
Innovation management — Innovation management system — Guidance

Management de l'innovation — Système de management de l'innovation — Recommandations

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html (standards.iteh.ai)

The committee responsible for this document is ISO/TC 279, *Innovation management*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

0 Introduction

0.1 General

An organization's ability to innovate is recognized as a key factor for sustained growth, economic viability, increased well-being, and the development of society.

The innovation capabilities of an organization include the ability to understand and respond to changing conditions of its context, to pursue new opportunities, and to leverage the knowledge and creativity of people within the organization, and in collaboration with external interested parties.

An organization can innovate more effectively and efficiently if all necessary activities and other interrelated or interacting elements are managed as a system.

An innovation management system guides the organization to determine its innovation vision, strategy, policy, and objectives, and to establish the support and processes needed to achieve the intended outcomes.

The potential benefits of implementing an innovation management system in accordance with this document are:

- a) increased ability to manage uncertainty;
- b) increased growth, revenues, profitability, and competitiveness;
- c) reduced costs and waste, and increased productivity and resource efficiency;
- d) improved sustainability and resilience;
- e) increased satisfaction of users, customers, citizens, and other interested parties;
- f) sustained renewal of the portfolio of offerings;
- g) engaged and empowered people in the organization;
- h) increased ability to attract partners, collaborators, and funding;
- i) enhanced reputation and valuation of the organization;
- j) facilitated compliance with regulations and other relevant requirements.

0.2 Innovation management principles

This document is based on innovation management principles. An innovation management principle includes a statement of the principle, a rationale of why the principle is important for the organization, some examples of benefits associated with the principle, and finally examples of actions the organization can take to improve performance when applying the principle.

The following principles are the foundation of the innovation management system:

- a) realization of value;
- b) future-focused leaders;
- c) strategic direction;
- d) culture;
- e) exploiting insights;
- f) managing uncertainty;
- g) adaptability;

h) systems approach.

The principles can be considered as an open set to be integrated and adapted within the organization.

0.3 Innovation management system

0.3.1 General

An innovation management system is a set of interrelated and interacting elements, aiming for the realization of value. It provides a common framework to develop and deploy innovation capabilities, evaluate performance, and achieve intended outcomes.

The elements can be gradually adopted to implement the system according to the particular context and circumstances of the organization. Full benefits can be gained when all the elements of the innovation management system, are adopted by the organization.

Ultimately, the effective implementation of the innovation management system relies on the commitment by top management and the ability of leaders to promote innovation capabilities and a culture supporting innovation activities.

0.3.2 Plan-Do-Check-Act cycle

The Plan-Do-Check-Act (PDCA) cycle enables continual improvement of the innovation management system to ensure that the innovation initiatives and processes are adequately supported, resourced, and managed, and that opportunities and risks are identified and addressed by the organization.

The PDCA cycle can be applied to the innovation management system as a whole or its parts. [Figure 1](#) illustrates how [Clauses 4 to 10](#) can be grouped in relation to the PDCA cycle. The cycle is informed and directed by the context of the organization ([Clause 4](#)) and its leadership ([Clause 5](#)).

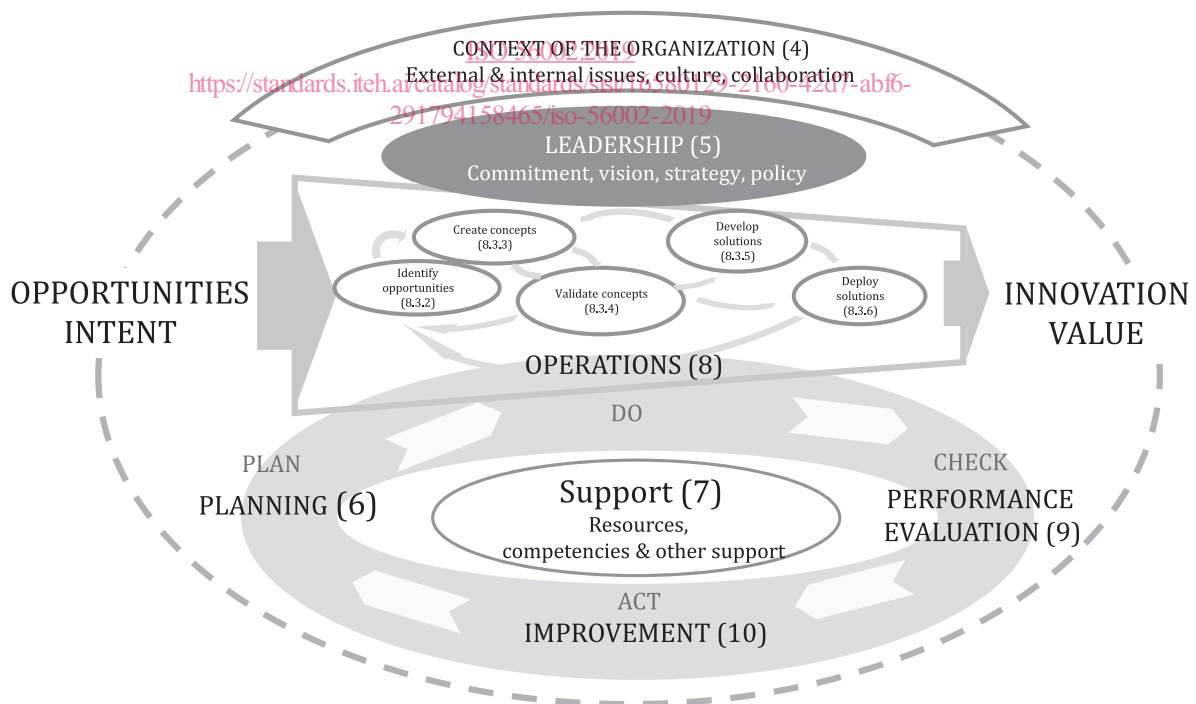


Figure 1 — Representation of the framework of the innovation management system with references to the clauses of this document

The cycle can be briefly described as follows:

- a) Plan: Establish the objectives and determine the actions needed to address opportunities and risks ([Clause 6](#));

- b) Do: Implement what is planned in terms of support and operations ([Clauses 7 and 8](#));
- c) Check: Monitor and (where applicable) measure results against objectives ([Clause 9](#));
- d) Act: Take actions to continually improve the performance of the innovation management system ([Clause 10](#)).

0.3.3 Managing uncertainty and risk

Innovation activities need to address high degrees of variation and uncertainty, particularly during the early creative phases. They are explorative and characterized by search, experimentation, and learning. As the process progresses, knowledge is gained and uncertainty is reduced.

Innovation initiatives involve risk-taking and not all of these will result in innovation. Discontinued initiatives are an integral part of the processes and sources of learning as input to future innovation initiatives.

The acceptable degree of risk is dependent on the innovation ambition, the organization's capabilities and the types of innovations addressed by the organization. Managing risk can be addressed by different approaches, e.g. iterative learning, partnering, or portfolio diversification with different risk levels. A systems approach is critical for understanding interdependencies and managing uncertainties.

Innovation initiatives can be implemented by processes that identify opportunities, create and validate concepts, and develop and deploy solutions. These innovation processes are implemented iteratively and often in a non-linear sequence. They need to be flexible and adaptable to the types of innovations the organization seeks to achieve.

Organizations can establish unified or separate structures, to implement innovation activities. These may require different leadership styles, competencies, and cultures. Implementing an innovation management system can encourage the organization to challenge the status quo and established organizational assumptions and structures. This can help the organization to manage uncertainties and risks more effectively.

0.4 Relationship with other management system standards

This document applies the framework developed by ISO to improve alignment among its International Standards for management systems (see ISO/IEC Directives, Part 1, Consolidated ISO Supplement, Annex SL). This framework enables an organization to align or integrate its innovation management system with the guidance or requirements of other management system standards.

This document relates to the ISO 56000 family of standards, developed by ISO/TC 279, as follows:

- a) ISO 56000¹⁾ *Innovation management — Fundamentals and vocabulary* provides essential background for the proper understanding and implementation of this document;
- b) ISO TR 56004 *Innovation management assessment — Guidance* provides guidance for organizations to plan, implement and follow-up on an innovation management assessment;
- c) ISO 56003 *Innovation management — Tools and methods for innovation partnership — Guidance*;
- d) and subsequent standards provide guidance on tools and methods to support the implementation of the innovation management system.

The implementation of an effective and efficient innovation management system can have impact on, or be impacted by, other management systems and can require integration at several levels.

Management system standards complement each other but can also be used independently. This document can be implemented together with other management system standards, helping organizations to balance the exploitation of existing offerings and operations, with the exploration

1) Under preparation. Stage at the time of publication: ISO/DIS 56000.

and introduction of new offerings. Organizations can find a balance between innovation management guidance and other management system standards.

Organizations that have not adopted other management system standards can adopt this document as stand-alone guidance within their organization.

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Innovation management — Innovation management system — Guidance

1 Scope

1.1 This document provides guidance for the establishment, implementation, maintenance, and continual improvement of an innovation management system for use in all established organizations. It is applicable to:

- a) organizations seeking sustained success by developing and demonstrating their ability to effectively manage innovation activities to achieve the intended outcomes;
- b) users, customers, and other interested parties, seeking confidence in the innovation capabilities of an organization;
- c) organizations and interested parties seeking to improve communication through a common understanding of what constitutes an innovation management system;
- d) providers of training in, assessment of, or consultancy for, innovation management and innovation management systems;
- e) policy makers, aiming for higher effectiveness of support programs targeting the innovation capabilities and competitiveness of organizations and the development of society.

1.2 All the guidance within this document is generic and intended to be applicable to:

- a) all types of organizations, regardless of type, sector, or size. The focus is on established organizations, with the understanding that both temporary organizations and start-ups can also benefit by applying these guidelines in all or in part;
- b) all types of innovations, e.g. product, service, process, model, and method, ranging from incremental to radical;
- c) all types of approaches, e.g. internal and open innovation, user-, market-, technology-, and design-driven innovation activities.

It does not describe detailed activities within the organization, but rather provides guidance at a general level. It does not prescribe any requirements or specific tools or methods for innovation activities.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 56000, *Innovation management — Fundamentals and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 56000 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp/>

— IEC Electropedia: available at <http://www.electropedia.org/>

4 Context of the organization

4.1 Understanding the organization and its context

4.1.1 General

The organization should regularly determine:

- a) external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcomes of its innovation management system;
- b) areas of opportunity for potential value realization.

4.1.2 External issues

The organization should regularly scan and analyse the external context, considering issues related to the:

- a) different areas covering economic, market, social, cultural, scientific, technological, legal, political, geo-political and environmental aspects;
- b) geographic scope, whether international, national, regional, or local;
- c) past experience, present situation, and potential future scenarios;
- d) speed of, and resistance to, change;
- e) likelihood and potential impact of trends; [ISO 56002:2019](https://standards.iteh.ai/catalog/standards/sist/16580129-2160-42d7-abf6-291704158465/iso-56002-2019)
- f) potential opportunities and threats, also those that might result from disruptions;
- g) interested parties.

4.1.3 Internal issues

The organization should regularly analyse its internal context, including capabilities and assets, considering issues related to:

- a) its vision, ambition-level, strategic direction, and core competencies;
- b) existing management practices, organizational structures and use of other management systems;
- c) overall performance of the organization and its innovation performance, e.g. achievements and failures over the recent past and compared with other relevant organizations;
- d) operational aspects, e.g. processes, budgeting, controlling, and collaboration;
- e) potential and maturity (position on the life cycle) of current offerings and value realization models;
- f) the uniqueness of its people, knowledge, skills, technologies, intellectual property, ecosystems, branding, partnerships, infrastructure, etc.;
- g) adaptability of strategies, processes, resource allocation, etc.;
- h) cultural aspects such as values, attitudes, and commitment at all levels of the organization;
- i) the innovation competencies of its people over time.