
**Innovation management — Tools and
methods for intellectual property
management — Guidance**

*Management de l'innovation — Outils et méthodes de management
de la propriété intellectuelle — Recommandations*

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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 of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

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

0.1 General

Every organization involved with innovation initiatives addresses intellectual property in one form or another, because intellectual property is inextricably linked with innovation. Intellectual property ("IP") refers to unique, value-adding creations of the human intellect that result from human ingenuity, creativity and inventiveness. IP is a type of property while intellectual property rights ("IPR") are the rights arising from different forms of IP.

IP enables the granting of property-like rights over new knowledge and creative expressions. For example, IP relates to scientific or technological products or processes, software, data, know-how literary and artistic works, designs, symbols and names. There are various types of IPRs that protect different innovation outputs.

IP is becoming increasingly important on a global scale in today's knowledge-based economy. IP is no longer important just for large organizations, it is also important for smaller organizations because it allows all organizations to capture the benefits of innovation. A consideration of third-party IP is also relevant in order to ensure that organizations can leverage the outcome of their innovative efforts. It is important to engage in IP management activities across the organization and amongst organizations. For example, IP can facilitate ideas being co-developed, exchanged and traded.

An organization can leverage IP to achieve its business objectives and to implement innovation initiatives for a range of purposes including:

- strategic positioning,
- finding routes to innovation,
- protecting innovation results,
- attracting and securing investment,
- increasing competitive advantage,
- establishing clear ownership of IP and IPR,
- establishing freedom to operate,
- creating innovation value,
- enabling collaboration.

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IP strategy should be an integral part of the wider business and innovation strategies. Organizations should be aware that considering IP only from a defensive perspective can obscure some benefits that IP can achieve which can support additional innovation and business objectives. This is because effective IP management enables an organization to optimize its IP assets to achieve a wide range of organizational objectives. This also allows for maximizing the benefits associated with innovation, while managing uncertainty and minimizing related risks and costs. IP management can enable collaboration with partners, competitors, and customers, which can yield enhanced innovation outcomes. IP management can create collective value through collaborative approaches (e.g. open-innovation, joint-development, ecosystems, and network effects), and be a driver of additional sources of revenue (e.g. cash flows through licensing).

Effective innovation management should include implementing an IP strategy which is aligned with the business strategy. There are several activities associated with an IP strategy (illustrated in the outer circle of [Figure 1](#)) and the implementation of these aspects results in positive outcomes (illustrated in the inner circle of [Figure 1](#)).

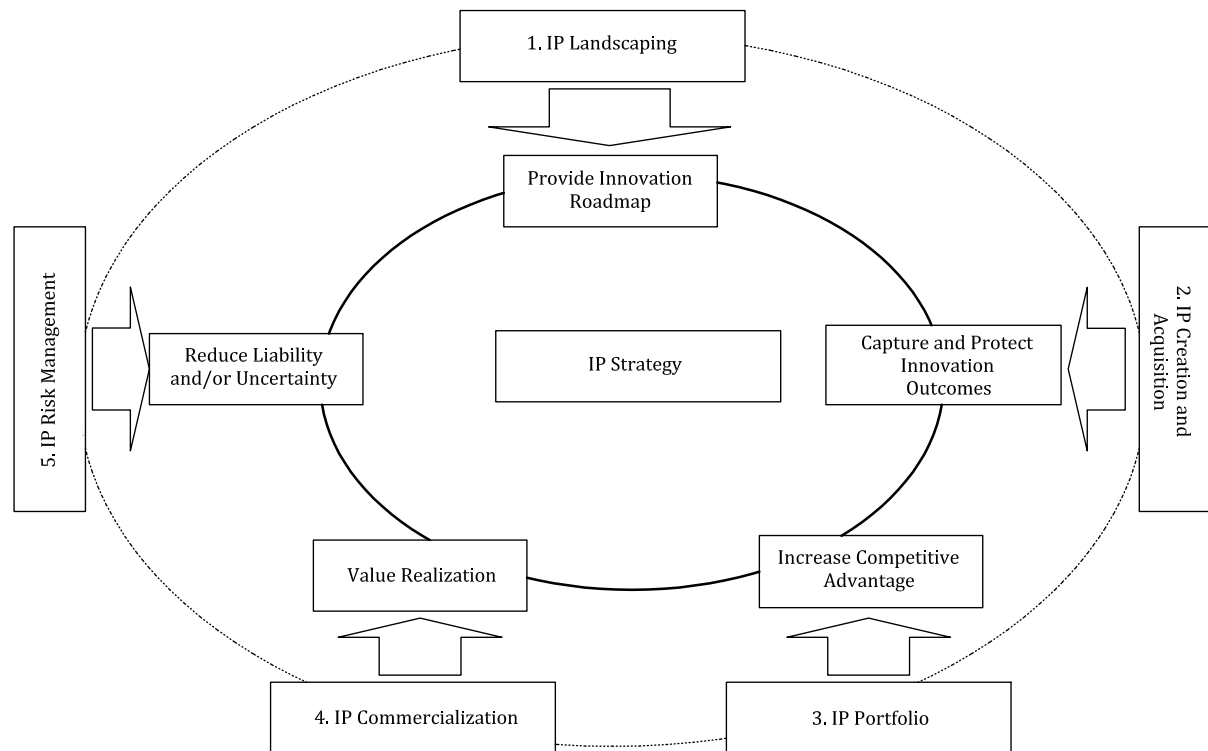


Figure 1 — IP management activities which contribute to innovation management
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There is no universally appropriate IP strategy, since an IP strategy should be tailored to the needs of an organization's business and innovation strategies. IP strategy is diverse depending on the context of the organization, such as external and internal issues, including the maturity of the organization's innovation management.

Therefore, the IP strategy should be flexible enough to adapt and change over time. In other words, the depth and breadth of an IP strategy should be adaptable to the changing context of the organization over time.

0.2 Principles

The following principles, derived from the innovation management system provide a foundation for IP management:

a) Realization of value

The management of IP should create value for all relevant stakeholders. This includes long-term and short-term value; explicit and implicit value; financial and non-financial value.

b) Future-focused leaders

At the outset of an innovation initiative, leaders across the organization should inspire and engage employees, and other interested parties, to generate, protect and leverage IP with a view to long-term value creation for the organization.

c) Strategic direction

The organization should align the overall strategic direction for the management of IP with its business and innovation strategies.

d) Culture

The organization should foster and sustain shared values, beliefs, and behaviours across the organization with a view to generating, protecting and leveraging IP for long-term value creation for the organization.

e) Exploiting insights

The organization should access a diverse range of internal and external IP knowledge sources to systematically develop the organization's IP expertise and to support its innovation planning and strategy.

f) Managing uncertainty

The organization should evaluate and manage innovation uncertainty and risks from an IP perspective, with regard to the management of internal IP and awareness of external IP.

g) Adaptability

The organization should adopt relevant systematic IP management processes in a timely manner to address changes in organizational context, and to ensure continued alignment with its desired purpose and core capabilities.

h) Systems approach

The organization should manage IP based on a systems approach (instead of on an ad-hoc basis) with a view to reducing organizational risks and enhancing value creation potential for the organization.

0.3 Structure of the document

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The management of IP is necessary for effective innovation management. It provides a means for the organization to obtain and maintain a dynamic core capability and to transform its innovation results into valuable IP assets.

The organization should consider the following:

- An IP management framework, aimed at the implementation of IP management activities ([Clause 4](#));
- An IP strategy as an integral part of the organization's business and innovation strategies ([Clause 5](#));
- IP management activities tailored to the innovation process, especially taking account of the changing context in different innovation stages ([Clause 6](#), linked to ISO 56002:2019, Clause 8);
- IP tools used in support of IP management activities ([Annex A](#) to [Annex E](#)).

[Figure 2](#) presents the structure of IP management with references to the clauses of this document.

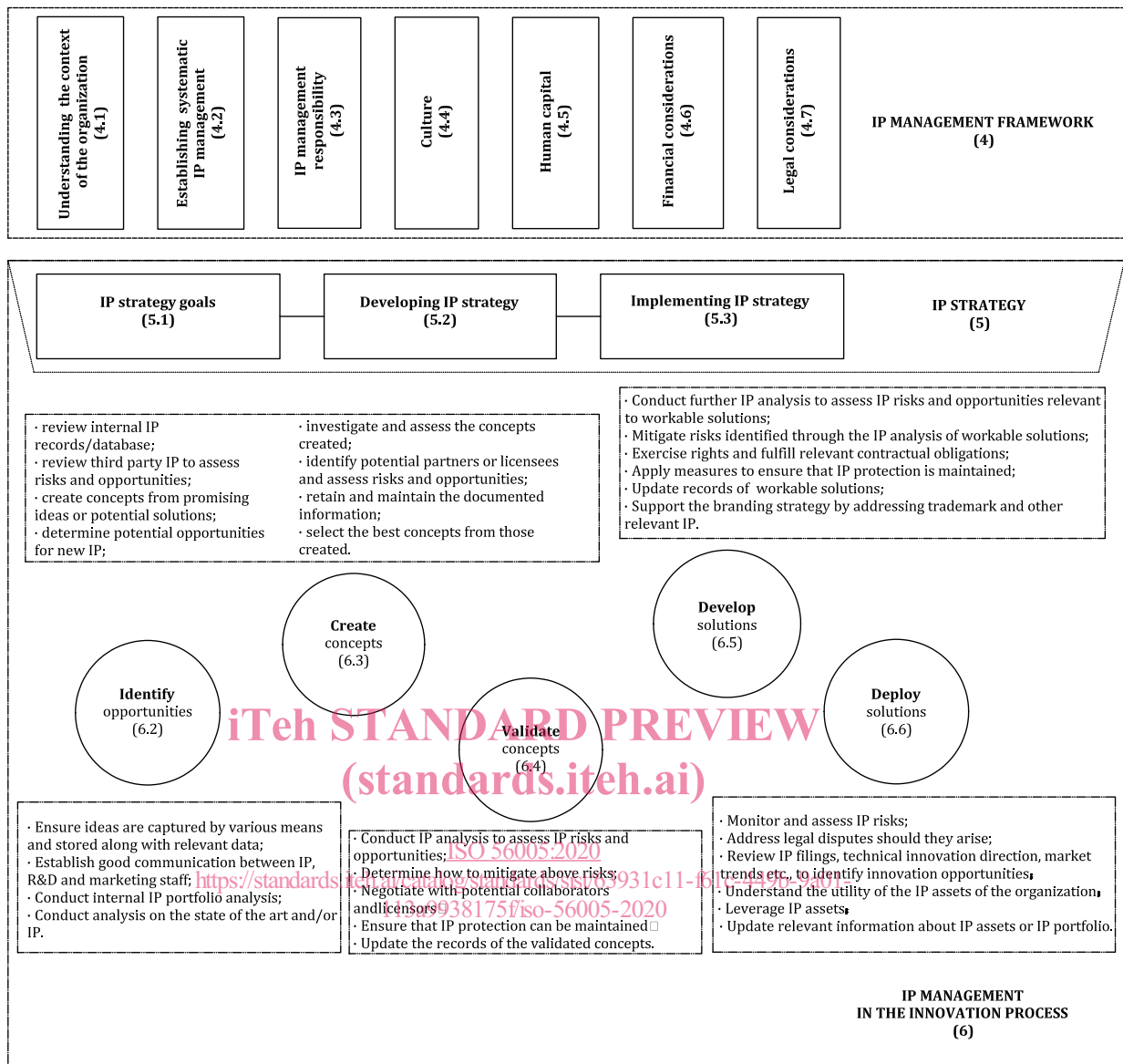


Figure 2 — Structure of IP management with reference to the clauses of this document

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

- ISO 56000:2020 Innovation management system — Fundamentals and vocabulary provides the essential background for the understanding and implementation of this document.
- ISO 56002:2019 Innovation management system — Guidance provides guidance for the development, implementation and maintenance of an innovation management system, to which all subsequent standards of the family, are complementary to.
- ISO 56003:2019 Innovation management — Tools and methods for innovation partnerships - Guidance provides guidance and tools to select external partnerships to enhance innovation success.
- ISO/TR 56004:2019 Innovation management assessment - Guidance provides guidance for organizations to plan, implement and follow-up on an innovation management assessment.

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Innovation management — Tools and methods for intellectual property management — Guidance

1 Scope

Efficient management of IP is key to support the process of innovation, is essential for organizations' growth and protection, and is their engine for competitiveness.

This document proposes guidelines for supporting the role of IP within innovation management. It aims to address the following issues concerning IP management at strategic and operational levels:

- Creating an IP strategy to support innovation in an organization;
- Establishing systematic IP management within the innovation processes;
- Applying consistent IP tools and methods in support of efficient IP management.

This document can be used for any type of innovation activities and initiatives.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 56000: 2020 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 IP management Framework

4.1 Understanding the organization and its context

The organization should determine external and internal issues and considerations that are relevant to its organizational objectives and that affect its ability to achieve its intended IP strategic objectives.

The organization should:

- a) scan and analyze the external environment, considering issues related to the following: a) areas such as market, culture, technology, legal, regulatory and political aspects; b) geographic scope: whether international, national or regional; c) time horizons - short, medium, or long term; d) potential opportunities and threats, such as opportunities through collaborators or threats from competitors;
- b) analyze its internal environment in terms of business and innovation strategies and types of IP assets of the organization, while considering issues related to: a) the business and innovation vision, strategic direction, existing management practices; b) the business and innovation objectives and planning to achieve them; c) existing IP owned by the organization or licensed to or from others; d) process and resource strengths and weaknesses that can impact achievement of intended IP

objectives; e) cultural aspects such as values, ethics beliefs, history, observed behaviours, attitudes, and commitment at various levels of the organization;

- c) identify interested parties (internal and external, current and future), that are relevant to IP management in innovation, and determine their relevant needs, expectations, and applicable requirements.

4.2 Establishing systematic IP management

IP management should take into account the activities, processes and supports that are required, how they interact, and how continuous improvement can be achieved in accordance with this document.

In the context of IP management, the organization should decide whether to make an innovation outcome publicly available without restriction or whether to protect it. If the decision is made to protect the innovation, then the different forms of IP protection (e.g. copyright, trade secrets, trademarks -- see [Annex B](#)) should be considered. IP management should also account for the fact that IPRs can provide a 'positive' rights (rights to use what is protected) and 'negative' rights (rights to exclude third parties from using what is protected) to the owner. This can depend on the type of IPR in question.

The organization should also provide measures to manage both, the potential positive and negative aspects of IP and IPR.

4.3 IP management responsibility

4.3.1 Leadership and commitment

Top management should ensure that the responsibilities and authority for relevant roles are assigned and communicated within the organization.

Top management should demonstrate leadership and commitment with respect to IP management by:

- a) ensuring IP policy and objectives are established;
- b) establishing and implementing an IP strategy which is aligned with (and supportive of) the innovation strategy;
- c) ensuring the established IP policy and objectives are aligned and evolve with the strategic direction of the organization;
- d) ensuring that the integration of IP management activities into the organization's innovation processes;
- e) ensuring the resources and capabilities needed for IP management as needed;
- f) communicating the importance of effective IP management throughout the organization;
- g) ensuring that IP management achieves its intended outcome(s);
- h) directing and supporting persons (e.g. sustained training and education in IP) to contribute to the effectiveness of IP management;
- i) promoting continual improvement of the management of IP.

4.3.2 Organizational roles and responsibilities

IP management responsibilities related to innovation should include:

- a) establishing appropriate activities and related support for managing IP;
- b) defining what innovation outputs should be made publicly available without restriction, or else protected, and if so, when, how (e.g. patent, copyright, design, trademark or trade secret) and where;

- c) establishing and maintaining an inventory of the organization's IP assets to ensure controlled access to it by persons, internally and externally, when necessary for the organization's work;
- d) according to legal considerations (see 4.7), periodically monitoring IP in the public domain that is relevant for the organization, as input to innovation activities and initiatives; as well as to avoid potential infringement or to provide innovation reference and inspiration;
- e) according to legal considerations (see 4.7), managing potential infringements of the organization's IP by other parties;
- f) according to legal considerations (see 4.7), monitoring the development and differences of relevant national legislation and other internationally applicable legal and regulatory requirements to current and future operations and markets;
- g) identifying and reporting IP risks and opportunities to interested parties (e.g. the board of directors, shareholders, other functions of the organization);
- h) realizing value (financial or non-financial, internal and external) to the organization through IP, e.g. reputational, financial, collaborative, and human capital;
- i) conducting other IP management activities, including protecting trade secrets, idea management, or clarifying ownership in relation to external partners, e.g. in collaborative innovation projects;
- j) establishing awareness and providing training, as necessary, within the organization.

IP management responsibilities should be clearly identified, documented and shared with the rest of the organization, in particular within the framework of their interactions with other functions in the organization.

Roles and responsibilities for IP management activities can be assigned: a) as part of existing roles, such as roles related to specific functions or units; or b) as dedicated roles with a focus on general IP management or on specific IP management initiatives and activities. These responsibilities can be assumed by a single person or a team, and can be internal or external to the organization.

The IP management function can either report to the top management team, be included within the top management team, or can be assumed by the top management itself.

4.4 Culture

The organization should promote an organizational culture that supports the effective management of IP.

4.4.1 Awareness

For the effective establishment, implementation, maintenance, and continual improvement of the management of IP, the organization should promote IP awareness throughout the organization by:

- a) Obtaining oversight and approval from the organization's top management of both policy and processes for the strategic management of IP;
- b) designating a member of the senior management team accountable for implementing the organization's policy and processes for the management of IP;
- c) providing employees with an understanding of IP management policies and processes, their purpose and specific expectations related to their role requirements and how they contribute to the effectiveness of IP management in their day-to-day work operations;
- d) ensuring employees across all areas understand the IP specific business processes and methods, and the implications and consequences of not conforming to the organization's requirements for the management of IP.