ANNUAL REPORT 2022

NSAI TECHNICAL COMMITTEE NSAI/TC 45 – INNOVATION MANAGEMENT

NSAI

Contents

1 Chairman's Statement

What an eventful and fast-moving year, we had Government Policy reports from IMPACT 2030, May 2022 which called out ISO 56002 as a reference for Innovation Management and then later the Government's White Paper for Enterprise 2022 - 2030 calling out innovation and standards as key foundation enablers for SMEs and certification.

On the TC 45 Team aspect, all I can say is the energy and passion around the whole topic of innovation keeps our TC 45 Team dynamic as we all travel on this evolving journey and realizing the value Innovation has to bring to all types and sizes on organizations – so thank you all.

We have continued to add new members to support on work on inputting on the suite of Innovation guides and standards. We additionally had a major change where Paul Killeen left to take up a European Post and Barry Cox seamlessly took over the tasks as our Standards Officer for TC45 and bring his vast knowledge and guidance to the TC 45 Team.

On the ISO Innovation Management System series of guide standards, we actively responded on ISO/CD 56008 -Tools and methods for innovation operation measurements and ISO/FDIS 56007 Idea Management. Then our hard-Working Group 1 with three Task Teams, which will be detailed in the main report and who I want to thank for all the time, energy given free to ensure we all get a good outcome for Ireland Inc from all these guides and supporting series of expert guides for all organizations to use. One key member also has taken on a lead role commencing a scoping and research exercise for an Innovation Competency Framework, again our thanks to all involved.

The drafting of the ISO 56001 Innovation Management System 'audit' standard is now at CD stage and a sub team from TC45 has worked on developing a set of comments and recommendation to ensure this standard is going in the right direction and will be useful and usable by SMEs, Researchers and all organizations based in Ireland.

2 Introduction

Standards on innovation management enable International and Irish organisations, particularly SMEs, to share best practices across various aspects of innovation management. This will facilitate collaboration, and also develop the capability of Irish-based companies to innovate and to bring new innovations successfully to competitive global markets.

ISO TC 279 is developing Innovation Management guidance standards

Innovation is key to global competitiveness and human and technological progress over the coming decades, particularly in the context of the required twin Green and Digital transformations. International management system standards on innovation will help break down the existing cultural, structural and organisational obstacles within and between organisations. These ISO Innovation standards will provide best practices to support the implementation of innovation policies and best practices in SMEs, public institutions, universities, research & innovation centres and non-profit organisations.

The OCED recognises the important of polices and processes that promote pro-innovation forms of workplace organisation for stimulating SME innovation. The OECD, in its recent report on SME and entrepreneurship makes reference to the fact that a firm's workplace organisation model

can affect its ability to stimulate ideas and facilitate the absorption of knowledge from research organisations [[1]].

An organisation 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 organisation to determine its innovation, strategy, policy and objectives, and to establish the support and processes needed to achieve the intended outcomes.

An innovation management system provides a systemic approach to integrate innovation into all the layers of the organizations in order to seize and create opportunities for the development of new solutions, systems, products and services. The first International Standard for such is ISO 56002:2019.

To achieve this goal, the work focuses on developing a management system for innovation, with supporting 'Tools & Methods'. The ISO 56000 Series of Innovation Management guidance standards address: terminology, tools and methods such as open innovation partnerships, design innovation, strategic intelligence, intellectual property management, creativity/idea management; measurement of innovation; and also, the assessment of innovation management practices in all types of organisations.

ISO 56002:2019 is based on the principles of innovation management. It schematically represents how the structure of the innovation management system should be viewed, relating

it to the different clauses of the standard and the Plan Do Check Act approach. This standard also refers to the need for an appropriate structure to manage the risks and uncertainties associated with the organisation's market, especially in the earliest stages of its creative processes.

The structure that is adopted also allows for an alignment with other international management system standards, such as ISO 9001:2015 and ISO 14001:2015[2], enabling a more effective integration, development, implementation, maintenance and continuous improvement of the innovation management system. The adoption of this standard, together with the innovation tools, has the potential to facilitate and boost the innovation process of any company by providing principles that allow it to structure and organise its internal innovation processes, maximise innovation efforts and harness the knowledge and creativity of its employees and those with whom it collaborates externally. It also makes possible an integration with other existing management systems [3].

3 Scope of TC

The scope of this Committee is standardization of terminology tools and methods and interactions between relevant parties to enable innovation.

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[1] OECD, "OECD SME and Entrepreneurship Papers No 17", 2019. [Online]. Available on: https://www.oecd-ilibrary.org/economics/oecd-sme-and-entrepreneurship-papers_f493861e-en [Accessed on: 10th January,2023

[2] International Organization for Standardization, "Environmental Management Systems—Requirements with Guidance for Use "(ISO 14001:2015)",. 2021 [Online]. Available online: https://www.iso.org/standard/60857.html [Accessed on 10 January 2023]

[3] Idris, M.C.; Durmusoglu, A. "Innovation management systems and standards: A systematic literature review and guidance for future research. Sustainability,"2021. [Online]. Available on: https://www.mdpi.com/2071-1050/13/15/8151 [Accessed 24th January 2023]

This committee does not produce indigenous Irish Standards as the national committee is focussed on participating in the development of International Standards at an ISO and European level.

The committee mirrors the following European & international committees:

Committee Name	Committee Title
CEN/TC 389	Innovation Management
ISO/TC 279	Innovation Management
ISO/TC 279/WG 1	Innovation Management System
ISO/TC 279/WG 2	Terminology, Terms and Definitions
ISO/TC 261/WG 3	Tools and Methods

4 Structure and Membership

4.1 Structure

The table below illustrate the latest official structure of the ISO TC 279 Committee, which is mapped directly by NSAI TC45

Structure	Liaisons

Reference ↑	Title
ISO/TC 279/STTF ⓘ	Spanish translation task force
ISO/TC 279/TF 2 ⓘ	Comments handling creation CAG
ISO/TC 279/WG 1 ⓘ	Innovation management system
ISO/TC 279/WG 2 ⓘ	Terminology, terms and definitions
ISO/TC 279/WG 3 ⓘ	Tools and methods

4.2 Members

Seven new members joined NSAI TC45 during 2022. The list below are the member organisations for the year 2022:

Organisation	Committee Role
Dolmen Design & Innovation (Managing Director, Dolmen)	Chair
Abcon Ireland	Member
Ariadne Consultants	Member
Bord Iascaigh Mhara (BIM)	Member
Centre for Excellence in Universal Design, National Disability Authority	Member
Chronos Consulting	Member
Citi Innovation Lab Dublin (Head of Innovation Design)	Member
Commercialisation Manager CeADAR	Member
CTO Neurent Medical	Member
DCU Business School (Assistant Professor)	Member
DPER Innovation Team	Member
DPER, Innovation Team	Member
Dromone Engineering	Observer
Enterprise Ireland (Intellectual Property Manager, EI)	Member
Enterprise Ireland	Member
Enterprise Ireland - LEO Policy & Co-ordination Unit	Member
Ervia	Member
Evoquent IP	Member

Hanna Moore + Curley, IP Attorneys (European Patent Attorney, IP Strategy lead)	Member
ICT Skillnet & Technology Ireland Innovation Forum (Manager)	Member
IDA	Member
IDA (Innovation team)	Member
IDA Ireland (Head of Technology, Consumer & Business Services)	Member
Innovate XL Innovation Consultant	Member
Innovation Consultant	Member
Innovation Consultant	Member
Innovation Consultant GBI Ltd.	Member
Innovation Consultant	Observer
Innovation Delivery Ltd. Innovation Consultant	Member
IRDG	Observer
J&J Depuy Synthes	Member
Atlantic Technological University	Member
Mergon	Member
NACEC - National Association of Community Enterprise Centres	Member
NACEC - National Hub Network Manager NOTE: NACEC recently rebranded as CEAI - Community Enterprise Association Ireland	Member
National College of Ireland / NCI (Program Director Innovation & Commercialisation)	Member
NSAI - Market and Regulatory Support	Member
NSAI Medical Devices (Industry Engagement)	Member
NuaWorks	Member
NUIG	Member
Origin Chain Networks	Member
SFA (Small Firms Association, Ibec)	Member
SFI Challenges Research Manager	Member
SFI Confirm	Member
SFI Confirm – Smart Manufacturing RDI Centre	Member
Sustainability Works (Business & Innovation Consultant)	Member
TU Dublin	Member
TU Dublin	Member
NSAI	Committee Manager

4.3 Liaison Organisations, ISO TC 279

ORGANIZATIONS IN LIAISON (CATEGORY A AND B)

ACRONYM ↓	TITLE ↓	CATEGORY ↓
CERN	European Organization for Nuclear Research	A
EPO	European Patent Office	A
FICPI	Fédération Internationale des Conseils en Propriété Intellectuelle	A
ISPIM	International Society for Professional Innovation Management	A
LESI	Licensing Executives Society International	A
OECD	Organisation for Economic Co-operation and Development, OECD	A
The World Bank	The World Bank Group	A
UNDP	United Nations Development Programme	B
UNESCO	United Nations Educational, Scientific and Cultural Organization	A
UNIDO	United Nations Industrial Development Organization	A
WIPO	World Intellectual Property Organization	A
WTO	World Trade Organization	A

As illustrated above, during 2021 ISO TC 279 had active liaison relationships with key international players in Innovation Management, including OECD, EPO, WIPO, UNESCO, UNIDO, LESI, World Bank and others who are actively following and participating in the ISO TC279 work programme. For example, the future revised version of the influential and highly cited OECD Oslo Manual on Innovation[4] will be aligned with the outputs from ISO TC279.

Many countries (48 Participating and 19 Observing members during 2021) are heavily involved in ISO TC 279 work programme, such that ISO believe the outputs from ISO TC 279 could well be the basis for 'the next ISO 9000 series' of key International management system standards, to support the systematic management of innovation systems in organisations of all types and sizes globally.

4.4 Liaison Organisations, ISO TC 279

The significant work being undertaken of ISO/TC 279 is recognised by its peers, through liaisons to other ISO technical committees. These liaison committees are a key aspect of the committee's work, that ensures alignment and consistency of standards across the whole ISO portfolio. See below for a full list of liaison committees to ISO/TC 279.

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[4]OECD, "Oslo Manual 2018 Guidelines for collecting , Reporting and Using data on Innovation",2018, [Online]. Available on: https://www.oecd.org/sti/inno/oslo-manual-2018-info.pdf .[Accessed on 8th February 2023]

Reference ↑	Title
ISO/IEC JTC 1/SC 7	Software and systems engineering
ISO/IEC JTC 1/SC 40	IT service management and IT governance
ISO/TC 176/SC 1	Concepts and terminology
ISO/TC 176/SC 2	Quality systems
ISO/TC 176/SC 3	Supporting technologies
ISO/TC 266	Biomimetics
ISO/TC 268	Sustainable cities and communities
ISO/TC 286	Collaborative business relationship management
ISO/TC 307	Blockchain and distributed ledger technologies
ISO/TC 312	Excellence in service
ISO/TC 323	Circular economy

5 Summary of 2022 Activities

5.1 National

5.1.1 Meetings

Some of the committee meetings were conducted via web-conferencing meeting facilities bearing in mind the COVID-19 Pandemic, as well as to reduce the burden and environmental impact of travel for members.

Committee members attended the following national meetings as follows:

Meeting No.	Date	Minutes Reference ** optional**
1	17th February 2022	N 370
2	09th June 2022	N 377
3	8th September 2022	N 404
4	8th December 2022	N 440

5.1.2 National Work

The Standards Committees does not draft any National Standards as it is focussed on the development of international standards. All of the ISO/TC 279 Standards adopted as European Standards will be published as Irish Standards.

5.2 International/Regional

5.2.1 Meetings

Committee members attended international meetings as follows:

Committee Name	Location	Date	No. of Attendees
ISO/TC 279	Online	16th June 2022	0
ISO/TC 279	Hybrid	17th October	2

COVID-19 disrupted Irish delegates travelling to the ISO/TC 279 meetings in 2022.

5.2.2 International/Regional Work

Ireland is committed to following and inputting into the development of the ISO Standards. The National Committee reviews, comments and votes on each of the public comment drafts circulated by ISO/TC 279.

Ireland has several experts participating in the Working Groups that are drafting the Standards.

Irish experts collaborated with their colleagues in UNIDO and ISO on the publication of an ISO-UNIDO Innovation Management Handbook. This practical guide expands upon the standard ISO 56002:2019, Innovation management — Innovation management system — Guidance, and aims at providing guidance for organizations wanting to innovate. In addition to the Handbook, UNIDO and ISO presented an online course on Innovation Management that they developed, which is currently available in both English and Spanish on UNIDO's Knowledge Hub, found at the following LINK.

5.2.3 International/Regional Standards Reviewed

ISO/CD 56001, *Innovation management — Innovation management system — Requirements*

ISO/DIS 56007, *Innovation management — Tools and methods for idea management — Guidance*

prEN ISO 56007, *Innovation management - Tools and methods for idea management - Guidance (ISO/DIS 56007:2022)*

ISO/CD 56008, *Innovation management — tools and methods for innovation operation measurements — Guidance*

5.2.4 International/Regional Voting Results

The committee voted on eight out of the 10 international votes in 2022.

5.3 Policy /Update

On the 18th May 2022 the Minister for Further and Higher Education, Research, innovation and Science Simon Harris launched *Impact 2030: Irelands Research and Innovation Strategy*. The core purpose of the new national strategy is to ensure that Ireland's investment in research and innovation makes as big a difference as possible to as many people as possible [5].

Minister Harris said:

"***The Irish research and innovation system is a strategic national asset that – through the whole-of-government approach taken by Impact 2030 – will deliver solutions and will create opportunities to address these grand challenges, building on and continuing its very successful role in Ireland's economic performance and resilience to date [6].***"

This National strategy which focuses on delivering system-wide impact that will facilitate and add value to the activities of national R&I performers and funders across five pillars, recognises standards development as an integral part of a competitive national enterprise R&I ecosystem.

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[5] Government of Ireland, "Impact 2030 – Ireland's Research and Innovation Strategy", 2022.[Online]. https://assets.gov.ie/224616/5f34f71e-e13e-404b-8685-4113428b3390.pdf [Accessed on: 26th January,2023]

[6] Government of Ireland, " Minister Harris launches Impact 2030: Ireland's Research and Innovation Strategy", 2022.[Online].https://www.gov.ie/en/press-release/18f45-minister-harris-launches-impact-2030-irelands-new-research-and-innovation-strategy/ [Accessed on: 26th January,2023]

Indeed, the strategy makes reference to the ISO 56000 series supporting innovation management, especially in SMEs in Ireland.

Under pillar 3.6 " Wider Business Environment" which is to deliver a competitive wider business ecosystem in standards, intellectual property, finance and tax measures. NSAI is committed to supporting its government department the Department of Enterprise Trade and Employment.

NSAI will deliver strategic objectives aligned to its own Strategic Plan for 2022 -2026 " Innovating to shape a safer, better, and sustainable future [7]". These flagship initiatives will enhance enterprise engagement on standards development and use for innovation and grow the number of firms with Innovation Management Certification.

NSAI will continue the work to grow the NSAI Innovation committee and actively contribute to the development of the international standard for Innovation Management system – requirements and enhance the knowledge valorisation of the ISO 56000 series.

Furthermore in 2022 NSAI initiatives regarding SME engagement continued to be examined and improved as part of the NSAI Strategic Plan, as new standards are currently under development to help strengthen and enable SMEs in their innovation management journey.

5.4 Publications

National Standards are not produced by this committee as International Standards developed in this area will be published as European Standards and adopted as Irish Standards.

6 Work programme for 2023 onwards

6.1 ISO/TC 279 – Innovation Management

ISO/CD 56001, *Innovation management — Innovation management system — Requirements*

ISO/FDIS 56007, *Innovation management system — Tools and methods for managing opportunities and ideas — Guidance*

ISO/DIS 56008, *Innovation management — Tools and methods for innovation operation measurements — Guidance*

ISO/CD TS 56010, *Innovation management - Illustrative examples of ISO 56000*

Quality-Control Data

6.2 CEN/TC 389 – Innovation Management

prEN ISO 56000 rev, *Innovation management - Fundamentals and vocabulary (ISO 56000:2020)*

prEN ISO 56001, *Innovation management — Innovation management system — Requirements (ISO/AWI 56001)*

prEN ISO 56007, *Innovation management - Tools and methods for idea management - Guidance (ISO/DIS 56007:2022)*

prEN ISO 56008, *Innovation management - tools and methods for innovation operation measurements - Guidance (ISO/AWI 56008)*

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[7] NSAI, " NSAI Strategic Plan 2022-2026 [Online]. https://www.nsai.ie/images/uploads/general/NSAI-Strategic_Plan_2022-2026.pdf/ [Accessed on: 26th January,2023]

7 Additional Information

Enterprise Ireland Innovation Scorecard based on ISO 56000

NSAI Innovation committee member Mr David Keeley a Senior Executive with Enterprise Ireland (EI), the government organisation responsible for the development and growth and competitiveness of Irish enterprises in world markets, has been instrumental in ensuring that ISO 56000 is used to assist SMEs through his work with EI.

Mr Keeley advised EI on the use of ISO 56000 Innovation Management Series as its framework for improving the innovation capabilities and performance of all Irish and multinational companies in Ireland to this end. EI also uses this same framework to promote innovation excellence throughout Europe.

Irish businesses are supported through an online Innovation scorecard that is currently utilised as an innovation tool for SMEs, MNCs and public sector organisations. The scorecard is based on the new ISO 56002 Innovation Management System guidance standard.

Based on answers to a questionnaire, the tool automatically generates a rich PDF report that includes a very intuitive heatmap which helps users to quickly understand their overall innovation position and identify key areas of strength and weakness. Users can also identify relevant development supports and understand the most effective next steps to improve their innovation management capability and performance.

The data generated by the toolset can help policy makers better address the innovation development needs of the SME, MNC and public service sectors in Ireland and across Europe.

To date the tool has been used by 172 SMEs, 88 MNCs and 31 public service organisations.

Due to the success of the innovation scorecard, Enterprise Ireland has expanded its programme to provide SMEs with an Innovation Diagnostic Tool service, to help identify weaknesses in their innovation management capacity. The innovation diagnostic is a facilitated collaborative group exercise. It is a more comprehensive and in-depth assessment that the innovation scorecard resulting in a more detailed and insightful analysis of where there are opportunities to develop organisation innovation capability.

Innovation Diagnostic tools are utilised, as part of the process, to diagnose gaps within their innovation capacity and provides tools to help SMEs overcome them. This service avails of the international best practices on innovation management activities, set out in the ISO 56000 Series of guidance standards on Innovation Management.

Enterprise Ireland's Innovation Diagnostic tools focus on five of the key groups of innovation management elements aligned with the ISO 56000 standard series:

- Leadership & Planning; Organisation Context; Operation; Supports; Evaluation & Improvement.

These elements and their interactions are needed for an organisation to establish its innovation capabilities for the purpose of effectively and sustainably achieving innovations. This exercise and output report allows business leaders to take a holistic view of the areas in their organisations. Leaders can understand where the opportunities are for improvement in developing their innovation capabilities based on the 5 key element groups. For more information you can download the information on the Innovation Diagnostic tool for SMEs, click on the following LINK.

NSAI recognised Mr Keeley's significant contribution by awarding him an NSAI Innovation Award at the NSAI Annual Standards Forum on the 13th of October 2022. The award is given in acknowledgement of exceptional dedication to standards development.

Government Policy: Impact 2030 & SME & Entrepreneurship Growth Plan

A particular focus of the NSAI TC45 team during 2022 will be continued inputs into the development of the ISO draft standards listed above, and related national roll-out and promotion of these and other published ISO 56000 series standards. Such a broad and ongoing national roll-out will support and enable NSAI actions under Impact 2030 (Ireland's Research and Innovation Strategy, is to maximise the impact of research and innovation on multiple national priorities.) and the national vision therein of positioning Ireland as a 'Global Innovation Leader'.

The widespread introduction of systematic - versus ad-hoc - innovation management practices as outlined in the ISO 56000 series will also help indigenous Irish SMEs to deliver much needed improvements in productivity and international competitiveness and exports – as outlined in the OECD report on SME Productivity in Ireland published in 2019 [8], and the directly related and current national SME & Entrepreneurship Growth Plan being led by the Department of Enterprise Trade & Employment (DETE).

The Taskforce's Growth Plan [9]sets out a wide range of recommendations with long-term strategic relevance for SME and entrepreneurs, including measures to assist companies to start up, scale up, enhance their digital capabilities, and increase export activity. These recommendations are being currently taken forward by a Ministerial-led SME and Entrepreneurship Implementation Group.

NSAI was assigned the following action under recommendation 2.4 Support and recognise a broader understanding of innovation to incentivise increased investment in innovation:

Action 2.4.2: Promote the use of the ISO 56000 Innovation Management Standards by SMEs through awareness building and education to encourage a wider view and understanding of innovation and grow innovation capability and culture within SMEs

These actions supporting recommendations are being taken forward by the taskforce. In December 2022 government noted the significant progress made on the 10 priorities, the intention to continue the work of the Taskforce into 2023 and the intention to publish a progress report on the priority areas [10]. This progress report is available at SME and Entrepreneurship Taskforce 2022: Priority Actions Progress Report.

NSAI TC45 will continue to work closely with our international community of experts & colleagues within ISO TC279 to support and enable the above strategy and actions.

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8 OECD, "OECD SME and Entrepreneurship Papers No 17", 2019. [Online]. Available on: https://www.oecd-ilibrary.org/economics/oecd-sme-and-entrepreneurship-papers_f493861e-en [Accessed on: 10th January,2023]

9 DETE, " Report of the SME Taskforce: National SME and Entrepreneurship Growth Plan", 2021. [Online]. Available on: https://assets.gov.ie/120136/27ff2549-d338-4507-bf16-1305a7f8c692.pdf [Accessed on: 30th January,2023

10 DETE, " SME and Entrepreneurship Taskforce 2022: Priority Actions Progress Report", 2022. [Online]. Available on: https://assets.gov.ie/242672/d7385dca-6227-4a65-9ffb-6de4c8bdf4be.pdf [Accessed on: 30th January,2023