TECHNICAL REPORT

ISO/TR 56004

Innovation Management Assessment — Guidance

Évaluation du management de l'innovation — Lignes directrices

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Contents

Foreword

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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).

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This document was prepared by Technical Committee 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.

Introduction

Innovation is the key driver for organizations to create value from new products, services, processes, or business models. Therefore, innovation needs to be managed in a systematic manner. Many organizations have already established their innovation management (IM). This might build on key success factors such as the innovation strategy and objectives, the operations for innovation including the processes and organizational structures, and the innovation-enabling factors, the innovation support, including among others the innovation culture, tools and methods, competencies, human and financial resources. Managing innovation in a systematic manner creates value and secures the organization's future. As a consequence, organizations seek guidance on continuously developing their innovation management capabilities and performance. A pre-requisite is transparency of the organization's current performance of its IM. To achieve necessary transparency here, regular and effective assessments of the IM are essential. In this context, this document is designed to answer the following over-riding question: How can an Innovation Management Assessment (IMA) contribute to the future development of an organization and its IM?

This document provides guidance on why it is beneficial to implement an IMA, what you can expect from a good IMA, how to carry it out, and act upon the results of the IMA. More specifically, the document provides the fundamentals for considering an IMA and provides the foundation for carrying out such a process. It is intended to help the user to understand the:

— value and benefits of carrying out an IMA (reasons behind carrying out an IMA);

— different approaches for an IMA;

— IMA process, its steps and impact;

— improvement potential for the IM, the IMA and, as a result, for the assessed organization.

Before continuing further, the reader is encouraged to consult Annex A of this document, which outlines the key principles behind a good IMA.

Details of an Innovation Management System (IMS) can be found in ISO 56002[1] with particular reference to Clauses 9 and 10 which cover performance evaluation and improvement. For details on specific innovation and innovation management tools or techniques, consult ISO 56003 and following documents in the series. The common innovation management terminology can be found in ISO 56000[2], "*Fundamentals and Vocabulary*".

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1)   Under preparation. Stage at the time of publication: ISO/DIS 56002

2)   Under preparation. Stage at the time of publication: ISO/CD 56000

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e6f1682687dc/iso-tr-56004-2019

Innovation Management Assessment — Guidance

1 Scope

This document will help the user understand why it is beneficial to carry out an Innovation Management Assessment (IMA), what to assess, how to carry out the IMA, and thus maximize the resulting benefits, which are universally applicable to:

— organizations seeking sustained success in their innovation activities;

— organizations performing IMAs;

— users and other interested parties (e.g. customers, suppliers, partners, funding organizations, universities and public authorities) seeking confidence in an organization's ability to manage innovation effectively;

— interested parties seeking to improve communication through a common understanding of Innovation Management (IM), via an assessment;

— providers of training, assessment, or advice in IM;

— developers of related standards;

— academics interested in research related to IMA.

Further, this document is intended to be applicable to:

— all types of organizations, regardless of sector, age, size, or country;

— all approaches to IM regardless of their level of sophistication, and complexity;

— all modalities of managing innovation whether centralized or decentralized;

— all ways to innovate, e.g. internal, collaborative, open, user-, market- or technology-driven innovation;

— all types of innovation such as product, service, process, business model, organizational innovation from incremental to radical.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/

3.1
innovation
new or changed entity, realizing or redistributing value

Note 1 to entry: Novelty and value are relative to, and determined by the perception of, the organization and interested parties.

Note 2 to entry: An innovation can be a product, service, process, model, method etc.

Note 3 to entry: Innovation is an outcome. The word "innovation" sometimes refers to activities or processes resulting in, or aiming for, innovation. When "innovation" is used in this sense, it should always be used with some form of qualifier, e.g. "innovation activities".

Note 4 to entry: For the purpose of statistical measurement, refer to the Oslo Manual (OECD/Eurostat 2018):'New or changed entity' corresponds to 'a new or improved product or process, or combination thereof, that differs significantly from the unit's previous products or processes'. 'Realizing or redistributing value' corresponds to 'and that has been made available to potential users or brought into use by the unit'.

[SOURCE: ISO 9000:2015, 3.6.15, modified by using the term "entity" instead of "object" and by adding notes]

3.2
innovation management
management with regard to *innovation* ([3.1](#))

Note 1 to entry: Innovation management can include establishing an innovation vision, innovation policy and innovation objectives, and innovation strategies, innovation processes, structures, roles and responsibilities and innovation support, to achieve those objectives through innovation planning, innovation operations, performance evaluation, improvement and other activities.

3.3
innovation process
process with regard to *innovation* ([3.1](#))

Note 1 to entry: Innovation processes are generally planned and carried out under controlled conditions to realize value.

Note 2 to entry: Innovation processes are designed to manage uncertainty with innovation as the intended result. Not all innovation processes are resulting in innovation.

Note 3 to entry: An innovation process consists of several innovation activities or process elements e.g. identification of insights and opportunities, ideation, prototyping , development, deployment

Note 4 to entry: Innovation processes can be implemented within an organization or across organizations in the case of e.g. collaborative innovation, innovation clusters, value networks or ecosystems.

4   Reasons for carrying out an Innovation Management Assessment

Before initiating an IMA, it is preferable that the organization gains a thorough understanding of the reasons for carrying out an IMA, and about its current IM performance. There may be the need for clarity on the IM and how it is performing, or there may be the need for change in the organization to perform better. In the first case, the IMA's objective is to provide insights into the current performance - both strengths, weaknesses and gaps to the desired value creation through better IM. This will be the basis for defining and implementing actions for improvement. In the second case, the IMA may yield a transformation roadmap including organizational changes to reach the level of a high-performing innovator. The following reasons may trigger an organization to initiate an IMA.

Table 1 — Possible reasons for an organization to carry out an IMA

Gain a better understanding of IM	Determine the performance of the current IM
— Learn what the key success factors for effective IM are, and how to leverage them — Better understand how the key success factors of IM are integrated within, and leveraged by the organization	— Discover the aspects of IM that lead to performance gaps, e.g. between value creation targets and actual results — Evaluate the organization's position based on value creation from innovation — Identify misalignment in the organization (activities, structures, processes, responsibilities, culture, HR, finance etc.) that impede IM results — Compare the organization's performance with external points of reference: such as known innovation leaders/growth champions, competitors, or other external stakeholders and identify best practices in IM
Meeting internal/external requirements	**Improving the performance and increasing the value of the organization**
— Meeting strategic goals/objectives — Comply with requirements for funding for innovation projects or qualification of the organization in the context of due diligence	— Structured input into a roadmap and the resources needed for enhancing the IM performance — Fostering an innovation, learning and dynamic culture to support the evolution of the organization

Note that the motivations in Table 1 are not exhaustive, nor are they intended to outline all possible benefits of performing an IMA. The reasons for initiating an IMA will guide its scope, strategic intent, required resources and – most important – the resulting level of change.

5 Choosing the Innovation Management Assessment approach

5.1 General

When choosing the most suitable IMA approach, the organization is expected to have a clear understanding of the:

— different IMA approaches;

— scope of the IMA;

— type and quality of the IMA output(s);

— formats of the IMA output.

These considerations may serve as selection criteria for the most suitable IMA approach.

5.2 Understanding different approaches to Innovation Management Assessment

Different IMA approaches include check-list assessments or benchmarking assessments. Check-lists provide a list of issues to be considered when assessing the IM and its deployment. Benchmarking assessments build on defined internal or external peer group's IM scores and provide transparency of the organization's IM performance and competitiveness.

Table 2 — Potential approaches for an Innovation Management Assessment

IMA Features	Options to Implement the IMA Features		
IMA Objective	☐ Compliance with Defined Targets	☐ Value Creation from Enhanced IM	☐ IM Capability Improvement
Extent of IMA (Breadth)	☐ Single Organization Unit	☐ Some Units Within Overall Organization	☐ Entire Multi-Unit Organization
Assessed Objects (Focus)	☐ Single Element Focus		☐ All Elements
Expertise Involvement	☐ Internal		☐ External Experts
Data Collection	☐ Desk Research	☐ Interviews	☐ On-line Survey
Tools for Data Collection	☐ Manual		☐ Automated
Data Types	☐ Qualitative		☐ Quantitative
Methods of Data Analysis	☐ Manual	☐ Tool Supported	☐ Fully Automated
Reference Types	☐ Before & After	☐ Actual vs. Target	☐ Best Practice (Benchmark)
Comparison Types	☐ Previous IMA(s)	☐ Correlation Analysis	☐ Benchmarking
Data Interpretation	☐ Normative		☐ Non-Normative
IMA Output	☐ Strengths & Weaknesses	☐ Identified Gaps	☐ Recommendations for Improvements
Format IMA Output	☐ Summary	☐ Tool Supported	☐ Comprehensive Report
IMA Recommendations	☐ For IM Enhancements	☐ For IMA Enhancements	☐ For Assessed Organization's Enhancements

Independent of whether the IMA is performed based on a check-list or on a benchmarking approach, the IMA can be designed along several dimensions as shown in Table 2.

— The "IMA Objective" will be defined as a first step when planning an IMA. The scope and, as a result, the questions asked will differ whether the IMA aims at compliance with defined targets, the value created from an enhanced IM, or at the organization's IM capability for improvement.

— The "Extent of IMA (Breadth)" covers the entire unit, defined either by a common profit and loss statement or by an annual performance statement. Within this unit, all success factors of the IM will be addressed in the IMA to reflect their interdependency;

— The selection of the "Assessed Objects (Focus)" ensures that the IMA results reflect the interdependencies of the organization's innovation strategy, culture/leadership, innovation process, for example. Only then underlying root/causes for IM improvement are identified.

— Deciding on the "Expertise Involvement" the organization takes a sober decision on the quality, availability and independence of internal resources. The recommendations from an external third party might have more credibility and impact on the implementation of the necessary improvements.

— The "Data Collection" will be determined by the defined scope of the IMA and by the availability of data that has been defined for the IMA.

— Selecting the "Tools for Data Collection" especially for small and medium-sized enterprises (SMEs) has become easier as there are proven online tools available that provide a comprehensive questionnaire reflecting the interdependencies of the innovation strategy, innovation organization and culture, as well as the innovation processes for example, and presenting the organization's IM performance within a mouse click in a well-structured report.

— "Data Types" - qualitative or quantitative – are usually used in combination to measure the effectiveness and efficiency of an organization's IM.

— "Methods of Data Analysis" will be fully automated when using an online IMA tool that offers this service. However, effective interpretation of the IMA results will take into account the organization's level of ambition, competitive/external pressure to change, available resources and capabilities to drive the change.

— The selection of the "Reference Type" and "Comparison Types" depends on the organization's access to reference data. When an organization performs an IMA the first time, internal data are not available. Here the defined targets or the external benchmarks might serve as a reference.

— The "Data Interpretation" ideally provides actions for further improvement of the IM. However, the "Data Interpretation" might also describe possibilities or predict what might happen as a result of certain actions.

— On the "IMA Output Format" the organization defines which types of actionable output they require for which level of hierarchy in the organization to achieve the necessary transparency and impact from the IMA.

— The "IMA Recommendations" reflect the full scope defined for the IMA. The recommendations may also affect the entire assessed organization or even their value networks.

5.2.1 Performance criteria for Innovation Management

For each of the IM's success factors such as the innovation strategy, innovation organization and culture, innovation processes, innovation-enabling factors and innovation results, performance criteria may include quantitative and qualitative measures. Quantitative measures allow for numerical analysis, while qualitative measures will complement this with additional richness and depth.

The criteria are selected to provide insights into the IM's impact on the organization's value-creation from innovation. This can be defined for example by value via:

— growth in:

  — revenue from innovation;

  — profit from innovation;

  — market share from innovation;

  — number of employees;

  — geographic reach from innovation;

  — number of beneficiaries (e.g. of social businesses or of public sector organizations) that are reached by the innovation offered;

  — value-created for the beneficiaries reached, social development and/ or environmental sustainability;

— its ability to set the pace for innovation by:

  — optimizing the innovation lifecycle;

  — speed of innovation;

— its efficiency based on:

  — resources allocated to achieve the defined value;

  — defined timeframes that were met or even accelerated;

  — defined quality levels reached or even exceeded.

5.2.2 Options for implementing the Innovation Management Assessment

The IMA may be a very simple high-level scan, based on only a few questions gaining a first idea on the IM's performance, or very detailed investigation, based on a greater range of qualitative and/or quantitative questions. Both a simple and more detailed IMA can be carried out as part of a stepwise IMA approach, where required. For large organizations with many separate organizational units, or geographically spread units there may be several different IM approaches in place. In such cases, there can be a benefit for running several parallel assessments to fully assess the overarching (or individual) IM performance. Efficiency and effectiveness of the IMA increases if proven automated tools are used.

The IMA can be performed internally by a dedicated team, with the help of external experts or completely driven by resources from an external party. The team can use a combination of interviews, surveys and desk research which will ideally produce both quantitative and qualitative results (Figure 1).
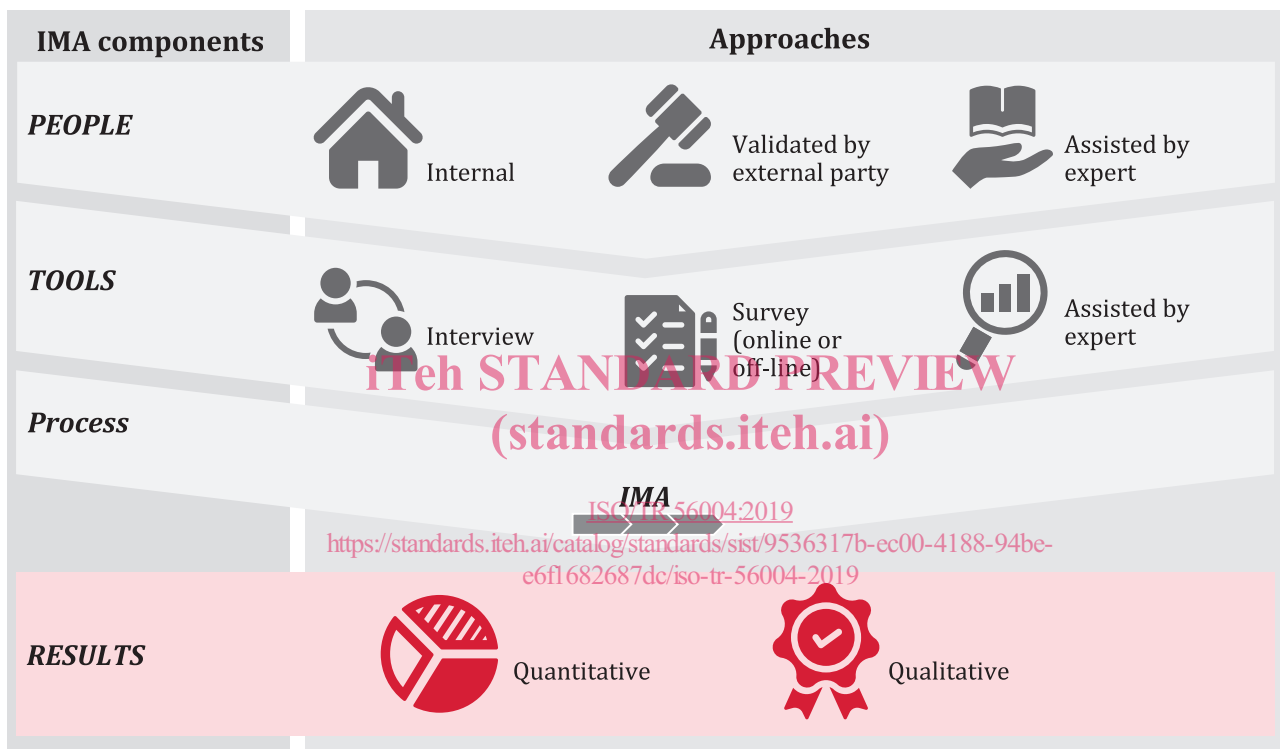

Figure 1 — Key components of, and approaches to, Innovation Management Assessment

Response formats might be of different types such as 5-7-point Likert (psychometric) scales, colour abacus or other forms of normalized scales. The respondents can include managers, employees, external clients, and/or partners.

5.3 Type and quality of Innovation Management Assessment output(s)

The quality of the IMA outputs depends on the quality of the data that is collected and documented as well as on the reports that present the IMA results.

For all types of IMA approaches, it is important to match the effort required from the respondents to the desired level of detail. Aspects to be ensured are:

— the validity of the underlying assumptions used to build the dataset/database;

— the consistency of responses, through detailed guidance or sufficiently simple and unambiguous questions;

— the validity of the results, through a sufficient number of responses in relation to the size of the organization.