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Innovation management — Tools and methods for innovation partnership — Guidance

Management de l'innovation — Outils et méthodes pour les partenariats en innovation — Lignes directrices

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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

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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).

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

Innovation partnerships are developed to create value for each partner working together.

Benefits of an innovation partnership include

— access to knowledge, skills, technology and other intellectual assets that are not available within the organization, and

— access to infrastructure resources, such as experimental laboratories and equipment to develop new or improved product and services.

This document provides recommendations for engaging in external partnerships to realize innovation. The corresponding tools and methods are detailed in Annex A to Annex E.

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

a) ISO 56000, *Innovation management system — Fundamentals and vocabulary* provides the essential background for the understanding and implementation of this document.

b) ISO 56002, *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.

c) ISO 56005, *Innovation management — intellectual property management — Guidance* provides guidance on how to use intellectual property to achieve business objectives.

Innovation management — Tools and methods for innovation partnership — Guidance

1 Scope

This document provides a guidance for innovation partnerships. It describes the innovation partnership framework (see Clause 4 to Clause 8) and the sample corresponding tools (see Annex A to Annex E) to

— decide whether to enter an innovation partnership,

— identify, evaluate and select partners,

— align the perceptions of value and challenges of the partnership,

— manage the partner interactions.

The guidance provided by this document is relevant for any type of partnerships and collaborations and it is intended to be applicable to any organizations, regardless of its type, size, product/service provided, such as:

a) start-ups collaborating with larger organizations;

b) SMEs or larger organizations;

c) private sector entities with public or academic entities;

d) public, academic or not-for-profit organizations.

Innovation partnerships start with a gap analysis, followed by the identification, and engagement, of potential innovation partners and the governance of their interaction.

NOTE The essence of an innovation partnership is for all parties to mutually benefit from working together in the context of an opportunity for innovation.

This document is not applicable to organizations seeking innovation by merger or acquisition.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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 Innovation partnership framework

4.1 Framework

As described in Figure 1, this document proposes a structured approach and the corresponding tools in Annex A to Annex E. It can be used at any stage of its innovation process by a single organization to

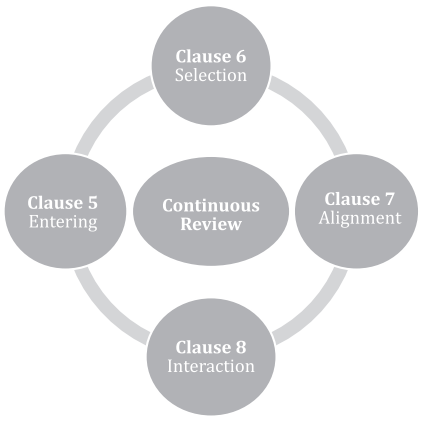
— decide whether or not to enter an innovation partnership (see Clause 5),

— identify and select partners (see Clause 6),

— align partners and agree on a common understanding (see Clause 7),

— assign roles, responsibilities and govern the interaction (see Clause 8).

Throughout the process, a continuous review should be carried out and actions adapted according to the performance evaluation criteria drawn from ISO 56002:—[1)], 9.1.1.1 and 9.1.1.2 and presented in Annex E.



Tools and methods to form Innovation Partnerships

Clause	5. Entering	6. Selection	7. Alignment	8. Interaction
Purpose	Decide to Enter Innovation Partnership	Identify, evaluate and select innovation partner(s)	Shared understanding of proposed opportunity for innovation	Describes the nature of collaboration between partners
How	Perform Gap Analysis to identify Capabilities and Resources	Generate List of Partners	Draft the written shared understanding	Draft an Innovation Partnership Agreement
Toolsets	Annex A	Annex B	Annex C	Annex D
Output	List of the required capabilities and resources, of the potential partner	List of partners to fill capability and resource gaps	Written shared understanding of the proposed opportunity for a joint innovation outcome	Innovation Partnership Agreement

Each output is input to the next clause. .

Figure 1 — The framework to develop and manage innovation partnerships.

4.2 Entry points to innovation partnership

Entering into an innovation partnership is not a linear process. Organizations may enter the innovation partnership process at any point, depending on their circumstances. For instance:

— if an organization has already decided the reason to enter an innovation partnership, it can skip Clause 5 and start from Clause 6;

— if an organization has already identified or been identified by potential partners, it can skip Clauses 5 and 6 and start from Clause 7;

— if an organization is already aligned with partners, it can start from Clause 8.

1) Under preparation. Stage at the time of publication ISO/DIS 56002:2019.

5 Entering an innovation partnership

5.1 General

Once an opportunity for innovation has been identified, the organization should conduct a gap analysis to evaluate the difference between the organization's existing competencies, capabilities and assets and those it needs.

Based on the gap analysis, the organization can decide if the project can be handled internally or through training, new hires and/or acquisition. For instance, when the opportunity cannot satisfactorily be handled within the organization, the organization should consider partner selection.

In most cases a gap analysis produces an inventory of missing technological and organizational knowledge, competencies, capabilities and assets, which then is used to identify and select the most appropriate partner(s).

It may also happen that based on the relevant internal and external issues, needs and expectations, an organization can join forces without any defined opportunity for innovation. It may have the competencies, capabilities and assets to handle the innovation initiative alone, but still prefers partnering.

Other reasons for partnering may include

— sharing risks (including financial risks) and addressing them more effectively,

— gaining a clearer insight into an ecosystem, as part of the context of the organization (e.g. new market, sector, etc.),

— motivating people (e.g. internal teams) and building unity, as part of the leadership and innovation culture that aims to enable the coexistence of creativity and actions needed to identify and deliver new solutions that realize value,

— learning from benchmarking and from any other means for monitoring and evaluating the innovation capacity and performance of the organization,

— reducing time to market, by enhancing planning and operational processes of the organization,

— reducing costs and/or optimizing resources and assets of the organization,

— establishing best practices to identify and deliver value driven new solutions,

— enhancing image or reputation, and

— reducing own investments.

Reasons for not partnering may include

a) loss of independence,

b) prefer to develop capabilities internally,

c) reluctance to share proprietary knowledge, and

d) prefer to retain ownership of intellectual property.

The result of the analysis allows the organization to decide whether to enter an innovation partnership (see 5.2 and Annex A).

5.2 Deciding whether or not to enter an innovation partnership

The determination whether to enter into a strategic relationship involves the following steps.

a) Identify the gaps (see A.1, using Table A.1 to guide this analysis);

b) Determine the best approach to fill the gap - internally or fill gaps by partnering (see A.2, using Table A.2 and Table A.3 to guide this analysis).

The decision is determining the best approach.

NOTE 1 Annex A provides the tools to guide the gap analysis to assist in determining the best partnership approach.

NOTE 2 Evaluation criteria to determining the best approach that may be relevant to your organization, can be sourced from throughout this international standard (see 5.1, 6.3, Annex C and Annex D).

6 Partner selection

6.1 General

Partner selection provides guidance on how an organization can identify, evaluate and select the appropriate partner(s). This clause addresses the suitability of each potential partner by evaluating the way in which two or more organizations can work together for mutual benefit.

6.2 Generating a long-list of potential partners

An internal multi-disciplinary team may be formed to assist in the partner identification process.

Potential partners can originate from the analysis of the context of the organization i.e. its interested parties and existing relationships and its internal and external sources, as follows:

a) Internal:

- organization's own documentation;
- strategic intelligence, such as forecasting, foresight exercises, scenario planning, road maps, market plan, market analysis, customer needs;
- supply chains;
- procurement chains;
- project teams;
- innovation department;
- sales and marketing;
- product development;
- manufacturing;
- finance;
- intellectual property;
- R & D departments;
- ethics and compliance committees.

b) External:

- customer and end-user feedback/needs;
- competitor supply chains;
- competitor manufacturers;
- competitor activities;
- clusters and networks;
- industry associations;
- trade associations;
- trade agreements;
- regulations and standards;
- publications, such as research papers, trade journals, annual reports, market reports;
- databases of patents and intellectual property rights;
- universities/professors/consultants;
- research and technology organizations (RTOs).

However, an open-minded approach is advised rather than focusing too early on known organizations in the network. Generating a long-list of potential partners can be useful as it may yield new and unexpected collaboration opportunities.

Figure 2 illustrates examples of organizations that can potentially become collaborative partners or help to identify partners.

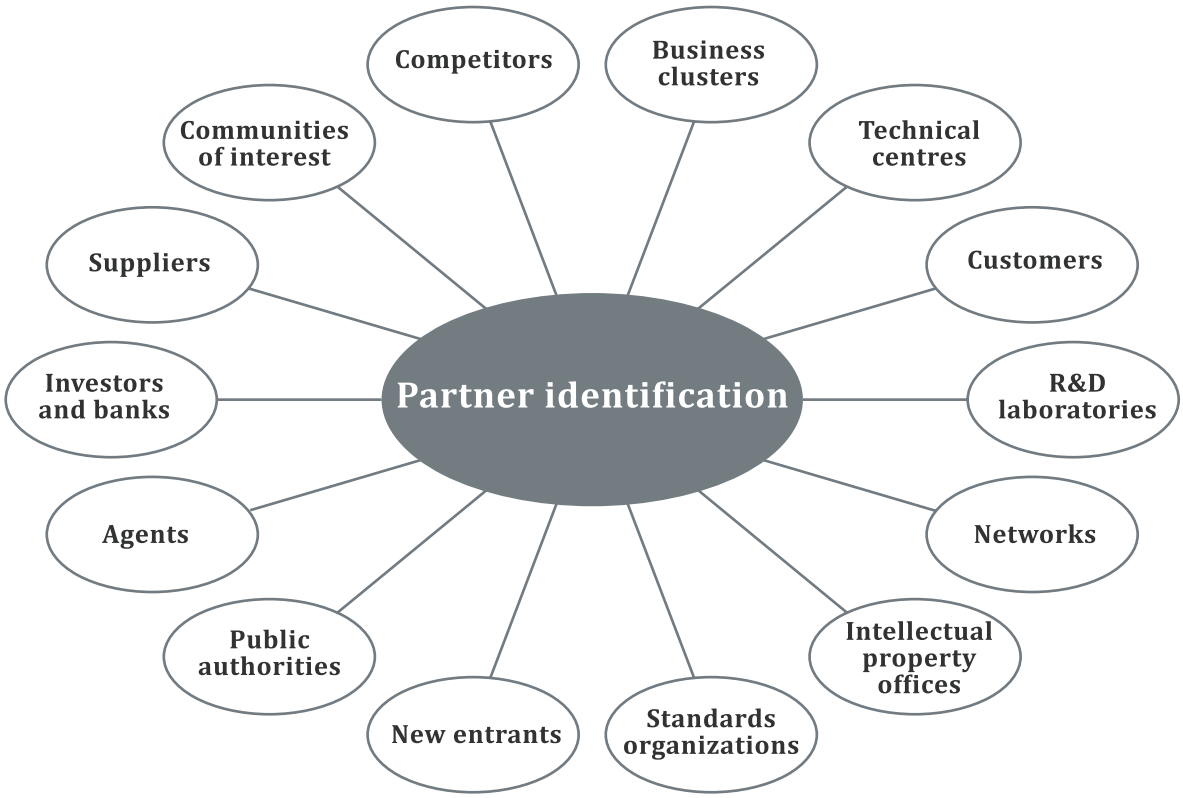


Figure 2 — Examples of potential partners

6.3 Generating a short-list of potential partners

To narrow down the long-list to a short-list, the suitability of the identified long-list of potential partners in 6.2, should be evaluated on the basis of the following criteria:

a) Previous partnership experience:

- past collaborative track record;
- entrance and exit reasons;
- partnering restrictions, potential future collaboration lock-out.

b) Organizational knowledge, competences:

- intellectual assets or access to intellectual assets;
- R&D capabilities;
- origin of knowledge or access to expertise;
- knowledge protection systems.

c) Innovation track record:

- new and innovative product, service, process, business model and/or other development, both incremental or disruptive;
- patents, publications and citations;
- increase in market share;
- joint innovation outcomes.

d) Operational fit:

- supportive innovation culture and working environment;
- risk appetite and tolerance;
- human resources and turnover rate;
- capability and efficiency of processes;
- time to market.

e) Financial profile:

- annual reports;
- resources.

f) Intellectual property management:

- intellectual asset database search;
- ownership;
- licensing and litigation track record;
- background and foreground strategies.

g) Geo-political, corporate, ethical and other risks:

- likelihood of emergent competition, risk of making a competitor out of a collaborator;

— preparedness to share risks, opportunities, knowledge and assets;

— quality risks, e.g. failure to fulfil customer requirements, failure to ensure proper quality control;

— reputational risks;

— access to knowledge, assets and/or networks;

— geo-political behaviours and related social, technological and economic effects;

— cultural aspects and language;

— legal and compliance requirements and/or constraints;

— cost structure analysis.

Organizations should use such criteria to assess suitability of the potential partners (see 6.4) against their skills, knowledge and/or resource gaps.

6.4 Partner selection decision

To assess the suitability of the shortlisted potential partners identified in 6.3, use the management analysis tools and suggested process in Annex B, to further prioritize criteria listed in 6.3 and then score each potential partner, by relative importance of the criteria.

NOTE Annex B provides the tools to make a partner selection decision.

It is recommended that due diligence be based on sets of criteria such as those listed in 6.3 and other alignment factors listed in 7.3 and more detailed in Annex C.

Once respective pros and cons of potential partners are known, those shortlisted are typically engaged in preliminary negotiations to determine their compatibility and willingness to collaborate. The selection process may need to be repeated.

7 Partner alignment

7.1 General

Before organizations formalize a legally binding agreement, it is important to ensure a shared understanding of the proposed opportunity for innovation and the partnership. To do so a number of factors to develop a common understanding should be addressed in order to increase the innovation partnership's likelihood of success.

7.2 Non-disclosure agreement

The partners should sign the agreement, before entering into discussions or negotiations and before confidential information is shared.

7.3 and Annex C describe the factors that can affect a shared understanding and suggested content for a formal partnership agreement.

7.3 Developing a common understanding

In order to develop a common perspective, the partners should agree on a common understanding of the:

— customer benefits;

— factors that can influence the inputs required;

— factors that can influence the outcome, and;

— factors that relate to the action plan.

The alignment of the parties should be recorded in the form of a memorandum of understanding or a letter of intent.

NOTE Annex C contains the suggested content for a memorandum of understanding or a letter of intent.

8 Interactions between the partners

8.1 General

This clause describes the interactions between partners in the context of an innovation partnership. These interactions can vary depending on the nature of the collaboration and roles of the partners.

How the partners will interact is formalised in the innovation partnership agreement. The nature and substance of the interactions will depend on the nature of the collaboration and assigned roles. Interactions can also be influenced by extraneous factors such as the duration of the partnership, organisational cultures, existing relationships, commitments and agreements.

8.2 Key factors of interaction

Elements that may be addressed are as follows:

— confidentiality;

— program and objectives of the innovation partnership;

— implementation of the innovation partnership;

— management;

— organizational;

— governance;

— funding and resources;

— cost budgeting;

— roles and responsibilities and powers of each board;

— intellectual assets;

— liabilities, indemnities and warranties;

— termination strategy.

The outcome of this clause may take the form of a formal innovation partnership agreement detailing the nature of the partners' interaction.

NOTE Annex D provides guidance to the development of an innovation partnership agreement.

Annex A
(informative)

Tools and methods for entering the partnership

This annex relates to Clause 5 that involves deciding whether to enter into an innovation partnership.

This annex details business tools to address each of these areas.

— Identify the gaps (see A.1):

  — Sample generic business management tools are provided to undertake various assessments.

  — Table A.1 can be used a template to guide this analysis.

— Determine the best approach to fill the gap (see A.2):

  — Table A.2 and sample criteria in Table A.3 can be used as a template to identify pros and cons.

  — The decision is determining the best approach – internally sourced or with an external partner.

NOTE Evaluation criteria to determining the best approach that may be relevant to your organization, can be sourced from throughout this international standard (see 5.1, 6.3, Annex C and Annex D.)

A.1 Identify the gaps

In the context of the opportunity for innovation, Table A.1 can be used as a template, to identify the internal knowledge and/or resource deficiencies required to improve business performance, understand change in the market, how to be competitive in those markets and/or find new opportunities.

Table A.1 — Guide for this analysis

Identified Gaps	Existing competencies, assets and capabilities	Needed competences, assets and capabilities	Requirements to fill the gap

The following business management tools (see Reference [2]) can be used to undertake various assessments to position a product, determine competitors, etc. to identify the gaps, as such, some generic tools are provided:

Gap Analysis – is an internal evaluation to identify performance deficiencies of business functions i.e. cash flow, visibility, etc. The analysis compares actual performance with desired performance, determines factors that have led to its current state, identifies factors needed to reach desired state, and then develops strategy to fill the gap between the two states. A gap analysis helps identify flaws in internal business processes i.e. market development, planning, strategy, finance, production, procurement, research, etc.

Score Cards is a strategic management method to identify and improve internal business processes or functions, according to the resultant, external outcomes, therefore can assist organizations in assessing gaps. The outcomes are measured against, pre-established performance metrics that are used to measure and provide feedback to the organization.

SWOT Analysis (SWOT) stands for strengths, weaknesses, opportunities and threats, generally an assessment within a particular environment to answer a specific question. It isolates opportunities and threats and lists strengths and weaknesses to develop strategies that capitalize on internal strengths,

respond to environmental opportunities, and mitigate external threats while avoiding internal weaknesses.

Product Lifecycle Management (PLM) is the process of managing the entire lifecycle of a product from inception through disposal, aiming to design products with closed-loop supply structures. The aim is to design products with less inputs (fewer, simpler and less harmful materials, etc), higher quality (more durability and easier repair), and more environmentally friendly disposal, that could be an input to another product. PLM provides the platform to engage all stakeholders along the supply chain, and in that sense, it integrates people, data, processes and business systems and provides a product information backbone for companies and their extended enterprise. This method is particularly adapted for integrating environmental consideration (environmental lifecycle analysis). PLM analysis helps to pinpoint missing capabilities to address some of the product life cycle components.

Experience Curve Concepts analyses the specific role of product, to the competitive portfolio. It analyses the relationship between accumulated output of product and costs that affect the feasibility of exploitation strategies that could include: modernizing delivery, production and disposal, integrating vertically or horizontally to reduce cost of inputs, or the further divisions of labour, etc. Experience curve analysis may show opportunities for improving operational costs.

Value Chain Analysis maps cost reduction or the increase of revenues or benefits that each activity can generate. It can help pinpoint missing capabilities to improve those parameters.

Industrial Analysis tool is based on the premise that there are five attributes, or 'forces' that influence the ability of a firm to either maintain or create above normal returns. These forces are; the threat of new entrants to a market, the introduction of substitutes or alternatives, the bargaining power of customers, the bargaining power of suppliers and industrial rivalry.

Strategic Planning is a formal planning process that guides an analysis of external and internal factors, such as the general, technological and competitive environment to gather intelligence about strengths, weaknesses, opportunities and threats to align innovation strategy with the environment. It can assist in pinpointing, missing capabilities.

Benchmarking this tool compares relative performance of business functions to alternatives and/or competitors. By illustrating performance on certain criteria, it can help identify gaps.

For individual and organizational competence collaborative analysis tool, see ISO 44001.

A.2 Determine the best approach to fill the gap

A partnering evaluation of pros and cons can support making a decision on whether to enter a partnership, in order to acquire the resources and capabilities needed to address the opportunity for innovation, or to pursue the opportunity independently.

Table A.2 can be used as a template to list the pros and cons.

Table A.2 — Partnering evaluation

Fill gaps internally		Fill gaps by partnering	
Pros	Cons	Pros	Cons

Table A.3 provides sample criteria based on strategic needs, level of risk, time needed to train, budget, performance metrics and other indicators (more can be drawn from 5.1, 6.3, Annex C and Annex D).

Table A.3 — Sample pros and cons

Partnering Criteria
Risk reduction
Level of insight into an ecosystem
Impact on team motivation
Learning opportunity
Time to market
Will reduce operating costs
New capabilities
Impact on image/reputation
Level of own investment
Level of independence
Willingness to cooperate
Diversification opportunity
Potential investment revenue
Impact on competitors
Possibility of leveraging a strategic alliance
I.P. considerations
Impact on future growth and profitability

Annex B
(informative)

Tools and methods for partner selection

B.1 Augmented partner selection decision matrix

A matrix cross references the selection criteria against each partner (see 6.3) with a weight assigned to indicate the scoring for the partner/criteria combination. The criteria may be augmented with the pros and cons identified in Table A.3.

The following matrix (see Table B.1) illustrates one way to prioritize criteria and score potential partners, using the management decision tools that are listed below the table.

Guidelines to using the technique: limit number of criteria, limit number of partners, clear scoring mechanisms, and choose a method to highlight low and high scores, such as the RAG system. The **RAG system** is a project management method of rating for issues or status reports, based on Red, Amber (yellow), and Green colors used in a traffic light rating system.

Table B.1 — Selection decision matrix

	Potential partner A	Potential partner B	……	Potential partner X
Criteria and score				
Criteria and score				
….				
Total score				

Weighting is a multi-criteria decision-making tool that allocates a weight to each criterion in order to express the relative priority of each criterion. In a table or matrix with one column per option and one line per criteria, a performance score is given for each option/criterion combination. Those scores are then multiplied by the corresponding weight for each criterion before being added to obtain a total score for each option. This total provides an indication of the relative performance of each option, with the obvious understanding that it is considerably influenced by the choice of weight for each criterion.

Multivariate Data Analysis is defined as any statistical technique to analyze information stored in database tables, containing rows and columns. The Multivariate Analyses allow one to examine the relation between two variables (options) while simultaneously controlling for how each of these may be influenced by other variables. See Reference [5].

Score Cards is a strategic management method to identify and improve internal business processes or functions, according to the resultant, external outcomes. The outcomes are measured against, pre-established performance metrics that are used to measure and provide feedback to the organization. This tool can be used for the gap analysis (see Annex A) and in B.1 can assist to prioritize criteria used for Weighting.

Annex C
(informative)

Tools and methods for partner alignment

In order to establish a common understanding, it is recommended the alignment of the parties is recorded in the form of a memorandum of understanding or a letter of intent. The following contains the suggested content that may aid alignment and should be documented.

a) The customer benefits:

- what is the value proposition for the customer(s);
- who will benefit;
- what problem, pain, need and desire will be addressed by the innovation;
- what will differentiate this value proposition from alternative options available to the customer. Does the partnership affect:
  - competitive positioning;
  - the organizational knowledge, competence and asset gaps that should be reduced;
  - the mission, objectives, strategy and brand essence of each partner.

b) The factors that can influence the inputs required, include:

- the measurable results (see Annex E);
- the benefits to the partners or benefits derived by the partners;
- the effort to obtain and protect them (competence, capabilities and resources, etc.);
- the agreed upon terms in relation to termination of the innovation partnership agreement and dispute resolution where unforeseen circumstances arise;
- the economic model that will be used for generating the necessary resources;
- the protection and exploitation strategy.

c) The factors that can influence the outcome of the innovation partnership, include:

- the balance between risks and opportunities;
- the critical success factors;
- the consequences and collateral effects of the partnership on the partners and on relevant interested parties;
- exploitation barriers (e.g. barriers to entry and suggested tactical moves to overcome them);
- environmental and societal impact;
- termination strategy and exist consequences.

d) The factors that relate to the action plan, include:

- what will be done;

— what resources will be required;

— who will be responsible;

— when it will be completed;

— stakeholder resistance to timeliness, strategy to reduce and effect of those strategies.

Annex D
(informative)

Tools and methods for interaction between partners: sample innovation partnership agreement

D.1 Innovation partnership agreement

The following clauses guide the development of key parameters that should be included in an innovation partnership agreement, based on the partnership alignment parameters (see Clause 7) to govern the interaction of the partners throughout the partnership.

D.1.1 Confidentiality

The policies and processes that will be used by each partner to maintain confidentiality should be defined. If a Non-Disclosure Agreement (NDA) has been signed, the NDA should be taken into account and included in the present clause.

It should also set out the decision-making process for publishing (or not publishing) the results. In case the partners decide to publish them, it should be considered when to do it, to what extent, by whom and how.

D.1.2 Program and objectives of the innovation partnership

This part should clarify the innovation partnership and its objectives in general terms.

D.1.3 Implementation of the innovation partnership

Each partner's responsibilities, tasks and contributions should be outlined. It should detail the innovation partnership planning and milestones.

D.1.4 Management

This part should define the guiding principles on organizing the innovation partnership.

D.1.4.1 Organization

Top management should demonstrate leadership and commitment with respect to value realization (reference ISO 56002:—[2)], 5.1.2).

Even if it does not specifically address innovation partnership, ISO 21500, which provides guidance and best practice for project management, could be used as a source of inspiration.

Appropriate leadership and access to networks are critical for effective partnership. Management of the innovation partnership should be regarded as an activity and integral part by all team members. All members should be tied into planning, control and learning by networking and synchronizing sub-plans and by promoting a common understanding of overall planning.

Tacit knowledge needs a special emphasis in innovation partnership. Tacit knowledge turns explicit by discussing and asking questions of those who know the specific problems of each area.

Although these factors are often beyond the formal agreement, they should still be addressed. One of the purposes of Clause 7 and Annex C is to make tacit understanding and knowledge more explicit.

2) Under preparation. Stage at the time of publication ISO/DIS 56002:2019.

D.1.4.2 Governance

To avoid misunderstandings and possible conflicts, partners should not only agree on the content of the innovation partnership but also on how they interact.

a) Any form of collaboration requires a clear agreement on its governance:

   — roles (who does what);

   — responsibilities (for what each party will be held accountable);

   — liabilities / obligations (in addition to resources mentioned in D.1.4.4);

   — rights of the parties (what each party is entitled to receive from the collaboration);

   — intellectual asset management;

   — decision-making processes and bodies (boards, committees, forums, mandates, etc.);

   — compliance, such as those recommended by ISO 19600 and ISO 37001.

b) Issues to be addressed could include:

   — the decision-making process: strategic fit, considering consensus or majority rule;

   — who leads the innovation partnership and what decision-making power each leader has;

   — what happens if one partner does not deliver what it is supposed to deliver in due time;

   — what happens if one partner does not allocate the resources it was supposed to;

   — how to avoid any partner's agenda and priority changes affecting the original objectives and those of other partners;

   — the degree of flexibility for changing original objectives;

   — the governing rules within the joint innovation partnership team (time, transparency, loyalty, level of accountability, etc.);

   — the mechanism for obtaining budget and people;

   — the monitoring mechanism (including reports and steering committee meetings).

D.1.4.3 Continual improvement

The partners should establish an approach to maintain a focus on continual improvement throughout the relationship.

This can include:

— improvement processes utilizing monitoring, measurement, analysis and evaluation criteria presented in Annex E, to identify areas of interaction which may result in process improvement, associated with the partnership engagement and on creating value-added results;

— creating added value: as the innovation process progresses the parties may identify additional areas for development which could be incorporated into the scope;

— exploitation of innovation: the partners should continuously evaluate opportunities for exploiting their discoveries;

— lessons learned.

D.1.4.4 Funding and resources

Define the innovation partnership's global resources that should be allocated to the innovation partnership and who commits to provide them. It should also clarify how a possible future increase in necessary resources (i.e. anticipating an increase of cost or duration of the innovation partnership) will be handled and the need to possibly attract new partners.

D.1.4.5 Roles, responsibilities and powers of each board

The governance may include a strategic board and an operational board.

The strategic board should be composed of CEO's or top managers of each partner, and should take decisions on issues such as:

— new alliances and joint ventures;

— nomination of managers of the innovation partnership;

— allocation of resources;

— exit from the innovation partnership.

The operational board should be composed of innovation partnership leaders, and should take technical decisions, for example:

— modification of milestones;

— implementation of activities;

— monitoring the innovation partnership team and the activities carried out;

— information to strategic board.

Each board should meet periodically to review important issues and verify that the governance is still relevant.

D.1.5 Intellectual assets

In an innovation partnership, the participants create value by applying their existing knowledge and developing new knowledge to provide a solution to an objective problem or problems. Therefore, to manage an innovation partnership program and capture the value created, it is necessary to recognize these inputs and outputs.

A key role of intellectual asset management (IAM) is to establish and maintain the legal bases of the intellectual assets used in and generated by the innovation program. It is relevant throughout all program phases, however, that the role can vary from one phase to another, as outlined below.

In innovation partnership planning and negotiation phase, the key activities of intellectual asset management are to secure and evaluate background intellectual assets, negotiate intellectual asset terms of the collaboration agreement and/or a separate Intellectual Asset agreement if appropriate, etc.

Throughout the innovation partnership program, IAM processes are employed to control the restricted use of background intellectual assets as well as identifying and securing new intellectual assets (foreground and side-ground) as they are created. The key activities include:

— monitoring and recording development results and data;

— maintaining confidentiality e.g. with the use of non-disclosure agreements;

— implementing agreed dissemination and publication protocols;

— tracking and tracing the contributions of each partner to the creation of intellectual assets;

— assigning ownership and inventor/researcher rights;

— attribution of inventorship, authorship and moral rights;

— managing subcontractor interactions including assignment of intellectual asset rights;

— easing the process of sharing proprietary materials, data, knowledge etc.;

— reviewing, scheduling and managing the Intellectual Asset Management processes;

— protecting intellectual assets in a timely manner;

— minimizing scope for conflict.

As the innovation partnership approaches completion and exploitation options are under consideration, there will still be a role for certain IAM processes at this point to facilitate efficient exploitation of results, which include:

— enabling potential exploitation;

— reducing the due diligence burden;

— simplifying license negotiations;

— structuring intellectual asset assignments;

— clarifying severable and non-severable background, foreground and side-ground intellectual assets;

— assigning roles and responsibility for ongoing intellectual asset management, prosecution and enforcement;

— resolving conflict by arbitration and mediation where possible.

In any case, intellectual asset management requirements should be discussed as early as possible with partners.

It is not always possible to prescribe a definitive exploitation plan at the time of signing the innovation partnership agreement. However, it can be useful to outline a number of exploitation options that can be considered including: Which partners can/will exploit the results (separately or jointly) and how:

— territories and applications of interest to each partner;

— joint ventures;

— licensing rights;

— possible cross-licensing options;

— publication of results.

D.1.6 Liabilities, indemnities and warranties

It should be agreed to what extent a partner should endorse the damages caused to another partner(s). The parties should agree to what extent, if any, each partner will provide indemnities and warranties to other parties and what liabilities apply. Each party should seek professional legal advice in this regard and the agreed terms should be formalized in the innovation agreement.

D.1.7 Termination

At the beginning of an innovation partnership, a termination strategy helps to define the parameters of engagement such as milestones, timeframes, deliverables, breach of contract, insolvency, and disengagement options such as dispute resolution methods and the performance measures required to meet the objectives of the parties in the collaboration, and other conditions that could trigger

termination. During the life of the relationship, it ensures that knowledge sharing is not constrained by lack of clarity. By clearly defining the rules of termination, organizations can help to engender a culture of openness and honesty, which recognizes changes over time. At the end of any specific collaborative arrangement, it ensures the strategy is mutually respectful and considers potential future re-engagement.

Annex E
(informative)

Performance evaluation criteria

E.1 Monitoring, measurement, analysis, and evaluation

The organization should determine:

a) what needs to be monitored and measured, including which innovation performance indicators are to be used,

b) the tools and methods for monitoring, measurement, analysis and evaluation, as applicable to ensure valid results,

c) when and how the monitoring and measuring should be performed,

d) when the results from monitoring and measurement should be analyzed and evaluated, and

e) who will be responsible.

The set of innovation performance indicators, quantitative or qualitative, can include a balance of:

a) input-related indicators, e.g. number of ideas, number of innovation initiatives value-creation potential of ideas, new sources of knowledge, new insights, resources, and competence, leading indicators.

b) throughput-related indicators, e.g. speed of development, number or ratio of employees, managers or users involved or trained, effectiveness of collaboration and relationships, new tools and methods adopted, time to profit, time to market, engagement level, and brand awareness.

c) output-related indicators, e.g. number or ratio of ideas implemented, return on innovation investment, revenue and profit growth, market share, ease of use, speed of adoption by users, user satisfaction, rate of innovation diffusion, organizational renewal and transformation, social and sustainability benefits, cost savings, rate of learning, intellectual property, leading indicators, lagging indicators, new users, user satisfaction, and image.

Innovation performance indicators can be applied at each step of the framework to develop, manage and continually improve the partnership. The indicators can be used to measure interaction at each step, as well as on the realized results.

Organizations can also use base-comparisons with other organizations when monitoring and measuring.

Bibliography

[1] ISO 19600, *Compliance management systems — Guidelines*

[2] ISO 21500, *Guidance on project management*

[3] ISO 37001, *Anti-bribery management systems — Requirements with guidance for use*

[4] ISO 44001, *Collaborative business relationship management systems — Requirements and framework*

[5] Vogt P. W. 1999). *Dictionary of statistics & methodology.* Thousand Oaks: SAGE.

[6] Pettigrew A, Thomas H, Whittington R 2002). *Handbook of strategy and management (Chapter 2).* London: SAGE.

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