002 Innovation Management System**

To advance the field of innovation management, the authors present the background and reasons for creating a management system standard. Although the ISO 56002 Innovation management system-guide standard is not new, it does provide a common language and structure for developing an innovation capacity. The concepts of innovation management and the system parts are described in the letter. Even establishing a standard for innovation management has been seen as a paradox. The release of ISO 56002, a management system standard for innovation work, in 2019 sparked a larger discussion on the benefits and downsides of such a standard (Hyland and Karlsson, 2021a).

In their study, Khan *et al.* (2021) propose for importance to identify sustainable development by adding sustainable development goal contributions, as well as the adoption of the recently improved ISO 56002-2019 innovation management system. As a consequence, green innovation reporting and ISO 56002-2019 will increase the level of openness of company operations and increase stakeholder confidence, while also boosting the firm's sustainable growth of target performance.

Because the link between innovation management and sustainable development has yet to be understood, it is unclear which is more important in the workplace. A theoretical framework for the ISO 56000 standard of innovation management has been demonstrated in previous studies.

This work contributes theoretically to the literature on innovation management structures and provides a comprehensive overview of them. And this might be related to the standards' relative newness or the fact that they have not been widely disseminated internationally, especially because the ISO 56,000 series had just recently been published.

## **3. The Relation Between Innovation Management and Competitiveness**

Many businesses are focusing on innovation management these days. If it isn't a top priority for the organisation, product lines will likely stagnate, and the company will risk disruption. Innovation management encompasses all of an organization's innovation-related activities (Niewöhner *et al.*, 2019).

According to the AFNOR FD X50-271 Standard: Innovation management is a process that specifies actions, options, and structures for an organisation (or a group of organisations) inside the perspective of its management level to boost impression, make a decision on the launch, and start executing its innovative business models.

The idea of competitiveness applies both at the national and sectoral levels; we base national competitiveness performance on sectoral competitiveness indicators, just as global competitiveness indices do (Drumea and Mirela, 2015).

Most big corporations have a good awareness of their immediate market competitors, but they often have little knowledge of how other organisations organise their innovation efforts.

When rivals add new items or company concepts to the market, they are compelled to preserve a competitive edge.

To be competitive in today's economy, businesses must alter frequently. For attaining this purpose, the process of innovation from an idea to commercialization and marketing must be properly and successfully handled. In actuality, developing and implementing innovation is the technique through which new market opportunities and new goods and services are created (Dereli, 2015).

The market's uniqueness and the variety of existing trends in numerous economic domains necessitated the need for innovation in terms of customization, adaptability, and increased rivalry over time. As a result, the natural phenomena of consolidation of the first innovation budgets and the necessity to allocate responsibility for it to a specific person or department inside the business emerged. Managers must recognise that the innovation potential is a resource in their business that has a cost, yet access to it is simple from a financial standpoint. More minds being brought together is referred to be a resource (Țițu *et al.*, 2015).

A competitive company cannot afford to adopt a performance assessment and pay system that is not effectively matched with the contributions of its members and performance outcomes (Gong *et al.*, 2022). Competitive businesses are the primary drivers of a country's competitiveness. They form the foundation of economic progress. In a contemporary economy, however, nations do not rely simply on goods and services. A country's ability to establish an effective educational system and increase its employment skills via training is critical for competitiveness (Ciocanel and Pavelescu, 2015).

As a result, the competitiveness of organisations and countries is determined by their ability to innovate as well as their orientation to technology and information.

In emerging economies, innovation is seen as the fundamental principle in tackling societal issues such as pollution, healthcare, poverty, and unemployment.

## **4. Brief Presentation of ISO 56002**

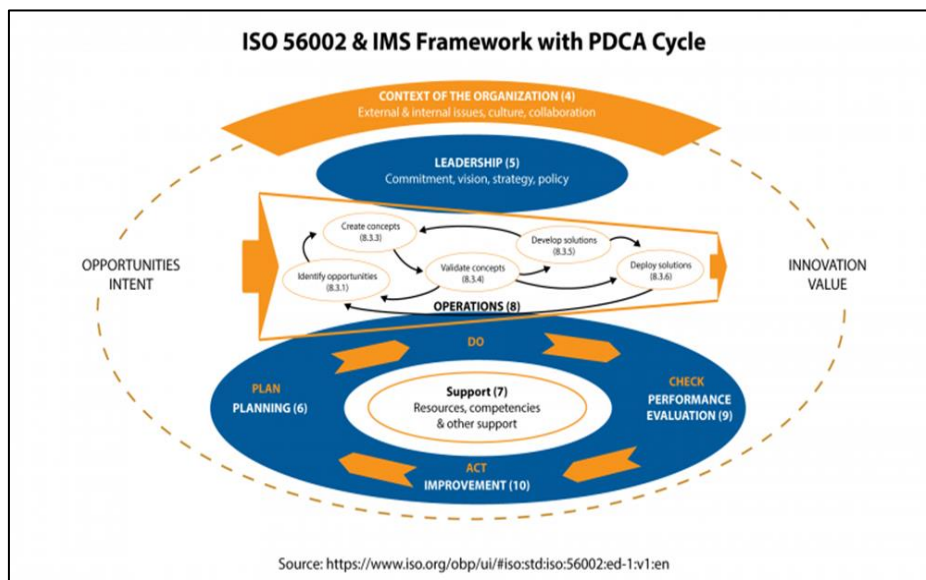
In 1947, The International Organization for Standardization has created. It is made up of technical and industrial leaders from 167 different nations. Their key objectives were to ensure that products and services are safe, dependable, and of high quality. ISO is a non-governmental multinational organisation that operates independently.

Over 24259 International Standards have been developed by ISO. ISO bringing together experts to share information and produce voluntary, consensus-based corporate International Standards that drive innovation and

provide answers to global challenges through its members. As seen by this comprehensive set of standards, innovation management systems are multifaceted. To gain the full benefits of the ISO 56000 series, all of the above-mentioned publications and best practices should be applied as a cohesive system (Gueorguiev, 2021).

The first publications from the new ISO56000 family of standards innovation management systems were released in 2019 and 2020. These standards, together with the others in the family, provide advice to product and process organisations in creating, implementing, and running innovation management systems.

The standards are intended to be readily integrated with widely used management system standards, particularly ISO 9001. They adopt a systemic approach to managing innovation since they are intended to encourage innovation in organisations of all sizes, from small entrepreneurial start-ups to large multinational corporations. They drive gains both within and outside of the organisation to foster a culture of long-term innovation.



**Figure-1.** Representation of ISO 56002 standard using the Plan-Do-Check-Act (PDCA)

The PDCA cycle can be applied to the innovation management system altogether or individual components. This graphic illustrates how Sections 4 through 10 of the above picture might be organised for the PDCA cycle. The Context of the Organization (Section 4) and its Leadership influence and drive the cycle (Section 5).

The document defines the vocabulary, fundamental concepts, and principles of innovation management, as well as how to execute it methodically.

It is applied to the following:

- Companies that are putting in place an innovation management system or conducting innovation management audits;
- Companies that have to increase their abilities to manage innovation initiatives successfully;
- Consumers, users, and other pertinent interested individuals seeking assurance in a firm's innovative capabilities;
- Businesses and interested parties strive to better communicate by developing a shared knowledge of the terminology used in innovation management;
- Trainers, assessors, and consultants in innovation management and innovation management systems;
- Creators of innovation management standards and regulatory guidelines.

Eight innovation management principles were developed to aid the successful administration of innovation initiatives. They can be used as an introduction to the innovation management system or as a tool to assess an organization's capacity for innovation management. A range of linked elements, like leadership, resources, culture, structures, processes, and so on, affect an organization's potential to innovate (Hyland and Karlsson, 2021b).

**a) Realization of value:** Among the most important of these indicators are those based on value creation. Considering that the goal of any economic institution is to ensure its continuity in an environment dominated by changes and competitive intensity, it always seeks to search for sources that can create value and that enable it to follow a transparent performance measurement strategy.

**b) Future-focused leaders:** Convert primary and secondary goals into actual results. Exploiting resources and unifying efforts to achieve the desired. It is the basis for the application of administrative tasks, from planning, organizing and directing, to control. It is very necessary to deal with the external factors affecting the work.

**c) Strategic direction:** Involves the strategies that must be executed for the firm to develop toward its vision and achieve its objectives. It guarantees that owners and management can explain the significance of workers' labour and their participation in the company's success.

**d) Culture:** In recent years, culture has attracted more attention as one of the variables driving innovation in the larger field of business and management. Given its importance and significance to business and economic growth, the effect of culture on innovation has been acknowledged as a vital aspect of leadership and organizational development (Tian *et al.*, 2018).

**e) Exploiting insights:** To access stated and implicit demands, a varied variety of different sources are employed to carefully generate deep insights.

**f) Managing uncertainty:** It has become a must for businesses and organisations as they decrease hazards and dangers that may harm them, particularly concerning information technology and data. As a result, a managing uncertainty strategy must encompass all procedures inside the firm to detect and monitor threats to digital assets, such as confidential corporate data, personal customer information, and intellectual property.

**g) Adaptability:** Because adaptability and innovation tend to go hand in hand, having the inventive flexibility to discover different markets and products in a commercially viable approach, as well as taking risks, is a crucial aspect in guaranteeing competitive advantage (Latham-Green, 2015).

**h) Systems approach:** To a considerable extent, innovation activities may be managed by providing the correct environment, removing barriers, and engaging individuals in the business. An organization's capacity to innovate is determined by several linked elements like leadership, resources, culture, structures, procedures, and so on. Thus, to manage innovation efforts, a systems approach is required.

This document's recommendations are completely general and meant to be relevant to:

- a. All sorts of organisations, depending on type, industry, or size. The emphasis is on existing firms, with the comprehension that provisional organisations and start-ups can gain from implementing these guidelines in whole or in part;
- b. all types of innovations, e.g. product, service, process, model, and technique, ranging from incremental to radical;
- c. All types of approaches: open innovation, technology and all the innovation practices.

It does not explain specific tasks inside the company, but rather gives broad direction. It does not specify any conditions, tools, or methodologies for doing innovative activities.

#### **4.1. The Link between ISO 56000 Standard and Sustainability to Increase Competitiveness in Business Companies**

Sustainable is a collection of organisational concepts that are contained and connected to meet human development goals while also protecting natural systems' ability to produce the natural resources and ecosystem services on which the economy and society rely (Adeusi and Elisbeth, 2022). Thus, sustainable competitiveness has recently been identified as a system of regulations and guidelines that empowers a business to become more productive over time while continuously developing sustainably, with core business goals including natural resource management, environmental protection, ecosystem stability, social equality, social evolution, and well-being (Mensah, 2019).

The management of innovation necessitates a plethora of abilities and concepts that are fundamentally different from traditional management tools and skills, which is why management approaches and suggestions focus on assuring long-term development (Tidd and Bessant, 2018). As a result, in the framework of innovation, sustainable development becomes even more important.

While sustainable growth remains an important aspect in creating value, service and product distinctiveness will play a larger part in determining a firm's market potential in the future. This disparity is mostly the result of sustainability-driven innovation.

As sustainable innovation has become an active area of innovation, one of the key research dimensions has been the effects of sustainable innovation on business performance. While the influence of sustainable innovation on corporate performance has been investigated, the impact of sustainability as an incentive for innovation has yet to be determined (Shin *et al.*, 2018).

Aside from attitudes, much research has been conducted on actual patterns of domestic energy use and efficiency, innovations in energy technologies, human factors in and responses to pollution and environmental degradation, and the politics of environment and energy, as well as some other resources such as land, water, and minerals. Sociologists have studied environmental parties and, in certain contexts, their relationships with governments (Burns, 2016).

Sustainability is about doing more with less, which most people and organisations throughout the globe believe is a good idea since it helps you to earn more now and in the future. Destruction of the Earth and consumption of all resources looks to be a less intelligent form of production over time; now, creating with fewer resources appears to be economically advantageous if done correctly. New solutions are reviewed, validated, and commercialised through both internal and external innovations.

The fundamentals of sustainability and the circular economy are "reduce, reuse, and recycle," and all of this may be performed incrementally or drastically. However, by acting boldly, we may be able to achieve both a big shift and a favourable market position (Penker *et al.*, 2018).

Innovation is critical for companies and institutions to embrace changes possibilities and ease the adoption of sustainable development. In many domains, unfortunately, moving sustainable innovation from an original concept or lab scale to production or commercial capacity is difficult (Ranjbari *et al.*, 2021).

Taking advantage of the rising cattle market's financial advantages can assist to maintain overall economic growth. In developing nations' livestock supply chains, improving the existing low productivity of labour in the livestock industry by training, technology upgrading, and innovation can result in significant and long-term value creation. Even with its high development rate and labour density, employment returns on investment in the cattle sector are often greater than average (Schneider and Tarawali, 2021)

To achieve long-term financial success and development, it will be important to build robust innovation infrastructures at both the business and country levels. Nonetheless, senior management will need to push innovation leadership from the top down to ensure that it receives the attention it deserves throughout the organisation (Maxwell, 2010).

Consequently, the important factors driving the long-term institutional expansion of the industrial alliance innovation ecosystem should be examined from both within and beyond (Oliveira-Duarte et al., 2021).

Nonetheless, the pursuit of sustainability is already changing the competitive landscape, compelling organisations to rethink their product, technology, process, and business model strategies. In times of economic difficulty, innovation is critical to progress. Early adopters will develop capabilities that competitors will find difficult to replicate if they consider sustainability to be a goal today.

They will gain from that competitive edge since sustainability will always be an intrinsic aspect of progress (Nidumolu et al., 2013).

## 5. Conclusion

This research aimed to provide an integrative theoretical framework for examining the interconnections between innovation management, sustainable development, and the implementation of the innovation management system standard ISO56002.

Innovation is as important as sustainability and technology. It is about thinking for the future to create and develop markets. Thus, innovation management comes to frame the new ideas of managers and also employees which are considered a significant tool for continuous encouragement acceptance and the realisation of these new ideas. Managing innovation is not an exact science, but it does need knowledge and experience that are distinct from ordinary management skills and traits to assist organizations in remaining stable and avoiding threats.

The problem now is how the company take the courage to change to join the whole part of different processes. Therefore, innovation will become as natural as working with the environment and quality. These three components form the complementary structure of every company.

Sustainable development requires cooperation between different actors and is not only limited to solely technological issues but can also encompass organisational, social or institutional innovation.

Making decisions in a complex environment is difficult. This emphasizes the necessity of maintaining that the competitive landscape supports the rapid development of the young, especially boosting Entrepreneurial ventures and creative companies in a world's trade innovative enterprises.

Research has identified practices to encourage sustainable development. These practices, which encompass the established targets and monitoring systems as well as design tools and management systems knowledge, will help your company to innovate.

ISO 56002 provides a systematic approach to integrating innovation in companies. It empowers to pursue and create new opportunities for the development of new solutions, processes, products and services. Companies must care to focus on technology innovation to strengthen technology through standards to ensure innovation and guarantee success ISO 56002:2019 guiding system outlines how an organisation works to innovate more quickly and successfully, rise the capability to handle the innovation process, respond to uncertainty, improve customer experience, participate and motivate individuals, and boost business reputation and value.

The most crucial point is that these standards are not viewpoints; they just define how innovation might be handled; they do not provide particular instruments. This programming article simply provides an overview of the parts of such a study. It is still necessary to define its purpose.

The paper's constraints include that the data was acquired from a single ISO webpage and that the resultant framework was evaluated conceptually but not in action. A future study might put the framework based on the ISO 56002 standard to the test in a variety of sectors.

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