ANNUAL REPORT 2024

ICT STANDARDS CONSULTATIVE COMMITTEE (NSAI TC 2)

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1 Chairperson's Statement

For some time now, and over the past five years in particular, the relevance of ICT and digital transformation to the way we live and work has grown apace. As a result, policy makers around the world are increasingly turning to legislative measures as a means of ensuring safe and fit-for-purpose application of digital technologies. Of most prominence in this context is the regulation of Artificial Intelligence (AI), cybersecurity and data governance. It is encouraging to see how in many instances policy makers are relying on the publication of international standards to support the implementation and conformity assessment of digital technologies that we all use.

On the other hand, as the current geopolitical narrative drives a transition to a more regional/national outlook, there is the potential for a proliferation of national or regional standards emerging. As well as adding significant burden to the manufacturing sector, the emergence of national/regional requirements will also result in varying, and in many cases, diminished levels of product quality being placed on the market. Deglobalisation will also place significant extra burden on countries in terms of resourcing an increased level of market surveillance activity.

However, in that context, it is promising to see a continually developing work program of international standardisation at ISO and IEC, with new technical committees being formed to cover the topics of Brain-Computer Interfaces (ISO/IEC JTC 1/SC 43) and Consumer Protection in the Field of Privacy by Design (ISO/IEC JTC 1/SC 44). On the European front, the CEN/CENELEC committee working on AI (CEN /CLC JTC 21) has continued to expand its work program of AI standards that can be used to support the AI Act where, in many cases, these standards are adoptions of the international standards published by ISO/IEC JTC 1. And with the continuing efforts by ISO/IEC JTC 1/AG 15 Standards and Regulations, it is hoped that the liaison between policy makers and standardisers can grow even stronger resulting in increasingly relevant standards.

The way standards are developed is also changing, with a push by ISO/IEC to develop the concept of SMART standards and the ongoing expansion of standards projects being developed using the Online Standards Development (OSD) platform - this is an important development supporting the objective of driving a more timely and efficient standards-making process.

With all these developments, NSAI/ICTSCC will continue to drive an engaged body of standards developers from across all stakeholder groups in Ireland and we look forward to your contributions.

2 Summary of developments in 2024

2.1 Introduction

The presence of NSAI experts in key standardization areas was again to the fore through their leadership positions in committees and working groups, as project editors and in key liaison roles including between ISO/IEC JTC 1 and the European Commission.

At home we expanded our engagement with stakeholders and with new experts joining our work while continuing to liaise with key stakeholders to ensure that public policy acknowledges and appropriately references European and International ICT standards.

2024 also significant engagement by NSAI registered experts in relation to EU Commission standardisation requests related to the trusted data framework (EU Data Act / Data Governance Act) and the cybersecurity requirements for products with digital elements (EU Cybersecurity Act).

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2.2 NSAI - Key areas of engagement

As in 2023 our key areas of participation spanned European and International standards engagement in the following areas, which also included NSAI experts holding key leadership roles in a number of committees and working groups.

- Artificial Intelligence
- Blockchain
- Cloud Computing
- Information Security, Cybersecurity and Privacy Protection
- Electronic Invoicing
- Dataspaces and Data Governance
- IT Professionalism and Digital Competences

2.3 Annual Work Programme for European Standardisation

The role of standardisation for EU policies is addressed in several Commission policy documents, most notably the standardisation strategy and EU industrial strategy. Standards support EU policies to ensure that EU products and services are competitive worldwide and reflect state-of-the-art safety, security, health, social and environmental considerations. In addition, standards are an important tool for research, development and innovation valorisation by demonstrating proof of concept and leveraging the roll-out of completely new industrial value chains in the green and digital areas.

In the 2024 annual Union work programme for European standardisation, the following actions were listed in support of the Commissions digital priorities.

— Cybersecurity requirements

— Technologies for European high-performance computing and European quantum communication infrastructure

— European Digital Identity framework

— Online verification of age

— EU Trusted Data Framework

— Interoperability for data processing services

— Customer data in the insurance sector

— Secure, interoperable virtual and augmented reality ecosystem and virtual economy

— Harmonisation of barcodes in order to enable interoperable ticketing with use of barcodes.

— Revision of standardisation request in support of Union policy on artificial

2.4 Standards for future and emerging ICT

The ICT sector continues to be characterized by waves of innovation both for discrete technologies and novel combinations of existing technologies, as we've seen in IoT.

The ISO/IEC JTC 1 *Emerging technology and Innovation* (JETI) group conducts an annual strategic review which identifies and prioritizes potential areas for future standardisation (see Table 1) and conducts a deeper dive on more immediate technology areas of interest which are explored through publication of Technology Trend Reports (TTR). TTRs published during 2024 include;

- Metaverse, and
- Intelligent Computing.

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No.	Key Technology 2024	Category
1	Artificial General Intelligence (AGI)	AI
2	Spatial Computing	Metaverse & Contents
3	Robotic Process Automation (RPA)	Robotics
4	Cross-border Data Flow / DFFT	Data
5	Space-Based Internet	Connectivity/IoT
6	Neuromorphic Computing	AI
7	Intelligent Unmmaned Systems	Mobility
8	Sustainable ICT Technology	Sustainable ICT
9	CitiVerse	Digital/Smart
10	Datafication	Data
11	Software Defined Vehicle (SDV)	Mobility
12	Data-driven Policing	Data
13	Continuous Threat Exposure Management	Security
14	Hydropower Technology	Sustainable ICT
15	Genomics	Life Science / Data

Table 1 – 2024 JETI's Top 15 Priority Technologies

3 ICT Standards Consultative Committee – Operational Overview

NSAI TC 2 engages in a broad range of standardization activities through its participation in those European and International standards committees listed in Table 2.

Committee Name	Committee Title
ISO/IEC JTC 1	Information Technology
ISO TC 307	Blockchain and distributed ledger technology
CEN TC 225	AIDC Technologies
CEN TC 428	Digital Competence and ICT Professionalism
CEN TC 434	Electronic Invoicing
CEN TC 440	Electronic Public Procurement
CEN/CLC JTC 13	Cybersecurity and Data Protection
CEN/CLC JTC 19	Blockchain and distributed ledger technologies
CEN/CLC JTC 21	Artificial Intelligence
CEN/CLC JTC 22	Quantum Technologies

Table 2 - European and International Committees mirrored by NSAI ICTSCC

Internationally, ISO/IEC JTC 1 is a joint technical committee of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) whose scope is to develop, maintain and promote standards in the fields of information technology (IT) and information and communications technology (ICT). JTC 1 is a global standards development environment where experts come together to develop worldwide ICT standards for business and consumer applications. JTC 1 also supports the standards process for integrating diverse and complex ICT technologies. These standards rely upon the core infrastructure technologies

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developed by JTC 1 centers of expertise complemented by specifications developed in other organizations.

Since its formation in 1987, 3600 ISO/IEC standards have been developed and published by committees of JTC 1, which comprises some 4500 technical experts from around the world. Currently there are 24 active sub committees of JTC 1, covering the topics set out in Figure 1. The most recent of these JTC 1 subcommittees, established in 2024, was SC 44 "Consumer protection in the field of privacy by design".

Membership of an ISO/IEC committee is qualified as being an observer or a participating member. Figure 1 identifies those JTC 1 subcommittees where NSAI experts are actively engaged as participating members together with those subcommittees where our experts have observer status.

European standardization work represents a very important activity as many standards projects have been supported by or are directly mandated by the European Commission to facilitate the implementation of policy and legislative instruments

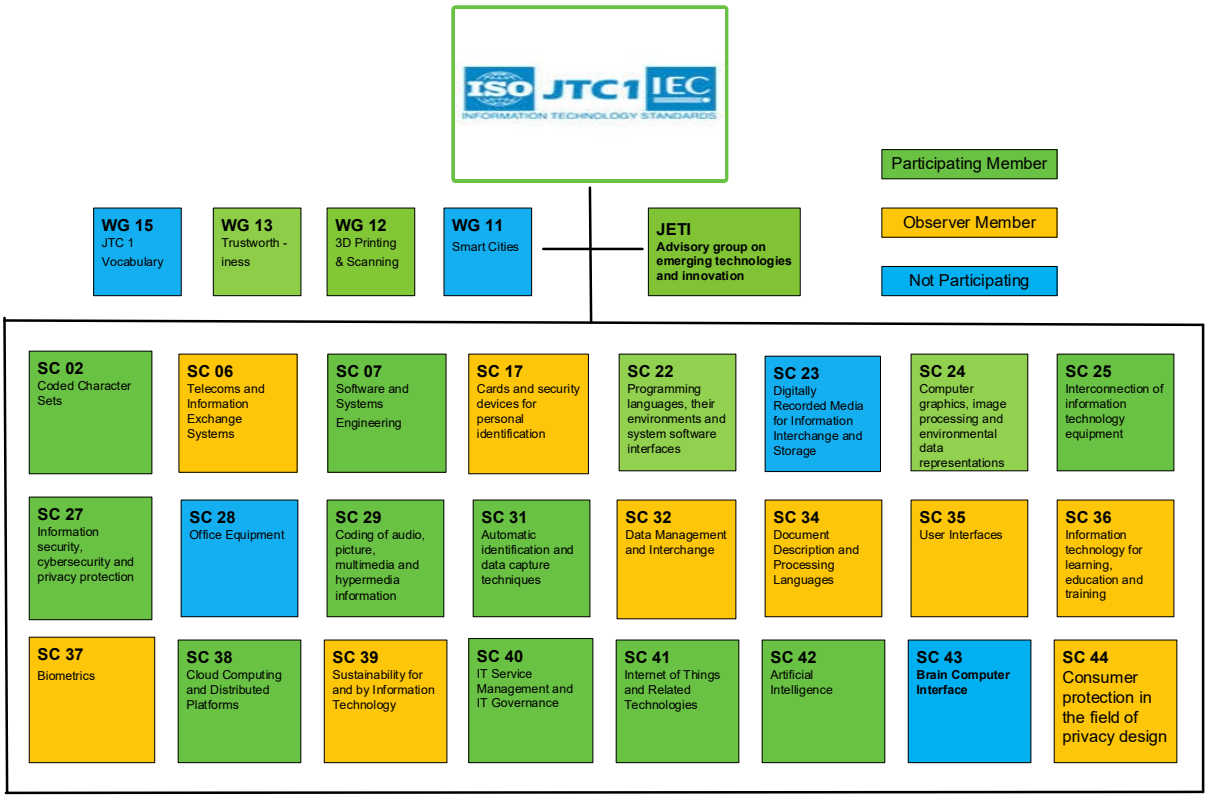

Fig 1 - ISO/IEC JTC 1 Working Groups & Subcommittees (including NSAI participation)

4 Structure and Membership

NSAI TC 2 comprises a plenary group and 19 subcommittees which mirror the engagement of NSAI registered experts in European and International standards. Table 3 details the current structure and organization of NSAI/TC 2.

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Technical Committee	Committee Name	Mirroring	International Participation Type	Membership
TC 2	ICT Standards Consultative Committee	ISO/IEC JTC 1	Participating	18
TC2/WG 1	Quantum Technologies – Advisory Group	CEN/CLC JTC 22	Participating	1
TC 2/SC2	Software Engineering	JTC 1/SC 07	Participating	6
TC 2/SC 3	Telecommunications, media encoding and green IT	JTC 1/SC 06	Dormant	-
TC 2/SC 4	Codes, character sets, and internationalization	JTC 1/SC 2	Participating	2
TC 2/SC 6	Generic cabling systems	JTC 1/SC 25	Participating	2
TC 2/SC 8	Biometrics	JTC 1/SC 17 & 37 / CEN TC 224	Observer	1
TC 2/ SC 9	Automatic Identification and Datacapture Techniques	JTC 1 SC 31 / CEN TC 225	Participating	2
TC 2/SC 10	Information security, cybersecurity, privacy and data protection	JTC 1/SC 27 / CEN-CLC JTC 13	Participating	35
TC 2/SC 11	Cloud Computing and Distributed Platforms	JTC 1/SC 38 / CEN-CLC JTC 25	Participating	7
TC 2/SC 12	eProcurement	CEN TCs 434 & 440	Participating	14
TC 2/ SC 13	ICT Professionalism and Digital Competences	CEN TC 428 / JTC 1/SC 36	Participating	10
TC 2/SC 14	Document description and processing languages	JTC 1/SC 34	Observer	3
TC 2/SC 15	IT Service Management and IT Governance	JTC 1/SC 40	Dormant	_
TC 2/ SC 16	Blockchain and electronic distributed ledger technologies	ISO TC 307 / CEN-CLC JTC 19	Participating	23
TC 2 / SC 17	Internet of Things and Digital Twin	JTC 1/SC 41	Participating	10
TC 2 / SC 18	Artificial Intelligence	JTC 1/SC 42 / CEN-CLC JTC 21	Participating	46
TC 2 / SC 19	Coding of audio, picture, multimedia and hypermedia information	JTC 1/SC 29	Participating	11
TC 2 / SC 20	Programming languages, their environment and system software	JTC 1/SC 22	Participating	5
TC 2/ SC 21	Smart Cities	JTC 1 / WG 11	Observer	3

Table 3 - ICTSCC Structure and Organization

5 ICTSCC Summary of Activities - 2024

5.1 Meetings

Meetings of NSAI TC 2 generally mirror the plenary meeting schedule of ISO/IEC JTC 1 which holds spring and autumn plenary sessions. In 2024, NSAI TC 2 held 2 formal meetings in April and December and 2 virtual meetings as debrief sessions outlining our participation at the JTC 1 plenaries.

As with TC 2, subcommittees generally meet at least twice a year while individual experts may attend project meetings, usually on a monthly cycle.

Apart from formal meetings, adhoc meeting occur regularly on a needs be basis.

5.2 Ballots on European and International Standards

An important obligation on the membership of committees is engagement in the standards balloting process. While our national experts are active in this process, NSAI also utilizes a default voting policy to ensure all ballots are appropriately addressed and in keeping with obligations as a participating member.

5.3 Highlights from 2024

5.3.1 New (*) and ongoing leadership roles held by NSAI Experts

ISO/IEC JTC 1 Liaison to the European Commission

*Convenor JTC 1/AHG 8 'Succession Planning'

Convenor JTC 1/ SC 42 / WG 3 'Trustworthiness'

Secretariat JTC1/SC 42 / WG 3 'Trustworthiness'

*Convenor JTC1/SC 42 WG1 'Foundational Standards'

Project Editor ISO 42001 'AI Management Systems'

*Convenor JTC 1/SC 38 / WG 6 'Data, interoperability and portability'

Secretariat of JTC 1/SC 40 / WG 1 'Governance of Information Technology'

Chair of CEN TC 428 'ICT professionalism and Digital competences'

Convenor of CEN TC 434/ WG 7 'eInvoicing – Registry services'

Co – Convenor of CEN TC 434 / WG 3 'eInvoicing – Syntax bindings'

Co – Convenor & Lead Editor of CEN TC 434 / WG 5 'eInvoicing –Extensions methodology'

5.3.2 Meetings Hosted in Ireland

9th plenary meeting of CEN /CENELEC JTC 21 'Artificial Intelligence'–February 12th–14th 2024.

6 Work programme for 2025

Our work programme for 2025 includes a review of the operations of NSAI TC 2, including the identification of key areas of standardization for enhanced engagement. As well as maintaining our current ICT standards coverage, we plan to consider the following areas through engagement with national stakeholders.

- Quantum Computing.
- Metaverse.

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2025 will also bring focus to planning for a number of international committees which NSAI will host plenary meetings in 2025 and 2026.

- ISO/IEC JTC 1/SC 38 'Cloud Computing and Distributed Platforms' / Letterkenny. Co. Donegal – September 1st to 5th 2025
- ISO/IEC JTC 1 'Information Technology' / Dublin – November 2026.

7 Stakeholder engagement

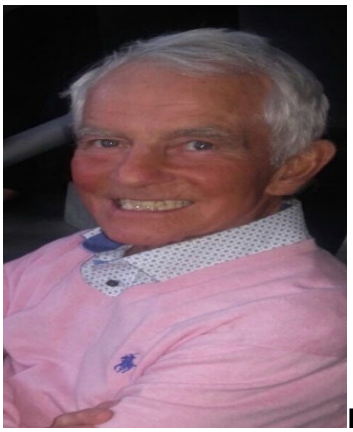
NSAI TC 2 aims to broaden and deepen its stakeholder network, including the promotion of the use of standards in national policy, regulation and procurement together with the recruitment of new expert participation in our committees. Our key stakeholders include;

- Government departments, agencies, and authorities, including the IDA, EI and the National Cyber Security Centre,
- Industry bodies including Ibec, IRDG, Blockchain Ireland, Cyber Ireland,
- Research and Academic Institutions, including Lero, Adapt and Empower Research Ireland funded centers,
- Professional bodies, including the Irish Computer Society and the Institute of Public Administration.

8 Acknowledgement

NSAI wishes to acknowledge the passing of long standing NSAI TC 2 member Pete Lonergan who passed away on February 15th, 2024. Pete contributed to standardisation over many decades, being a contributor to standardisation at ETSI (European Telecommunications standards Institute) from its foundation in 1988.Pete was Chair of NSAI TC 2/SC 3 'Telecommunications , media encoding and green IT' and an Irish delegate on ISO/IEC JTC 1 'ICT'.

Long after his retirement from Enterprise Ireland, Pete continued to participate in standardisation work at a national and international level. Known not only for his technical expertise, but Pete was also highly regarded for his social engagement and the great company he was. May he rest in peace.



Pete Lonergan

Ken Halpin

2024 also saw the passing of Ken Halpin (CEO of Celtrino) who participated in the work of standards for many years in the area of Electronic Invoicing and Procurement. He was known by the standards community both at national and European level through NSAI/TC 2/SC 12, CEN/TC 434, and CEN/TC 440. He will be sadly missed. May he rest in peace.

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