



NSAI

ANNUAL REPORT 2017

NSAI TECHNICAL COMMITTEES
INNOVATION MANAGEMENT – NSAI TC45

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1 Chairman's Statement

I am happy to present this annual report on behalf of the NSAI TC45 committee.

Today innovation is key to secure the profitable and sustainable growth of companies, and for non-profit organisations to continuously deliver value to their stakeholders.

Innovation, if successfully and systematically managed - as proposed via NSAI TC45 and the evolving ISO Innovation Management series of standards that we are actively engaged in helping to develop - creates high added value and promotes the development and profitable growth of businesses and related jobs in the 'knowledge economy'.

Innovation occurs, however, in a complex context of increasing globalisation that challenges an organisation's market position more quickly than ever before. Hence, organizations need to innovate constantly in order to maintain their competitiveness in the short and longer term in a sustainable way. Irish companies need a clear innovation strategy; an innovation culture that translates strategy into effective and efficient innovation processes that in turn can enable an organisation to systematically deliver innovative new products, services and business models that can win in competitive global markets.

In the context of our work in NSAI TC45, innovation is interpreted in its broadest sense. It includes the successful implementation of a new or significantly improved product (good or service), process, business model or new organizational model – with the goal of generating economic and/or social value for organisations and society in general. However, successful management of innovation is still a challenge for many organisations, particularly SMEs that are limited in terms of time and resources. Systematic innovation management, as proposed by NSAI TC45 and the series of guidance standards that we are involved in developing with our International ISO and CEN partners, will help Irish organisations on their innovation journeys, and will help Ireland in meeting its goal of becoming a 'Global Innovation Leader'.

Sean McNulty, Chair NSAI TC45

Introduction

Standards on innovation management will allow International and Irish organisations, particularly SMEs, to share their 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.

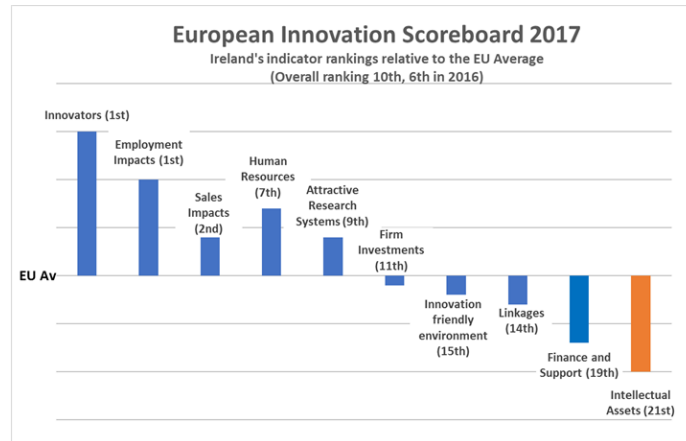
Innovation is key to global competitiveness and human and technological progress over the coming decades. International management system standards on innovation will help break down the existing cultural, structural and organisational obstacles among/between organisations. These standards will provide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

To achieve this goal the work focuses on a management system for innovation. To define this management system, experts will address: terminology, tools and methods such as open innovation, design innovation, strategic intelligence, intellectual property management, creativity management and also assessment of innovation management practices in all types of organisations.

EU & National Innovation Policy

As illustrated in the summary diagram below via Enterprise Ireland¹, while Ireland does relatively well in some aspects of innovation, we are well behind the EU average when it comes to the management of 'intellectual assets' – a key element in systematic innovation management, which is the focus of the work of NSAI TC 45.

¹ *IP Strategy and Innovation*, IP4Business Training. Sept 25, 2017. Joe Doyle – IP Manager Enterprise Ireland & Member of NSAI TC 45.



Source: [European Innovation Scoreboard 2017](#) European Commission

Indeed, based on deliberations within the NSAI TC45 committee, EI now plans to include ‘standards, regulations and related certifications’ as key elements of a firms ‘Intellectual Assets’ that add real market value to innovative firms.

The stated vision of Innovation 2020 – the National strategy for research and innovation – is for Ireland to move from its current position as an ‘innovation follower’ in the current European Innovation Scoreboard, to a ‘Global Innovation Leader’. To help make this vision a reality, a key government strategy within Innovation 2020 is to ‘*promote standards and regulations as a source of competitive advantage*’. In this context, NSAI has been given the following specific Action under Innovation 2020:

“Work with firms to stimulate and support the embedding of standards and regulatory compliance into their R&D (Innovation) processes”

The development and implementation of International standards in systematic (versus ad hoc) Innovation Management within Irish-based companies, particularly SMEs, will help NSAI via NSAI TC45 - working in close collaboration with our Enterprise Ireland colleagues and key national stakeholders - to deliver on this key action for Ireland over the coming years.

2 Scope of TC

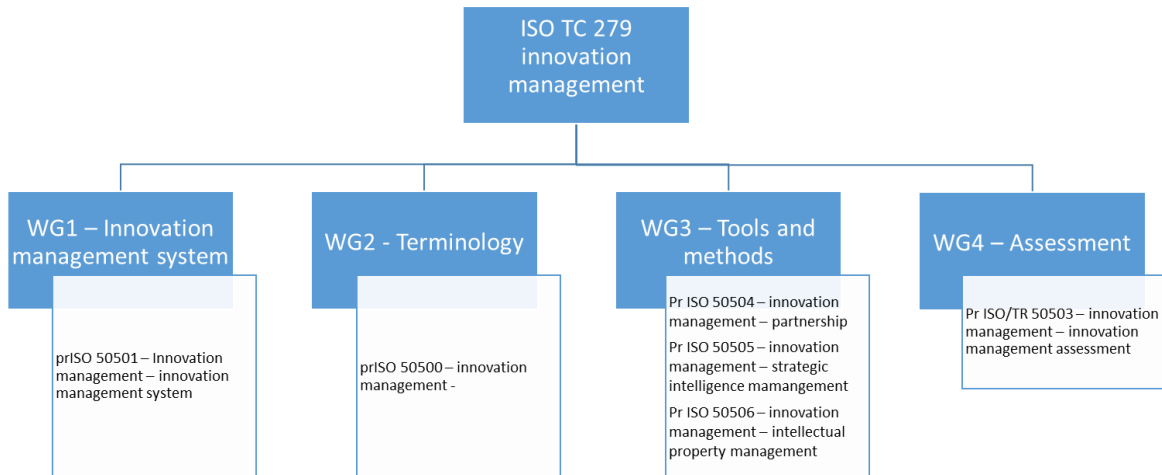
The NSAI TC 45 committee mirrors the following international committees:

Committee Name	Committee Title
CEN/TC 389	<p>Innovation Management.</p> <p>This committee produced the 7-part Technical Specification below:</p> <p>CEN/TS 16555 Parts 1-7</p> <p>Part 1: Innovation management system.</p> <p>Part 2: Strategic intelligence management.</p> <p>Part 3: Innovation thinking.</p> <p>Part 4: Intellectual property management.</p> <p>Part 5: Collaboration management.</p> <p>Part 6: Creativity management.</p> <p>Part 7: Innovation management assessment</p>
ISO/TC 279	<p>Innovation Management.</p> <p>This is now the active international TC on Innovation Management, following on from the initial work of CEN TC 389 outlined above.</p> <p>Refer to section 4 below for details on structure, work programme etc.</p> <p>In summary, the ISO TC 279 working groups are as follows:</p> <ul style="list-style-type: none"> - WG1 “innovation management system” - WG2 “terminology, terms and definitions” - WG3 “tools and methods” - WG4 “assessment”

3 Structure and Membership

3.1 Structure

The Figure below illustrates the structure of the ISO TC 279 Committee, which is mapped directly by NSAI TC45:



3.2 Members

The list below included the NSAI TC 45 members for the year 2017:

Organisation	Name	Role	Notes
Dolmen Design & Innovation	Sean McNulty (Managing Director, Dolmen)	Chair NSAI TC45	Attends International TC meetings e.g. Will be attending ISO TC 279 Plenary & WG meetings in London, March 2018
Enterprise Ireland	Joe Doyle (Intellectual Property Manager, EI)	Member	Attends International TC meetings e.g. Attended ISO TC279 WG3 meetings in Paris Oct 2017, and will be attending ISO TC 279 Plenary & WG meetings in London, March 2018
Ibec Technology Ireland Innovation Forum (TIIF)	Dave Feenan (Manager, TIIF)	Member	Joined as new member in 2017
Bord Na Mona	Hugh Henry (R&D and Innovation Manager)	Member	
Innovation Consultant & Innovation Management Lecturer in Maynooth University MSc programme	David Trevitt	Member	
Waterford Institute of Technology, Rikon Group (Innovation research & consultancy for SME clients)	Dr Pat Lynch	Member	Joined as new member in 2017
Fujitsu	Anthony McCauley (Head of Research and Development)	Member	

Ariadne Consultants	Derek Bridges	Member	
NSAI	Mary White	Member	
Dromone Engineering	William Egenton	Observer	Has attended past International Standards meetings on Innovation Management e.g. CEN TC 389 meetings
InterTrade Ireland (moved to IRDG)	Bernadette McGahon	Member (Observer)	Moved from InterTrade Ireland to IRDG during 2017. Has requested to remain as Observer
Enterprise Ireland	Greg Coyle	Member	
NSAI	Paul Killeen	Technical Secretary NSAI TC45	Since June 2017

New Members, 2017

As alluded to in the table above, 2 new members joined TC45 during 2017

- Dave Feenan - Ibec Technology Ireland Innovation Forum (TIIF)
 - Dave is Manager of Technology Ireland Innovation Forum, which “drives transformational, innovative and impactful collaboration throughout the digital technology cluster by supporting organisations to scale. The Forum is part of Technology Ireland which is an association within Ibec representing the software, digital and ICT / technology companies in Ireland”
- Dr Pat Lynch - Waterford Institute of Technology, Rikon Group
 - Pat leads a research and applied innovation team in the ‘Rikon group’ within WIT - doing extensive work with Irish SMEs, including via many Enterprise Ireland innovation vouchers and EU framework / H2020 projects

3.3 Liaisons, ISO TC 279

Organizations in liaison (Category A and B)			
Acronym	Title		Category
CERN	European Organization for Nuclear Research		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
UNESCO	United Nations Educational, Scientific and Cultural Organization		A
WIPO	World Intellectual Property Organization		A
WTO	World Trade Organization		A

As illustrated above, ISO TC 279 has a number of active (and planned) liaison relationships with key international players in Innovation Management, including OECD, WIPO, UNESCO, LESI, World Bank and others who are actively following the ISO TC279 work programme. For example, per NSAI TC45 secretary discussions with the ISO TC279 secretary and Chair, the future revised version of the influential and highly cited OECD Oslo manual on innovation will be aligned with the outputs from ISO TC279. The Chinese and many other countries (34 Participating and 15 Observing members) are also heavily involved in ISO TC 279 work, such that many believe the outputs from ISO TC 279 could well be the basis for ‘the next ISO 9000 series’ of key International management system standards.

4 Summary of 2017 Activities

4.1 National

4.1.1 Meetings

Committee members attended the following national meetings as follows:

Meeting No.	Date	Notes
1	15-Sept-2017	N183 - Minutes & Actions
2	15-Jan-2018	N186 - Minutes & Actions
3 & 4	July-2017	NSAI TC 45 Chair and Secretary teleconference, followed by face-to-face meeting with ibec 'Technology Ireland Innovation Forum' (TIIF) manager and chair in ibec HQ offices in Dublin re potential collaboration on Innovation Management standards and engagement of ibec Technology Ireland members. Resulted in TIIF manager joining NSAI TC 45 as new member in 2017
5	26-June-2017	NSAI TC 45 Secretary visit to Waterford Institute of Technology, including WIT Rikon centre – leaders in completion of Enterprise Ireland Innovation voucher projects with Irish start-ups and SMEs. Resulted in Dr Pat Lynch of Rikon centre joining NSAI TC45 as new member in 2017.
6	7-Sept-2017	NSAI TC 45 Secretary meeting with past InterTrade Ireland member that moved to IRDG in 2017. Given new role and work commitment, member could not commit to be full member but requested to remain as 'observer' member and support NSAI TC 45 in whatever way possible into future.
7 & 8, 9	14-Sept-2017 November 2017	<ul style="list-style-type: none"> NSAI TC 45 Secretary presented at Enterprise Ireland 'Innovation in Construction' event (on <i>How Standards & Certification Can Help You Win in International Markets</i>) and met with new Enterprise Ireland 'Innovation Manager' to discuss increased NSAI & EI collaboration on Innovation Management Subsequently, NSAI TC 45 Chair had follow-up meeting with new Enterprise Ireland 'Innovation Manager' to discuss increased NSAI & EI collaboration on Innovation Management. Chair also met with IMI lead responsible for redevelopment of the flagship EI 'Innovation for Growth' programme, where the focus will be on development of practical guide and skills around innovation management. Following the above series of meetings, EI and IMI expressed an interest in becoming more engaged with TC45 over coming year
10	4 th Dec-2017	<ul style="list-style-type: none"> NSAI TC 45 Secretary presentation and panel discussion / meeting at Midlands Engineering Cluster on 'Innovation Management for Engineering & Manufacturing Companies', including reference to NSAI TC45 work and related ISO standards.

4.1.2 National Work

See 'Notes' in table above

4.2 International/Regional

4.2.1 Meetings

Committee members attended ISO TC279 meetings as follows:

Committee Name	Location	Date	No. of Attendees
ISO TC 279, Innovation Management <ul style="list-style-type: none"> • WG1 “innovation management system” • WG2 “terminology, terms and definitions” • WG3 “tools and methods” • WG4 “assessment” 	Paris, France	16-20 October 2017	2

4.2.2 International/Regional Work & Standards Reviewed & Voting Results

Ballot on key ISO CD1 50501 (Innovation Management System – Guidance)

NSAI TC 45 members put significant effort into the review and comments in relation to the above key ISO ballot re progression of the central “ISO CD 50501” Committee Draft (on innovation management system – guidance) from the internal committee stage to the external ‘enquiry’ stage as a ‘Draft International Standard’ / DIS.

Members expressed serious concerns that ISO WG1 (and its convenor) had not been taking NSAI TC45 inputs and comments on board over the past 2 years. Specifically members noted that ISO WG1 seemed to have more ignored most of the work and effort over the past years from NSAI TC45 and the various CEN TCs and WGs that developed NSAI SWiFT 1 and CEN / TS 16555, Parts 1-7.

Members also felt the ISO CD 50501 document was so generic and high level that it added little practical value for SMEs trying to practically develop and implement an Innovation Management System (IMS).

Based on the above and after much discussion, the Cahir and all members agreed on final consensus NSAI TC45 comments and vote for submission to ISO TC 279 (as summarised in [N162](#))

- Consensus Vote: **Disapproval with comments**

The following is the key summary comment agreed by all members, and submitted to ISO TC 279 in advance of the Paris meetings in October 2017 per table above in 5.2.1:

ISO is the globally accepted and respected body for the development of standards for use by industry. In order to safeguard this respected position, we passionately believe that the current ISO CD 50501 document lacks credibility and therefore needs a complete change in trajectory and radical re-drafting in order to refocus on the practical implementation of an IMS.

In summary, as representatives of Irish industry, we feel strongly that this ISO CD draft document in its current form is not fit for purpose, and we could not recommend it for use by companies in Ireland as it would not provide any practical value.

Proposed change: complete change in trajectory and radical re-drafting of ISO CD 50501 in order to refocus on the practical implementation of an IMS

Following the TC45 submission of the above vote & comments to ISO TC 279, the NSAI TC45 secretary arranged a teleconference for the NSAI TC45 secretary & chair to discuss the NSAI position and proposal with the ISO TC 279 Chair and Technical Secretary - in relation to TC45 concerns re ISO 50501 CD1, in advance of the planned ISO TC279 Working Group meetings in Paris from 16-20 October 2017.

In advance of the above teleconference with ISO TC 279, the NSAI TC45 secretary & chair prepared a positive and constructive proposal ([N169](#)) suggesting the inclusion of a clear Innovation Management System Framework / Diagram into the ISO 50501 CD document. On presentation and discussion of this proposal with the ISO TC 279 chair during a teleconference in advance of the ISO meetings in Paris, the ISO chair expressed appreciation for the useful and constructive inputs via NSAI TC45 and requested that the Irish delegation (via the NSAI TC 45 secretary) bring the Irish proposal to the key ISO WG1 meetings in Paris.

ISO TC 279 Meetings in Paris, October 2017 – Improved ISO 50501 document

The NSAI TC45 secretary attended key WG1 meetings in Paris focused on ISO CD1 50501 (Innovation Management System – Guidance) comments and proposed changes, and the NSAI TC45 proposal (discussed earlier) to include a clear Innovation Management System Framework / Diagram into ISO 50501. This proposal was discussed and build on by others (including France) during the Paris meetings, and resulted in a much improved IMS framework diagram being developed and included in an updated ISO 50501 CD2 – helping to clarify what an IMS actually is and thereby improving consistency within the key ISO 50501 document, and across related ISO 505XX series documents that will be based on ISO 50501 over the coming months and years.

The Enterprise Ireland member of TC45 also attended key meetings in France - WG3 ‘Tools & Methods’, with a focus on Intellectual Property (IP) Management during the Paris meetings. He took the leadership role on drafting the key ‘IP Management in the innovation process’ clause of the draft ISO standard ([N185](#)).

Voting Results

See summary below, per the National eBalloting platform:



Type	Committee	Reference	Vote	Result	Status	Opening date	Closing date	Role	Source Type	Source
NPOS(A)	NSAI/TC 45	Establishment of a liaison with LESI	2 votes	Approved	Closed	2017-06-28	2017-08-21	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	Establishment of a liaison with UNESCO	2 votes	Approved	Closed	2017-06-11	2017-08-21	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	Adoption of the revised version of the Business Plan		No decision taken	Closed	2017-06-23	2017-09-07	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	ISO/CD 50501 - Innovation management system - Guidance		Disapproved with comments (see section 5.2.2 earlier)	Closed	2017-06-23	2017-09-07	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	ISO/CD 50500 - Innovation management system – Fundamental		Abstention	Closed	2017-10-15	2017-11-27	Ballot owner	ISO/CD	ISO/TC 279
NPOS(A)	NSAI/TC 45	Call of project leader - strategic intelligence management		Disapproved	Closed	2017-12-15	2018-01-12	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	Establishment of a category A liaison with EuKTS		Approved	Closed	2017-12-12	2018-01-12	Ballot owner	ISO/CIB	ISO/TC 279
NPOS(A)	NSAI/TC 45	ISO/CD 50501.2 - Innovation management system - Guidance		Approved	Closed	2017-11-03	2018-01-12	Ballot owner	ISO/CD	ISO/TC 279
NPOS(A)	NSAI/TC 45	ISO/INP 23249		Approved	Closed	2017-11-26	2018-01-12	Ballot owner	ISO/INP	ISO/TC 279

4.3 Regulatory Development/Update

Not applicable.

5 Irish Publications/Reviews

5.1 Publications

The Committee did not publish any Irish specific deliverables this year.

5.2 Reviews


Not applicable.

6 Work programme for 2018 onwards

The NSAI TC45 strategy is to continue to actively engage in the development of the various emerging ISO TC 279 standards over the coming year and beyond. For example, 3 members of TC45 plan to attend the key upcoming ISO TC 279 Plenary & Working Group meetings in London in March 2018. In London, the Irish delegation will a focus on WG1 (innovation management system) and WG3 (tools and methods).

The NSAI TC45 team also plan on engaging in various aspects of ISO TC 279 WG2 (terminology, terms and definitions), ISO WG4 (innovation management assessment) and a New Work Item Proposal on 'Idea Management' during 2018 and beyond.

The following is a summary of the current officially approved work programme for ISO TC 279.



Filter: Published standards Standards under development Withdrawn standards Projects deleted

Standard and/or project under the direct responsibility of ISO/TC 279 Secretariat (6)	Stage
ISO/NP TR 50502 [Under development] Innovation management -- Assessment -- Guidance	10.99
ISO/AWI 50504 [Under development] Innovation management -- Strategic intelligence management -- Guidance	20.00
ISO/AWI 50505 [Under development] Innovation management -- Intellectual property management	20.00
ISO/CD 50500 [Under development] Innovation management -- Fundamentals and vocabulary	30.60
ISO/CD 50501 [Under development] Innovation management -- Innovation management system -- Guidance	30.60
ISO/DIS 50503 [Under development] Innovation management - Tools and methods for innovation partnership -- Guidance	40.00

As alluded to earlier, NSAI TC45 also plan on further engagement with Enterprise Ireland (EI) in relation to their new strategy (see [N157](#)) which includes plans to “Place innovation centre stage”. Hence, the new EI client engagement model now includes an ‘Innovation pillar’ and EI have also appointed a new ‘Innovation Manager’, who the NSAI TC45 secretary & chair met for initial discussions in 2017. Further follow-on discussions and joint planning willing occur in 2018 to discuss the potential for increased collaboration on innovation management and standards development – in the context of NSAI TC45, ISO TC 279 and related EI & NSAI actions under Innovation 2020 and Enterprise 2025.

7 Additional Information

Drivers / Leaders in Standards Development

The diagram below via the NSAI TC45 secretary illustrates how active engagement by Irish experts in standards development - as part of the innovation management process - can deliver real value for Irish companies; particularly for 'drivers' / leaders in the standards development process.

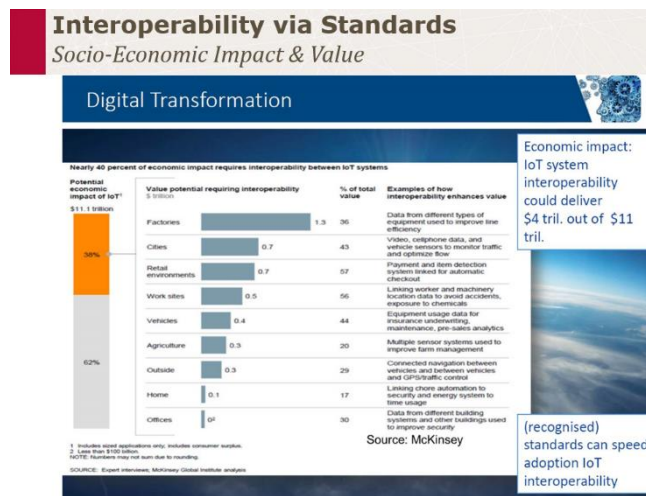


Standards Create Real Value - Key Enablers in Digital Innovation & Transformation

As new digital innovations transform traditional sectors of the economy ranging from smart agriculture, digital manufacturing to Smart Cities & Communities, interoperability via standards is a critical. The is probably most easily illustrated in context of the Internet-of-Things /IOT. According to McKinsey2:

Interoperability between IoT systems is critically important to capturing maximum value; on average, interoperability is required for 40 percent of potential value across IoT applications and by nearly 60 percent in some settings.

Standards are key enablers of interoperability, and companies that embed standards development within their Innovation Management System can generate and capture significant value from their integrated innovation & standards development activities – as illustrated in the diagram below (chart from McKinsey report alluded to above):



² The internet of things: mapping the value beyond the hype. McKinsey Global Institute, June 2015.

As well as the direct business value delivered by interoperability-standards as outlined above, organisations that incorporate standard-essential patents (SEPs) into international standards can generate very substantial revenue and profits from SEP licensing. For example, license royalty income for 2G, 3G and 4G standards is approximately EUR 18 billion per year³. Innovative Irish start-ups and SMEs in IOT and other emerging technology areas that actively engage as ‘drivers’ in the standards development process and get their innovative ideas and IP into new and evolving standards could also reap substantial SEP-licensing rewards.

³ *Setting out the EU approach to Standard Essential Patents*. European Commission, 29.11.2017 COM(2017) 712 final.