ILNAS

ILNAS Breakfast “Quantum Technologies and Standards Analysis for the ICT Sector”

Introduction

21 November 2023

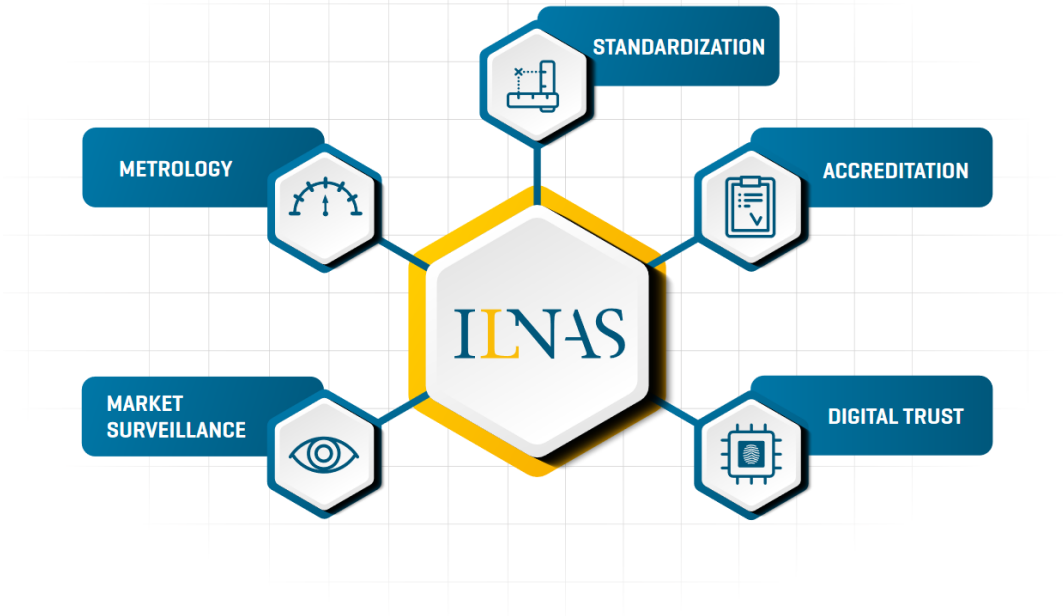
Jean-Philippe HUMBERT - Deputy Director, ILNAS

Presentation of ILNAS

- **ILNAS**
  - Public administration under the authority of the Minister of the Economy
  - Creation: Law of May 20, 2008
  - Legislation in force: amended Law of July 4, 2014 reorganizing ILNAS
  - Total staff: 62 (November 2023)
  - ISO 9001:2015 certification (Budget and administration department, OLN, Digital Trust department, Market surveillance department, BLM, OEC)

PORTAIL-QUALITE.LU
QUALITE · SECURITE · CONFORMITE
UNE INITIATIVE DE L'ILNAS

- **National Standards Body (OLN)**
  - Composed of 8 persons
  - Close collaboration with the E.I.G. ANEC-N



ANEC – Agency for standardization and knowledge-based economy

- **Creation**: October 4, 2010
- **Status**: Economic Interest Group (EIG)
- **Objectives:** Promotion, awareness raising and training, applied research in the field of standardization and metrology in order to support companies' competitiveness in Luxembourg
- **Human resources**: 9 persons, including 4 employees in the standardization department (November 2023)
- **Partners** :

LE GOUVERNEMENT DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Économie

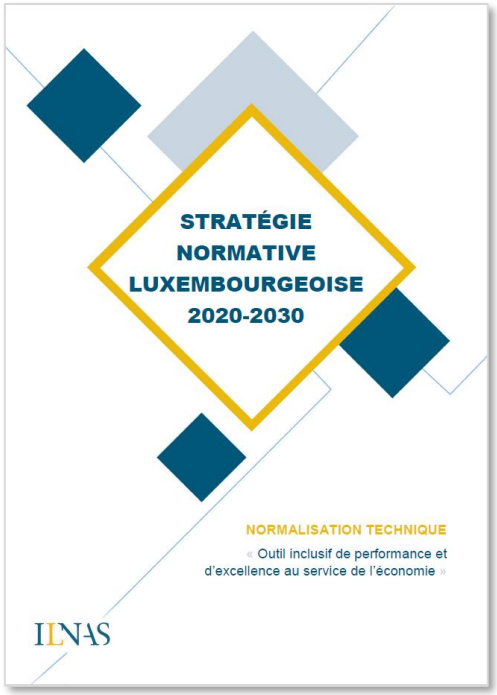
CHAMBRE DES METIERS Luxembourg

CHAMBRE DE COMMERCE LUXEMBOURG

➔ Support for the implementation of the Luxembourg standardization strategy

Luxembourg standardization strategy 2020-2030

Technical standardization
"Inclusive tool for performance and excellence to serve the economy"



→ Strategy signed by the Minister of the Economy of Luxembourg

PERFORMANCE

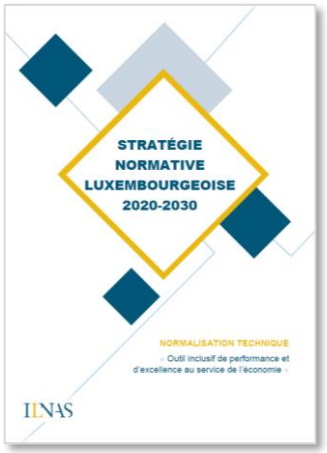
- ❑ **Pillar 1 – Use of relevant technical standards**
- ❑ **Pillar 2 – Involvement in the standardization process**

EXCELLENCE

- ❑ **Pillar 3 – Active participation of the NSB in the European and international standardization organizations**
- ❑ **Pillar 4 – Development of research and education about standardization**

https://portail-qualite.public.lu/content/dam/qualite/publications/normalisation/2020/strategie-normative-luxembourgeoise-2020-2030.pdf

Luxembourg standardization strategy 2020-2030



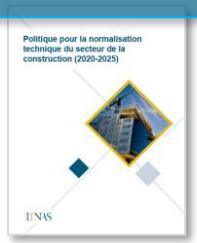
Technical standardization
"Inclusive tool for performance and excellence to serve the economy"

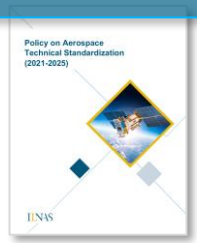
3 growth sectors identified

CONSTRUCTION

INFORMATION AND COMMUNICATION TECHNOLOGIES

AEROSPACE





Identification of trans-sectoral standardization interactions

- Computer Aided Design (CAD)
- Building Information Modelling (BIM)
- 3D printing
- …

- Space data processing
- Space traffic management
- Smart Mobility
- …

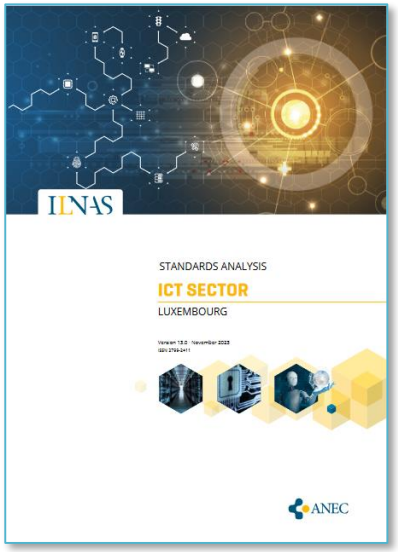
Luxembourg's policy on ICT technical standardization

"Foster and strengthen the national ICT sector involvement in standardization work"

→ Three lead projects

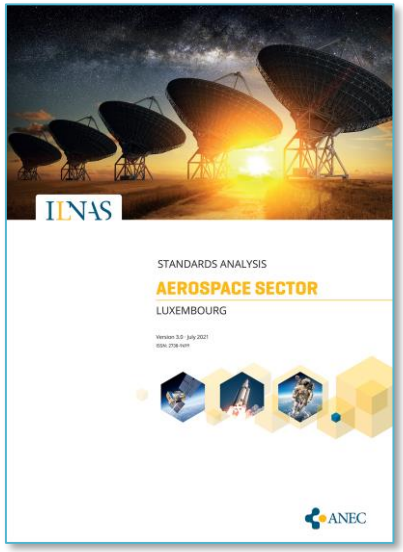
1. Promoting the ICT technical standardization to the market
2. Reinforcing the valorization and the involvement regarding ICT technical standardization
3. Supporting and strengthening the EaS and the related research activities

Policies for the Construction and Aerospace sectors, as well as for the "Conformity" domain are based on similar lead projects



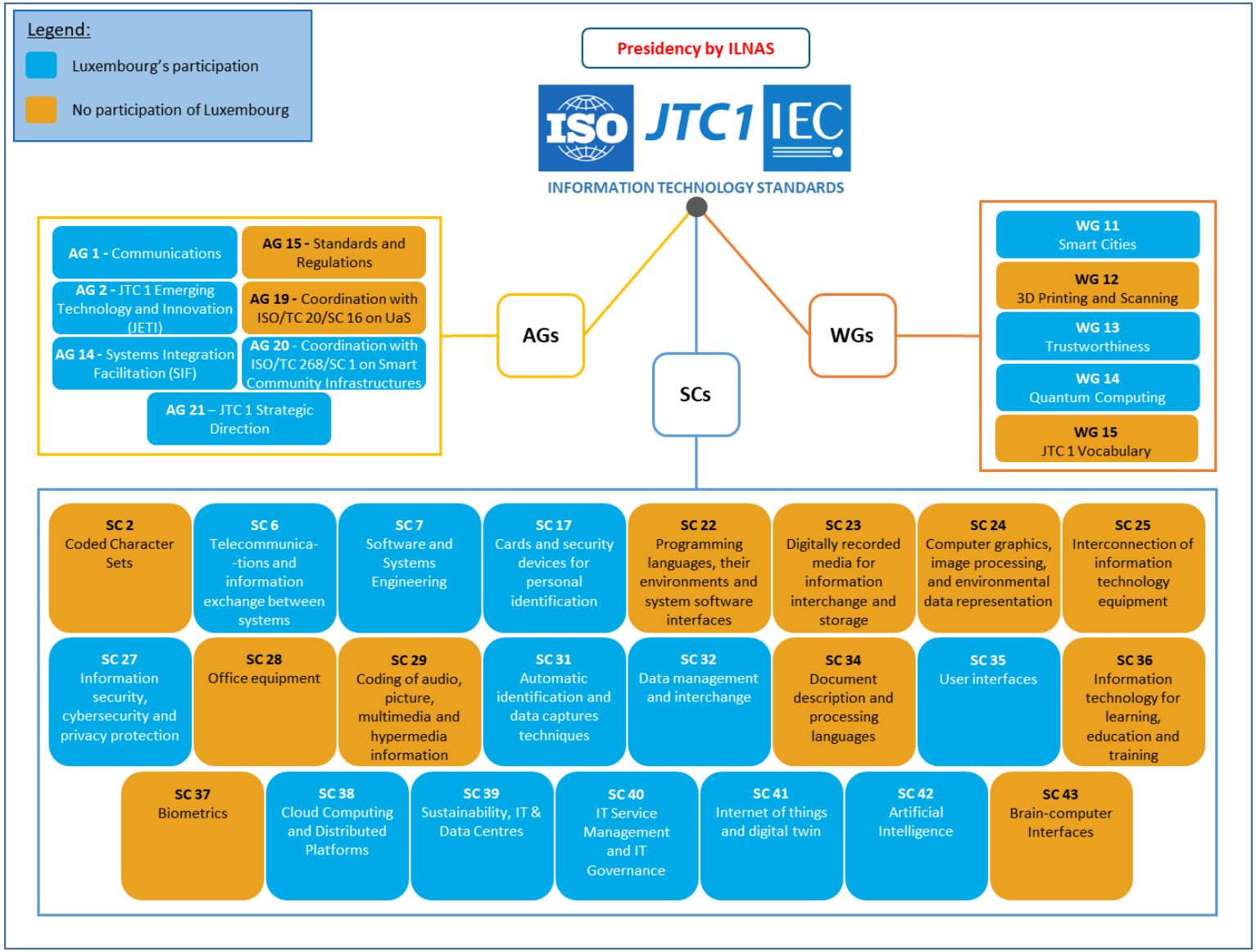
2023 - Standards Analysis

- **Content**
  - Standardization context of the related sectors
  - Presentation of European (CEN,CLC, ETSI) and international (ISO, IEC) technical committees active in the related sectors (distributed among subsectors relevant for the national economy)
  - Offer guidance to national stakeholders for a potential future involvement in the standardization development process
- **Updated annually (twice a year for ICT)**



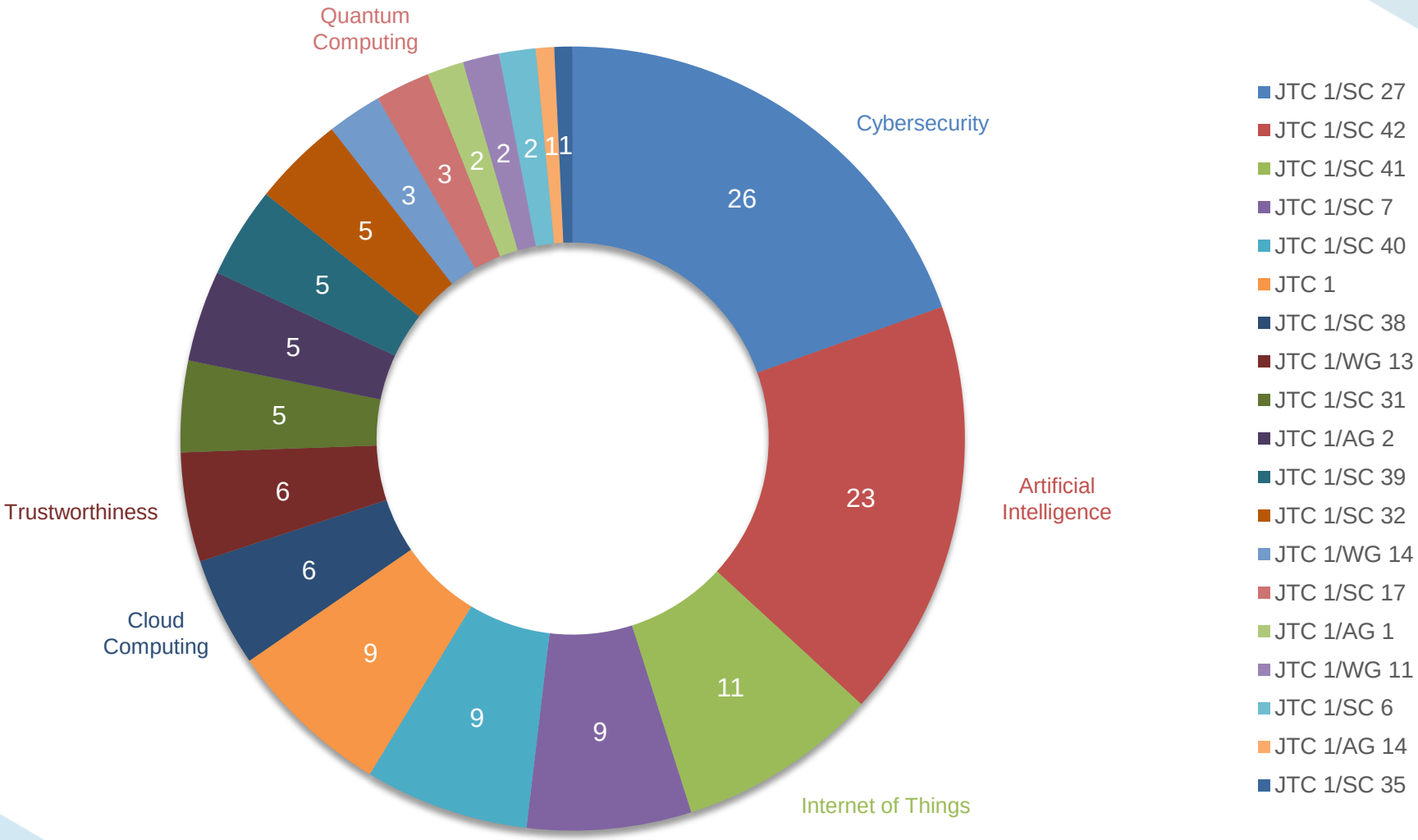
Reinforcing the valorization and the involvement regarding ICT technical standardization

ISO/IEC JTC 1



Reinforcing the valorization and the involvement regarding ICT technical standardization

ISO/IEC JTC 1

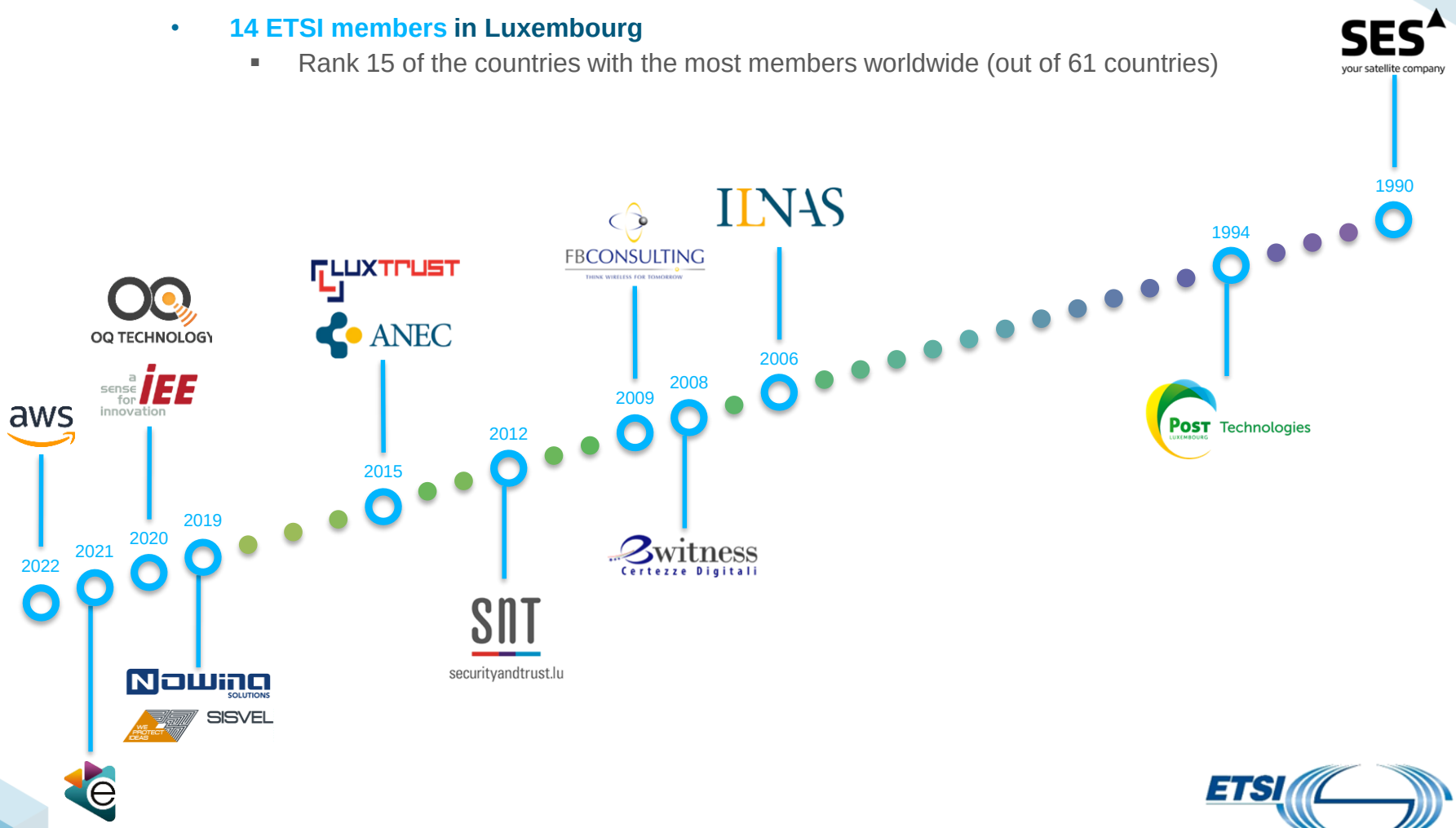


→ 63 national delegates registered in ISO/IEC JTC 1 (77 in total for the ICT sector)

Reinforcing the valorization and the involvement regarding ICT technical standardization

ETSI

- **14 ETSI members in Luxembourg**
  - Rank 15 of the countries with the most members worldwide (out of 61 countries)



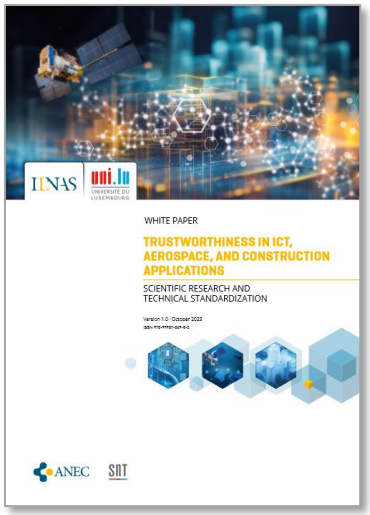
Supporting and strengthening the EaS and the related research activities

Research program “Technical Standardisation for Trustworthy ICT, Aerospace, and Construction” (2021-2024)

Research program “Technical Standardisation for Trustworthy ICT, Aerospace, and Construction” (2021-2024) in collaboration with the University of Luxembourg

3 PhD students

1 postdoc



Supporting and strengthening the EaS and the related research activities

Research project CORAL - cybersecurity Certification based On Risk evALuation and treatment

CORAL

CORAL - cybersecurity Certification based On Risk evALuation and treatment

Co-financed by the Connecting Europe Facility of the European Union

https://youtu.be/kmMHJ-lj4FY

Overview

CORAL is a European Union-funded project under CEF Telecom Call, that **aims to elaborate a toolkit and methodology to speed up the certification process in line with the EU Cybersecurity Act** or CSA (Regulation EU 2019/881). The project aims to address challenges concerning self-certification and the basic level of assurance, as well as to enhance the exchange of good practices, collaboration and information sharing related to performing evaluations in line with the CSA.

The CORAL project is being developed in a Luxembourgish context, but it aims to become known and used beyond the Luxembourg market and borders. Its target audience is primarily small and medium enterprises who have a product or service for which, they wish to assess the basic cybersecurity requirements.

Fit4CSA tool: https://fit4csa.nc3.lu/

CORAL website: https://coral-project.org/

Supporting and strengthening the EaS and the related research activities

White Papers & Technical Reports ILNAS

2020-2023 - ILNAS Research activities

1 White Paper published

ARTIFICIAL INTELLIGENCE

Technology review

Economic overview

Challenges

Technical Standardization

...

BLOCKCHAIN

INTERNET OF THINGS

CLOUD COMPUTING

MSS

4 National Technical Standardization Reports published

New Technical Standardization Report on Quantum Technologies

Supporting and strengthening the EaS and the related research activities

Master MTECH (second promotion)

Master MTECH (2023-2024) – ILNAS in collaboration with the University of Luxembourg and the Chamber of Employees

PROGRAMME

STANDARDISATION	ECTS
Smart Secure ICT and Innovation	1
Technical Standardisation	3
TOTAL	4

SMART ICT	ECTS
Smart ICT Technologies I	5
Smart ICT Technologies II	5
TOTAL	10

DIGITAL TRUST FOR SMART ICT	ECTS
Security for Smart ICT I	2
Security for Smart ICT II	3
Trust Architectures for Smart ICT	4
TOTAL	9

TECHNOPRENEURSHIP	ECTS
Management of Business and Technical Innovation	3
Digital Intelligence	2
Legal Aspects	2
TOTAL	7

MASTER THESIS	ECTS
Master Thesis	30
TOTAL	30

- 332 hours of teaching
- 60 ECTS
- Internship (+/- 750 hours)
- Started in February 2023
- 2 years lifelong-learning
- 11 Modules
- 10 students

Next promotion in September 2024

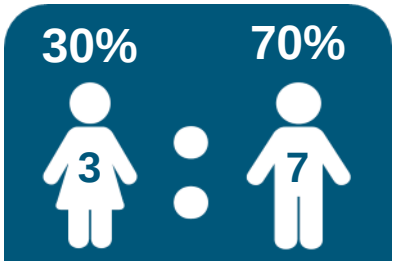
With the support of: THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBOURG Ministry of the Economy

CEN CENELEC ETSI

Supporting and strengthening the EaS and the related research activities

Master MTECH – Profile of the students enrolled in the Master MTECH

WOMEN : MEN



AGE

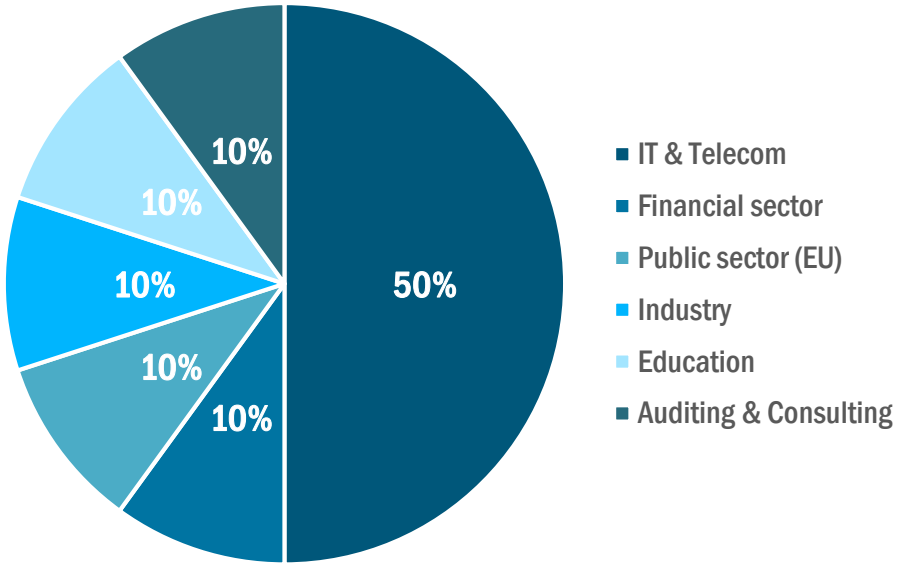
28 → 56

Average: 40

NATIONALITIES

9

ECONOMIC SECTORS



STAY INFORMED ABOUT ILNAS ACTIVITIES

→ **Portail qualité:**
www.portail-qualite.lu

→ **ILNAS e-shop:**
https://ilnas.services-publics.lu/

→ **Newsletters:** https://portail-qualite.public.lu/fr/support/newsletter.html

→ **Social Networks:**

Welcome
Bienvenue
Willkommen

ILNAS

ILNAS Breakfast "Quantum Technologies and Standards Analysis for the ICT Sector"

Presentation of the National Standards Body

21 November 2023

Jérôme HOEROLD - Head of the Standardization department, ILNAS

1. Standardization activities

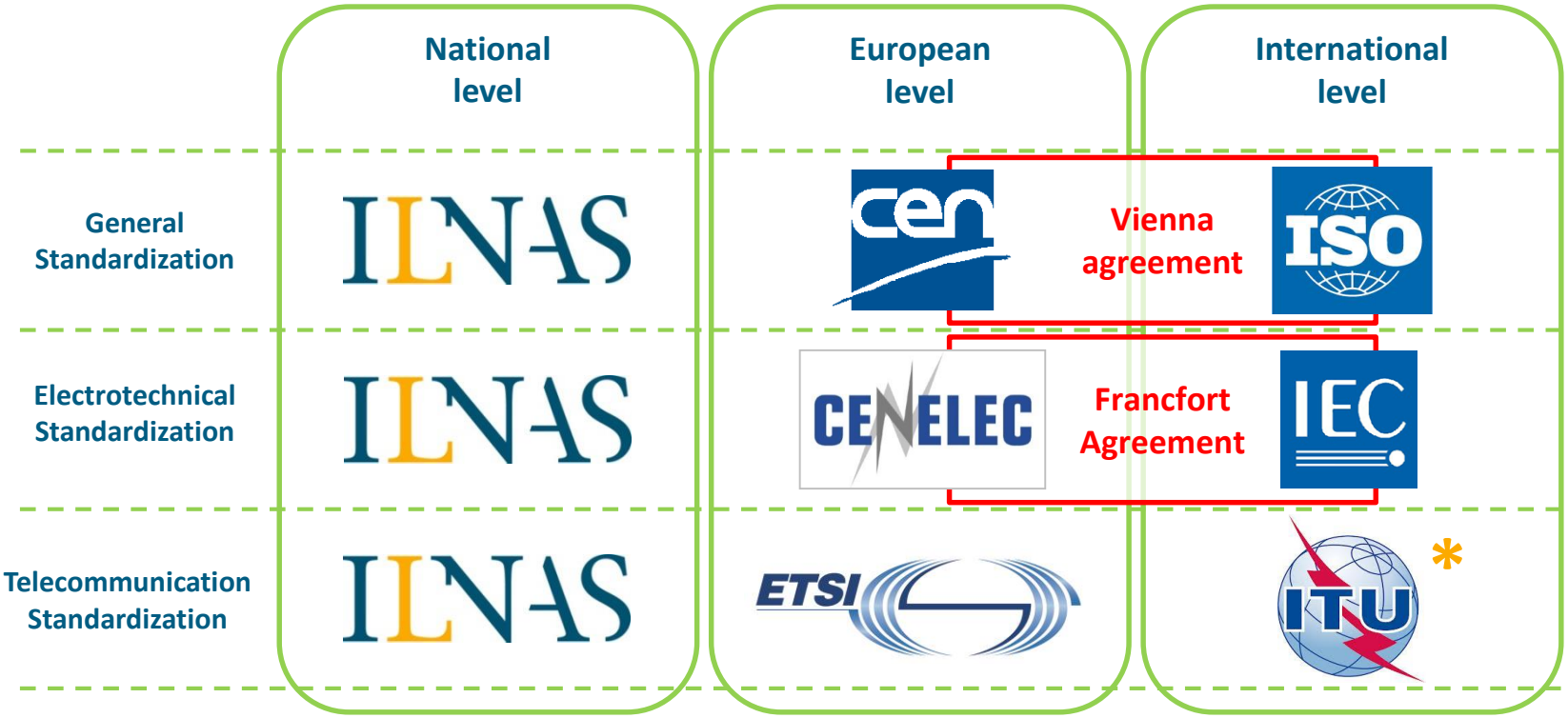
1.1 At national level

- **Coordinate and supervise the creation of national standards**
  - National annexes of the Eurocodes (2011 and 2019)
  - National annex concerning the Winter Diesel (EN 590:2013+A1:2017/AN-LU:2019)
  - Creation of a national standards office in the construction domain (2015)
  - National standard on the calculation of the living surface (ILNAS 101:2016)
  - National standard related to the information security in the context of accreditation of laboratories (ILNAS 107:2020)
  - National standard related to the technical controls of buildings (ILNAS 105-1:2021)
  - National standard on building acoustics (ILNAS 103-1:2022)
  - National standard on e-archiving (ILNAS 106:2022)
  - National annexes on concrete (ILNAS-EN 206:2013+A2:2021+CN-LU:2023)
  - National standard on telecommunication cabling techniques in residential buildings (ongoing work)
  - National standard on soil classification (ongoing work)

- **Create a normative culture in Luxembourg**
  - Master « Technopreneuship », in collaboration with the University of Luxembourg and the *Chambre des salariés* (support provided by GIE ANEC-N)
  - Research program in collaboration with the University of Luxembourg
  - Promote technical standardization at national level (Newsletter, portail-qualite.lu, Linkedin, events, …)
  - Continuous training in the field of technical standardization and awareness raisins sessions in high schools

1. Standardization activities

1.2 European and international level



* ITU-T

1. Standardization activities

1.2 European and international level

- **Participate in the creation of European and international standards**
  - Open to all national stakeholders
  - Free of charge
  - Free trainings offered to registered experts

- **Represent Luxembourg at European and international level**
  - Participate in the « Committee on Standards » and the « High-Level Forum on European Standardisation » of the European Commission
  - Participate in general assemblies, technical boards and other specific working groups of CEN, CENELEC, ETSI, ISO et IEC

2. Participate in technical standardization

2.1 How to get involved ?

- **How can I participate in the elaboration process of national, European or international standards ?**

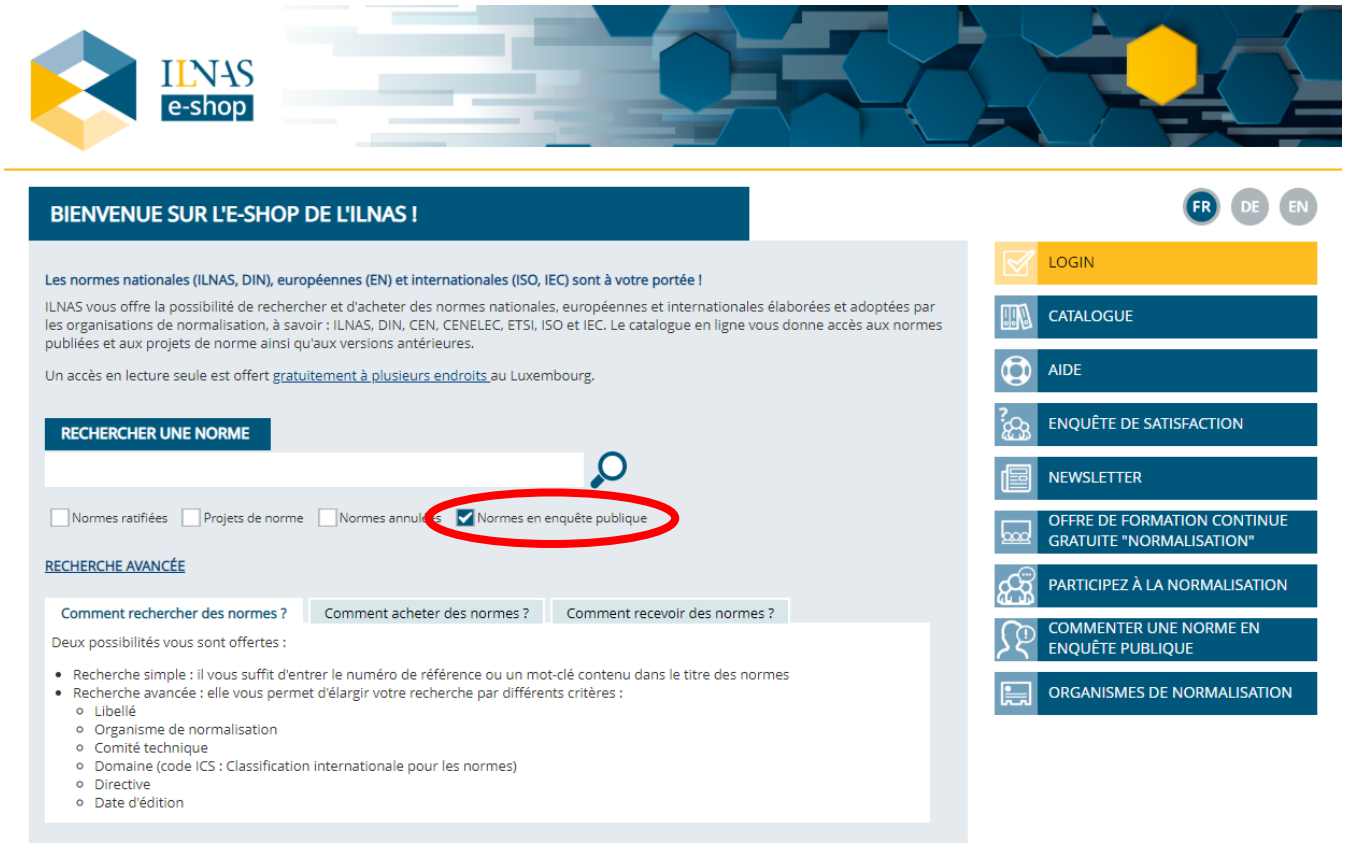
    1) Public enquiry of a draft standard

    2) Active participation in a technical committee

2. Participate in technical standardization

2.2 Public enquiry

- Navigate to the ILNAS e-shop (https://ilnas.services-publics.lu) in order to be able to comment on draft standards which are currently in the “public enquiry” stage



2. Participate in technical standardization

2.3 National delegate in technical standardization

Why should I participate ?

- Join a network of experts
- Anticipate future standards and developments in a specific sector
- Possibility to vote while representing Luxembourg

Who can participate?

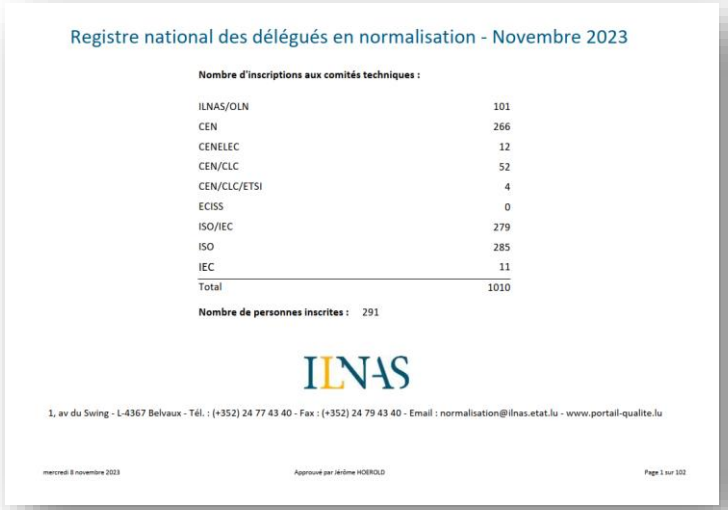
- Every socio-economic actor in Luxembourg with a certain expertise

Costs related to an active participation ?

- Free of charge

National register of standardization delegates (Link)

- 291 experts registered
- 1010 registrations in technical committees



Registre national des délégués en normalisation - Novembre 2023

Nombre d'inscriptions aux comités techniques :

ILNAS/OLN	101
CEN	266
CENELEC	12
CEN/CLC	52
CEN/CLC/ETSI	4
ECISS	0
ISO/IEC	279
ISO	285
IEC	11
Total	1010

Nombre de personnes inscrites : 291

ILNAS

1, av du Swing - L-4367 Belvaux - Tél. : (+352) 24 77 43 40 - Fax : (+352) 24 79 43 40 - Email : normalisation@ilnas.etat.lu - www.portail-qualite.lu

mercredi 8 novembre 2023 — Approuvé par Jérôme HOEROLD — Page 1 sur 102

3. Availability of standards

3.1 Standardization catalogue – ILNAS e-shop

- 85 national standards

- +81.000 European Standards from CEN CENELEC and ETSI

- +74.000 International Standards from ISO and IEC

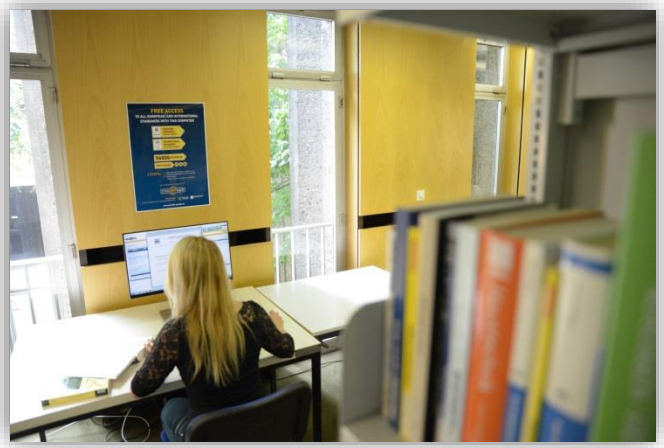
- +49.000 DIN Standards

➢ **More than 200.000 normative documents** at your disposal at competitive prices

3. Availability of standards

3.2 Free consultation

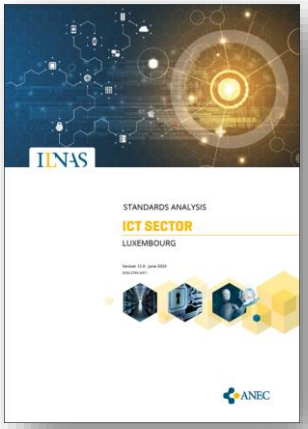
- Free consultation of European (CEN,CENELEC & ETSI), international (ISO & IEC) and national (ILNAS) standards
- Locations:
    1) **University of Luxembourg** (Campus Kirchberg)
    2) **Chambre des métiers**
    3) **LHC - Luxembourg House of Cybersecurity** (on appointment)
    4) **Lycée des Arts et Métiers**
    5) **Lifelong Learning Center**
    6) **ILNAS** (on appointment)
    7) **LIST** (Belvaux)
    8) **Administration communale de la ville d'Echternach**
    9) **Atert-Lycée Redange**



4. Products and services

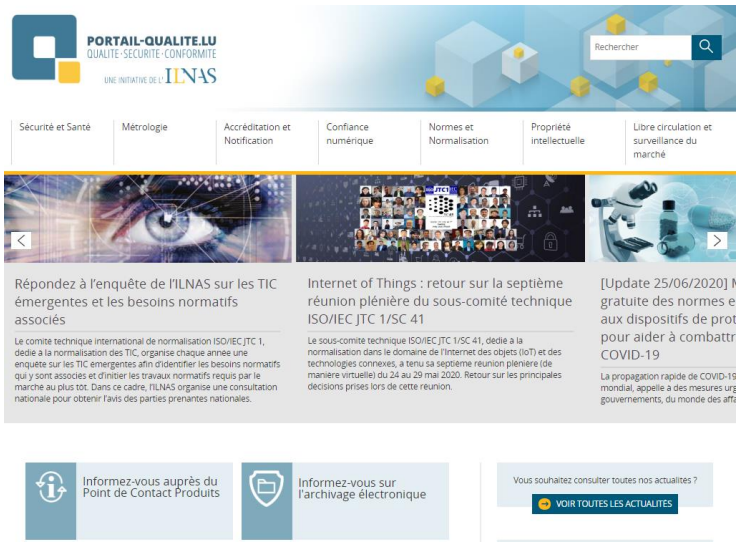
In order to best exploit the advantages linked to technical standardization, ILNAS offers, in collaboration with the GIE ANEC-N, the following products and services to national socio-economic actors:

- Diffusion of normative information
- Continuous training in the field of technical standardization
- Standards watch
- National standards analysis (limited to the « priority » sectors defined in the national standardization strategy)

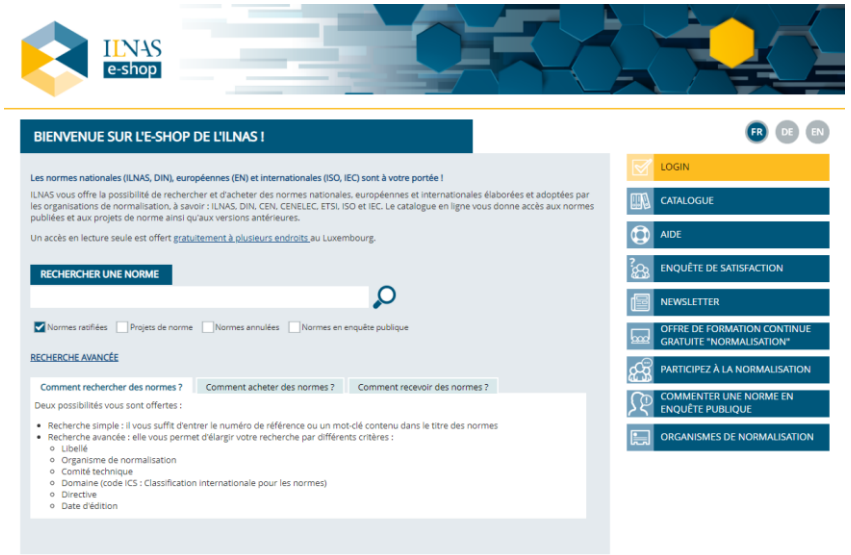


For more information

Portail qualité
www.portail-qualite.lu



ILNAS e-shop
ilnas.services-publics.lu



Organisme luxembourgeois de normalisation

Tel. : (+352) 247 743 40
Fax : (+352) 247 943 40
E-mail : normalisation@ilnas.etat.lu

ILNAS

ANEC

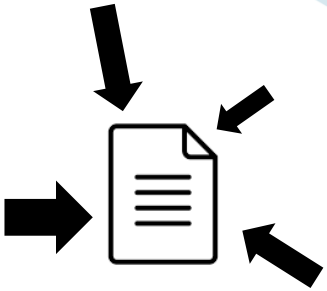
Quantum Technologies and Technical Standardization

21/11/2023, Rim DOUKHA, ANEC GIE

What is this document?

Main information

This report aims to support the national stakeholders by describing the field of quantum technologies and relevant standardization activities that can contribute to its development and acceptance



Purpose

To help you identify :

- Relevant technical committees related to quantum technologies
- Relevant standards and projects helping the progress of quantum technologies

What aims?

- Sources of technical standards that might impact you
- Understand the importance of technical standardization in quantum technologies
- Identify standards development connected to your business in which participating in their development could be of interest

Content

Part 1

Quantum technologies overview
- Introduction to quantum technologies
- Main subfields of quantum technologies

Part 2

Economic overview of quantum technologies
- Global investments in quantum technologies development
- Focus on European investments in quantum technologies

Part 3

Challenges of quantum technologies
- Main challenges of quantum technologies
- Stating the role of technical standardization for quantum technologies

Part 4

Quantum technologies and technical standardization
- Introduction to technical standardization
- Benefits of standardization
- How standards are fostering the development of new technologies and innovation?
- Standardization activities related to quantum technologies
- Relevant standards and ongoing projects relates to quantum technologies

Part 5

Standardization opportunities in Luxembourg
- How to access the standards
- Why and how to get involved in standards development

Content part 1

Part 1

Quantum technologies overview

- Introduction to quantum technologies
- Main subfields of quantum technologies

Quantum technologies overview

- **Introduction to quantum technologies**
- **Main subfields of quantum technologies:**
  - **Quantum computing**
  - **Quantum communication**
  - **Quantum sensing**
  - **Quantum simulation**

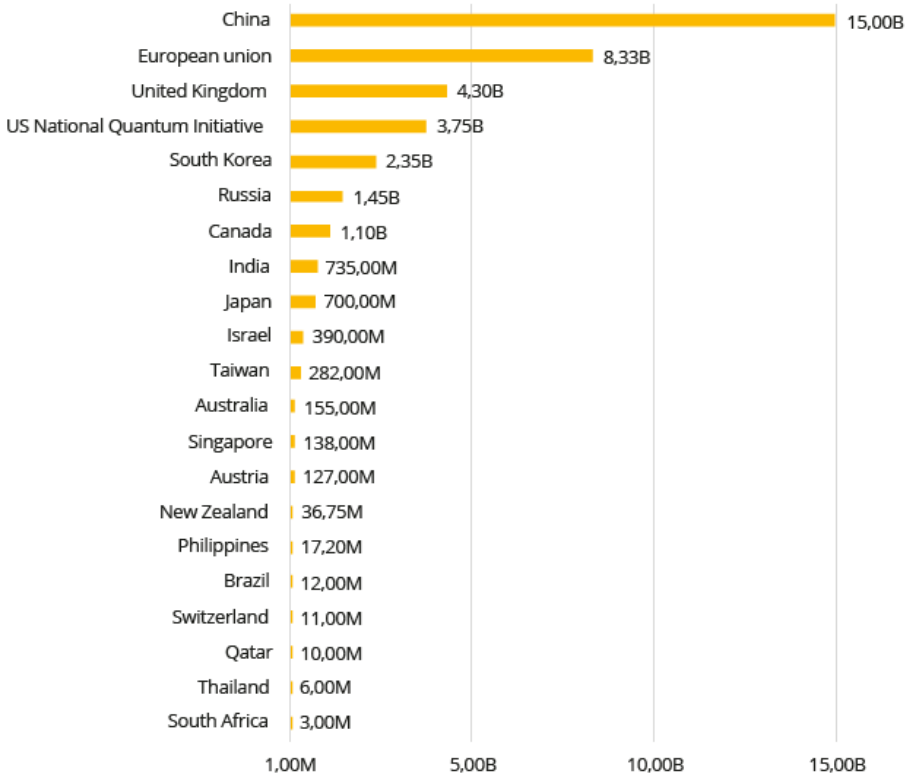
Content part 2

Part 2

Economic overview of quantum technologies

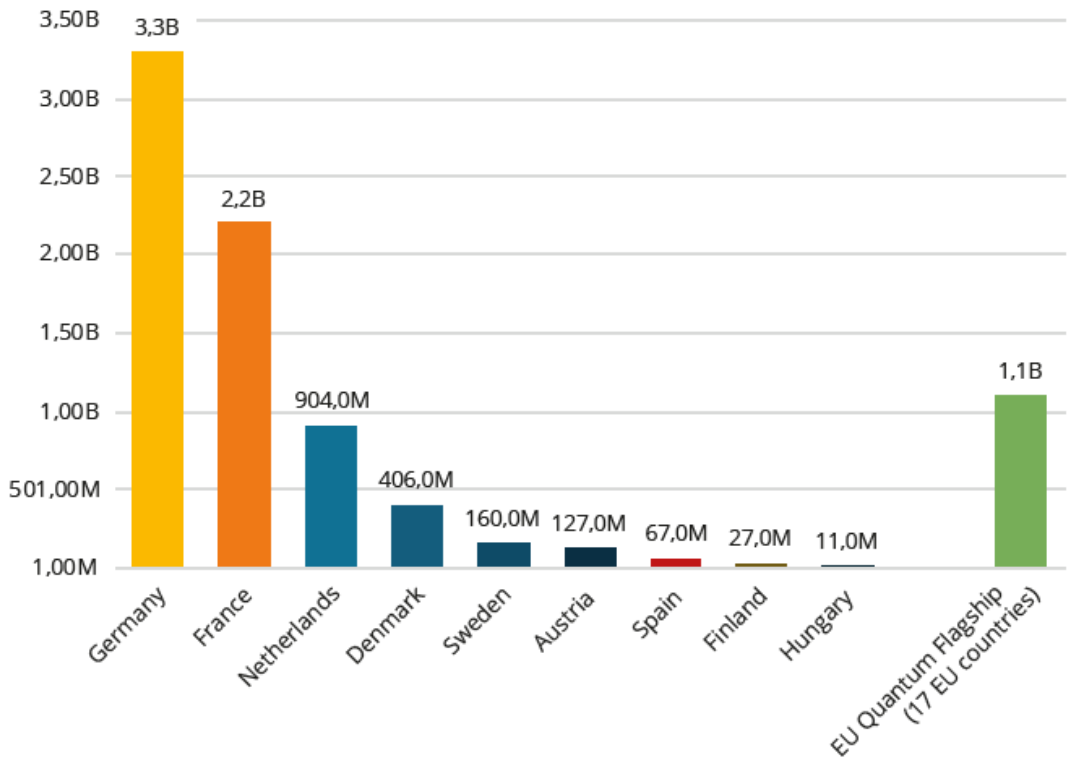
- Global investments in quantum technologies development
- Focus on European investments in quantum technologies

Global overview



Content part 2

Focus on the European Union



Content part 3

Part 3

Challenges of quantum technologies

- Main challenges of quantum technologies
- Stating the role of technical standardization for quantum technologies

Main challenges of quantum technologies

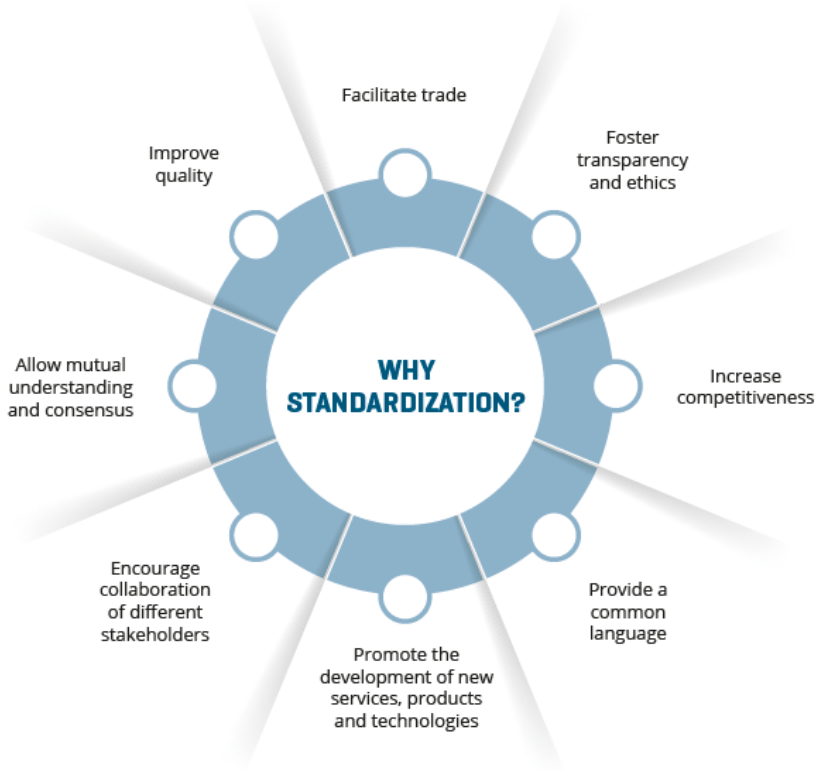
Content part 4

Part 4

Quantum technologies and technical standardization

- Introduction to technical standardization
- Benefits of standardization
- How standards are fostering the development of new technologies and innovation?
- Standardization activities related to quantum technologies
- Relevant standards and ongoing projects relates to quantum technologies

Benefits of standardization



Content part 4

Standards fostering the development of new technologies and innovation

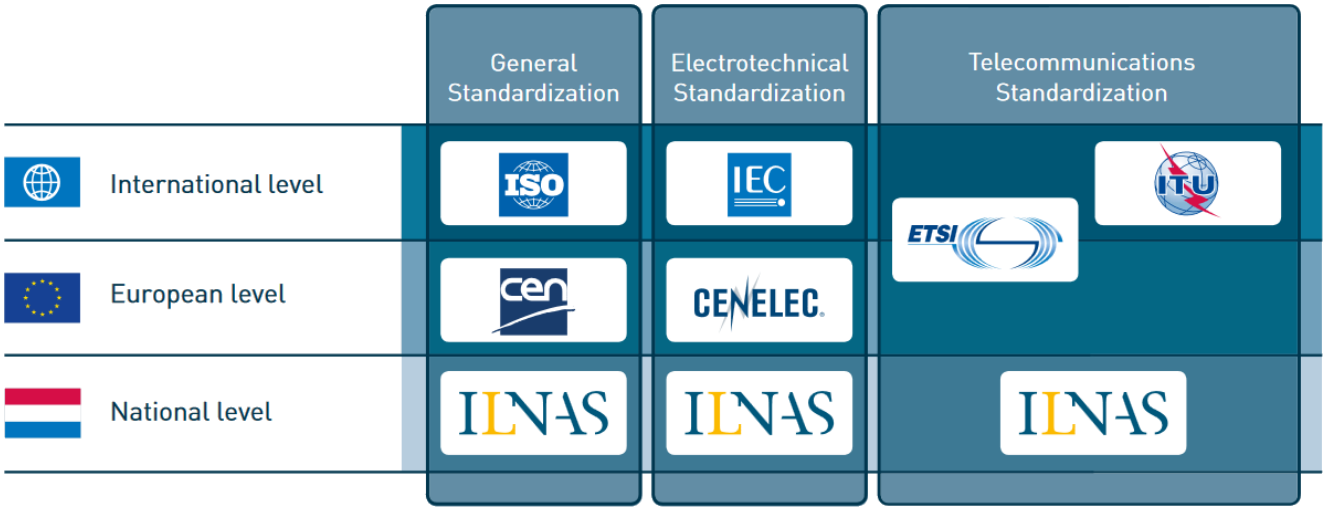
(extract)

- **Benchmarking:** Creating benchmark tests and performance metrics can enable researchers and engineers to assess and compare the capabilities and limitations of different quantum systems objectively. This can help identify areas for improvement.
- **Quality Control:** Standardization can help ensure the quality and reliability of quantum devices and systems. This is important to build trust among users and investors and prevent the unsafe quantum systems from entering the market.
- **Security Guidelines:** Even in early stages, it is important to establish guidelines to secure the communications in quantum systems. This includes protocols for handling quantum hardware and data encryption.
- **Education and Training:** Standardized curricula and training materials for QT can be created to ensure that individuals entering this field have a fundamental understanding of the technology.
- **Interoperability:** As QT advance, it will become increasingly necessary to integrate various quantum components, systems, and software from different manufacturers and research groups. Standardized interfaces and protocols will facilitate this integration and enable more transparent development and deployment of quantum applications.
- **International Collaboration:** International collaboration in standardization is essential for the development of QT, as it brings together knowledge and expertise from experts around the world.

...

Content part 4

Standardization organizations



Content part 4

Technical committees – International level

ISO/IEC JTC 1/WG 14 “Quantum information technology”

ISO/IEC JTC 1/SC 27 “Information security, cybersecurity and privacy protection“

IEC SEG 14 “Quantum technologies”

ITU-T/SG 13 “Future networks and emerging network technologies”

ITU-T/SG 17 “Security”

ITU-T FG-QIT4N “Quantum Information Technology for Networks”

Content part 4

Technical committees – European level

ETSI ISG “Quantum Key Distribution”

ETSI TC CYBER WG “Quantum-Safe Cryptography”

CEN/CLC JTC 13 “Cybersecurity and Data Protection”

CEN/CLC JTC 22 “Quantum Technologies”

CEN/CLC FGQT (2020-2023) “Quantum Technologies”

Content part 4

Relevant standards in quantum technologies

(extract)

Committees	Document reference	Title	Date of publication
ISO/IEC JTC 1/ SC 27	ISO/IEC 23837-1	Information security – Security requirements, test and evaluation methods for quantum key distribution – Part 1: Requirements	08/2023
	ISO/IEC 23837-2	Information security – Security requirements, test and evaluation methods for quantum key distribution – Part 2: Evaluation and testing methods	09/2023

Ongoing projects in quantum technologies

Committees	Document reference	Title
ISO/IEC JTC 1/ WG 14	ISO/IEC DIS 4879	Quantum computing – Terminology and vocabulary
	ISO/IEC AWI TR 18157	Information technology – Introduction to quantum computing

Content part 5

Part 5

Standardization opportunities in Luxembourg

- How to access ICT standards?
- Why and how to get involved in standards' development

Consulting and purchasing standards

- Reading stations
- e-Shop

Who can participate?

Open to all socio-economic actors in Luxembourg

Costs of participation?

Registration is free-of-charge

How to register?

Registration is done using ILNAS/OLN/F001a form (Initial registration) or ILNAS/OLN/F001b form (Additional registration).

Content part 5

Why to get involved in standards' development ?

- Collaborate to defend common interests
- Learn about your competitors and their positions in meetings
- Promote your organization and your skills at national, European and international levels
- Access drafts standards and influence their content based on your know-how
- Propose new standards projects
- Increase your knowledge regarding the state of the art in standardization of your core business
- Anticipate the evolution of your activity sector's good practices
- Integrate strategic network of national, European or international experts

To conclude…

Main takeaways of the quantum technologies report

- **Know the importance of technical standardization in quantum technologies**
  - Know some existing standards
  - Know who is developing standards in quantum technologies
  - Follow their work, their evolution
  - Join them as delegate to
    - Shape new standards that are in project form
    - Rework published standards that are under revision
    - Propose new standards and lead projects
- **Know what services ILNAS and ANEC GIE can offer to support you**
  - Coach you as a delegate
  - Serve as an interface to submit comments

DON'T HESITATE TO:

- **DIVE INTO THE DOCUMENT!**
- **CONTACT THE ANEC GIE PROJECT OFFICERS!**

ILNAS

ILNAS Breakfast “Quantum Technologies and Standards Analysis for the ICT Sector”

Standards Analysis ICT – Luxembourg - V13.0

21 November 2023

Nicolas DOMENJOUD - Responsible ICT & Technical Standardization, ILNAS

What is this document?

1. Promoting the ICT technical standardization to the market
2. Reinforcing the valorization and the involvement regarding ICT technical standardization
3. Supporting and strengthening the EaS and the related research activities

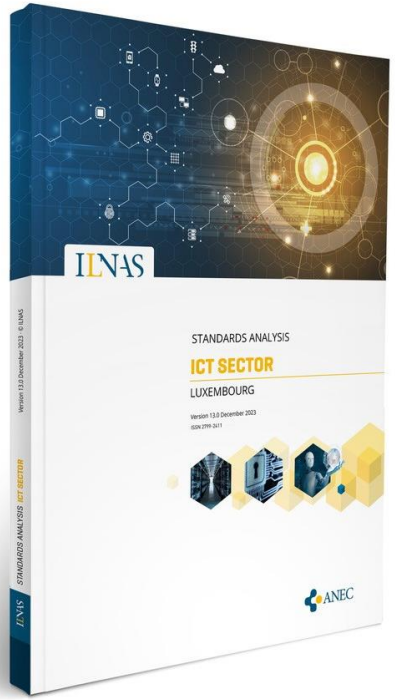
A main outcome of Project 1

"Drawing up a yearly national standards analysis for the Smart Secure ICT sector"

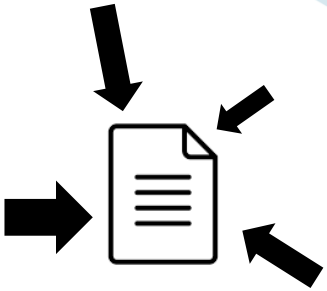
- Baseline resource
- Actionable, practical information
- Freely available online

Twice a year, actually Spring and Autumn

What is this document?



Main information
A single-document resource of technical standardization committees covering the overall ICT sector

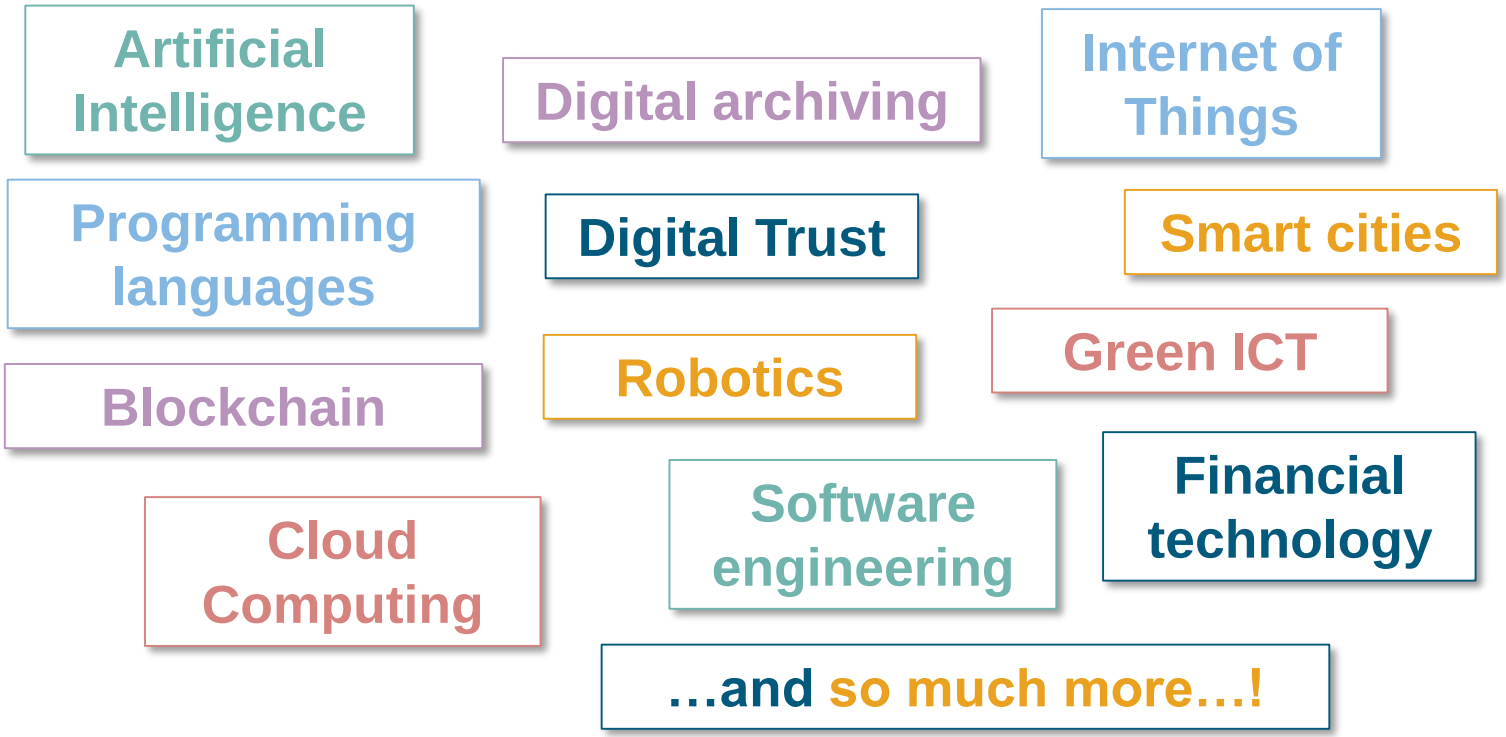


Purpose
To help you identify quickly and efficiently those SDOs and committees relevant to your business

What aims?
- Sources of technical standards that might impact you
- Identify committees connected to your business within which participating might by of interest

What is this document?

An overview of ICT standardization overall



- ***Budding technologies (and their security) → Budding committees in standardization… BUT ALSO***
- ***Maintenance of standards, and contributions to standards projects, in "classic" topics***

Generalities on standardization

- Quick overviews of ISO, IEC, ITU-T, CEN, CENELEC, ETSI
- Definitions and purpose of standardization (World Trade Organization, European legislation)

A presentation of the main national actors

- ILNAS, your national standards body
- ANEC GIE, in support of ILNAS for the promotion and standardization…

…and the delivery of services!

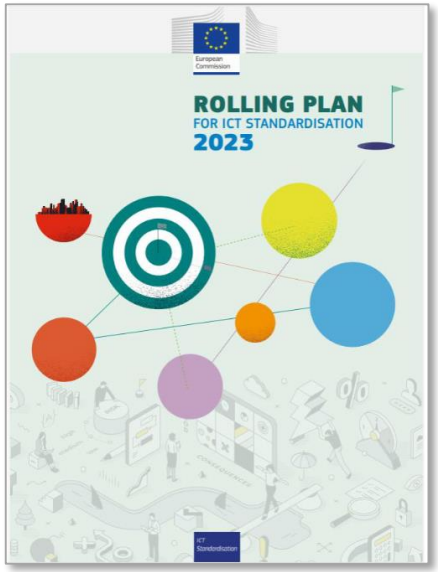
Your standardization partners in Luxembourg

Content - Chapter 2: ICT Subsectors definition

- Technical committees of interest broken down by sub-sectors

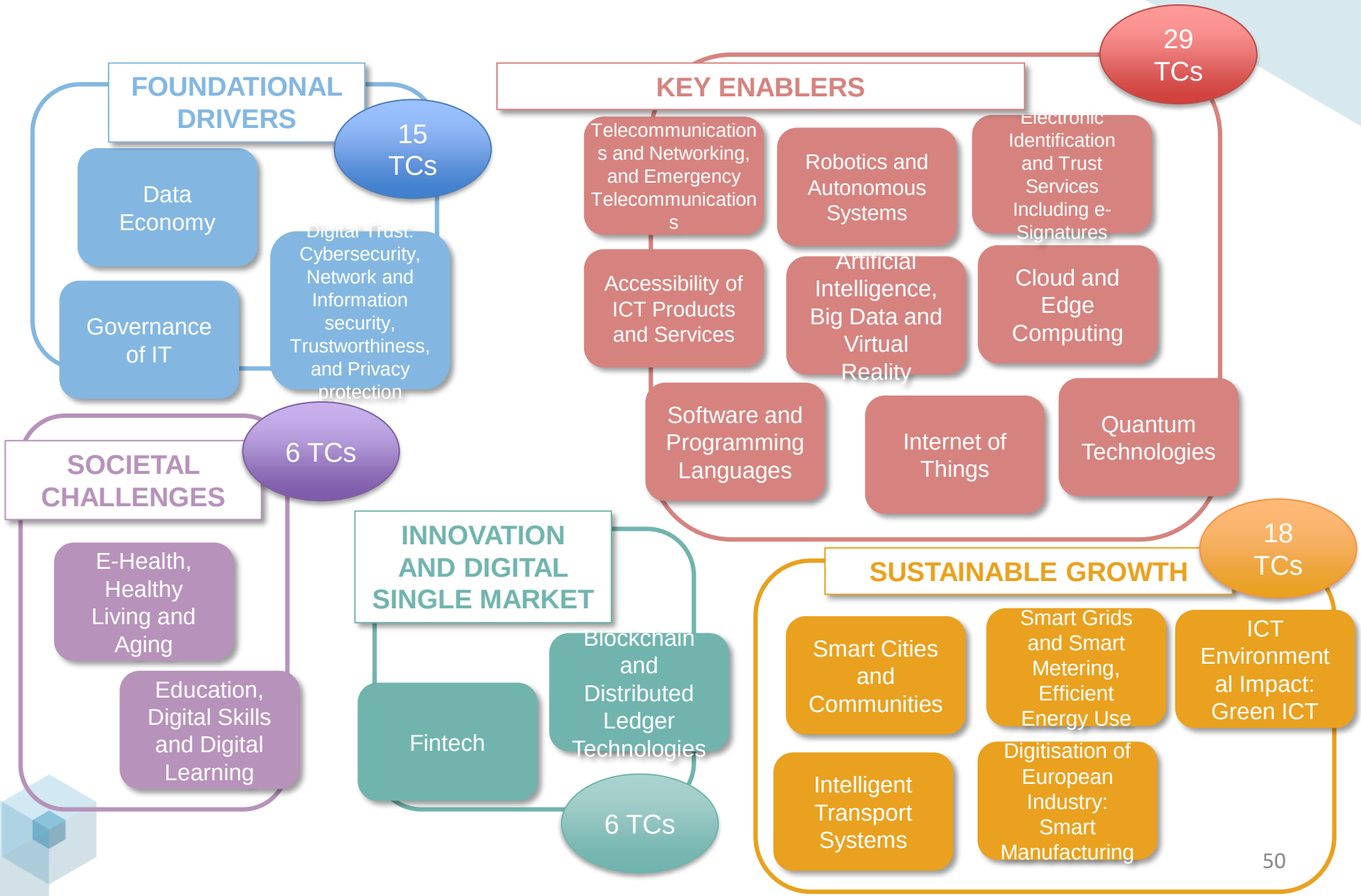
- Sub-sectors inspired by the European Commission's Rolling Plan for ICT technical standardization, which defines the most important standardization initiatives and actions supporting EU policies

- The Rolling Plan 2023 identifies around 260 actions grouped into 39 technological or application domains under 5 thematic areas: foundational drivers, key enablers, societal challenges, innovation for the single market and sustainable growth

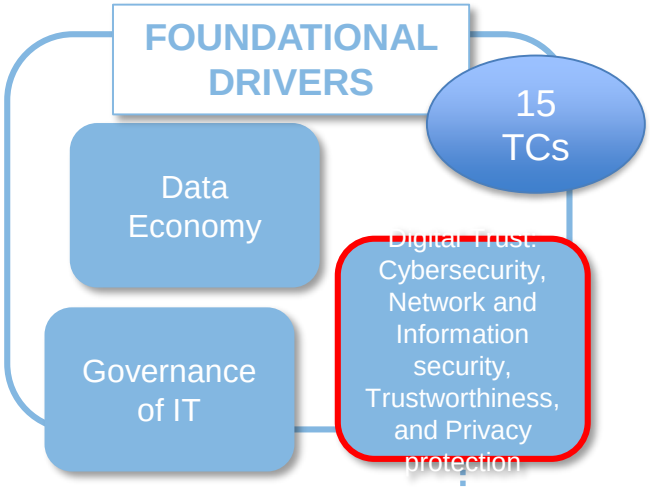


https://joinup.ec.europa.eu/collection/rolling-plan-ict-standardisation/rolling-plan-2023

Content Chapter 2: Subsectors



Content - Chapter 3: ICT Sector Standards Watch – Technical Committee's ID-cards



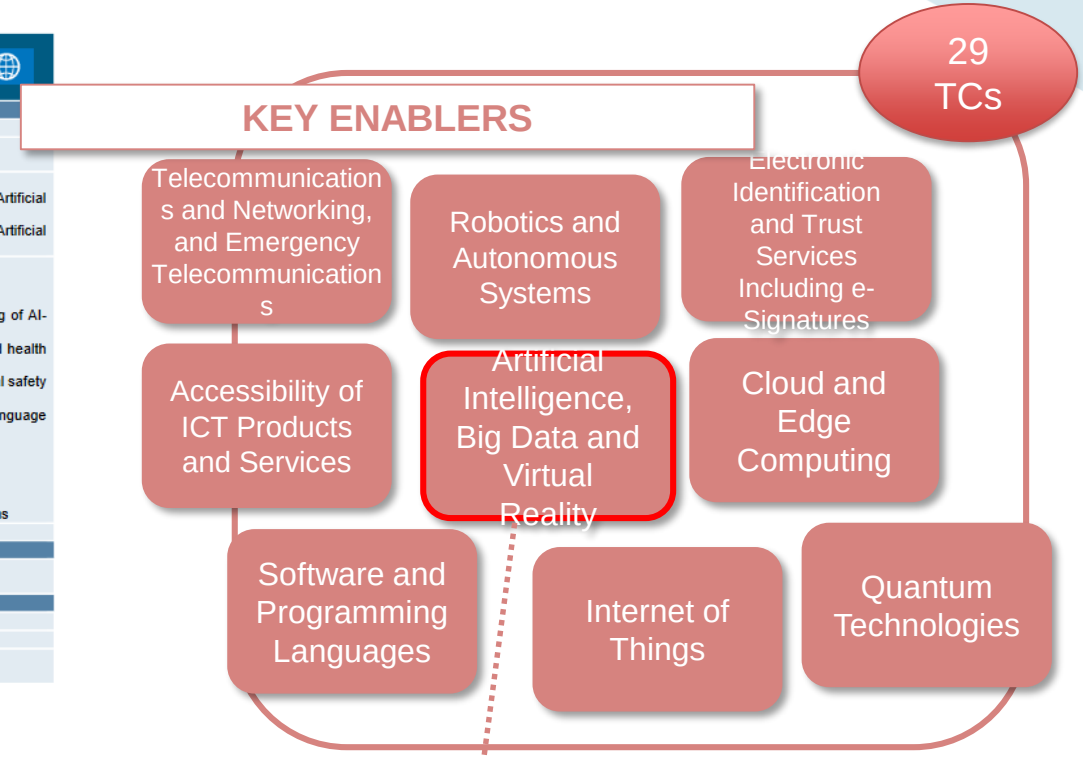
- ISO/IEC JTC 1/WG 13 – Trustworthiness
- ISO/IEC JTC 1/SC 27 – Information security, cybersecurity and privacy protection
- ISO/PC 317 – Consumer protection: privacy by design for consumer goods and services
- CEN/CLC JTC 13 – Cybersecurity and data protection
- ETSI/TC CYBER – Cybersecurity
- …

ISO/IEC JTC 1/SC 27
INFORMATION SECURITY, CYBERSECURITY AND PRIVACY PROTECTION

GENERAL INFORMATION			
Creation date	1989	Secretariat	DIN (Germany)
Chairperson	Mr. Dr. Andreas Wolf	Committee Manager	Mr. Sobhi Mahmoud
Scope	The development of standards for the protection of information and ICT. This includes generic methods, techniques and guidelines to address both security and privacy aspects, such as: - Security requirements capture methodology; - Management of information and ICT security; in particular, information security management systems, security processes, and security controls and services; - Cryptographic and other security mechanisms, including but not limited to mechanisms for protecting the accountability, availability, integrity and confidentiality of information; - Security management support documentation including terminology, guidelines as well as procedures for the registration of security components; - Security aspects of identity management, biometrics and privacy; - Conformance assessment, accreditation and auditing requirements in the area of information security management systems; - Security evaluation criteria and methodology. SC 27 engages in active liaison and collaboration with appropriate bodies to ensure the proper development and application of SC 27 standards and technical reports in relevant areas.		
Structure	AG 2 Trustworthiness AG 5 Strategy AG 6 Operations AG 7 Communication and outreach (AG-CO) AG 8 Advisory Group on Conformity Assessment AHG 1 Resolution Drafting AHG 2 Security and privacy in IoT and Digital Twin AHG 3 Security and privacy in AI and Big Data (BD) CAG Chair's Advisory Group JWG 6 Joint ISO/IEC JTC1/SC 27 - ISO/TC 22/SC 32 WG: Cybersecurity requirements and evaluation activities for connected vehicle devices WG 1 Information security management systems WG 2 Cryptography and security mechanisms WG 3 Security evaluation, testing and specification WG 4 Security controls and services WG 5 Identity management and privacy technologies **Joint working groups under the responsibility of another committee:** ISO/TC 307/JWG 4 Joint ISO/TC 307 - ISO/IEC JTC 1/SC 27 WG: Security, privacy and identity for Blockchain and DLT		
Webpage	https://www.iso.org/committee/45306.html		
STANDARDIZATION WORK			
Published standards	238	Projects	70
INTERNATIONAL MEMBERS AND NATIONAL INVOLVEMENT			
P-Members	56 participating members (including **Luxembourg**)		
O-Members	34 observing members		
Luxembourg's involvement	**26 national delegates** *Note: National participation in ISO/IEC JTC 1/SC 27 is done via ILNAS' National Standardization Commission "Cybersecurity", which centralizes and coordinates Luxembourg experts' work in ISO/IEC JTC 1/SC 27, ISO/IEC JTC 1/WG 13, CEN/CLC/JTC 13, and ISO/PC 317.*		

Content - Chapter 3: ICT Sector Standards Watch – Technical Committee's ID-cards

ISO/IEC JTC 1/SC 42 ARTIFICIAL INTELLIGENCE			
GENERAL INFORMATION			
Creation date	2017	Secretariat	ANSI (United States)
Chairperson	Mr. Wael William Diab	Committee Manager	Ms. Heather Benko
Scope	Standardization in the area of Artificial Intelligence - Serve as the focus and proponent for JTC 1's standardization program on Artificial Intelligence; - Provide guidance to JTC 1, IEC, and ISO committees developing Artificial Intelligence applications.		
Structure	AG 3 AI standardization roadmapping AHG 4 Liaison with SC 27 AHG 7 JTC1 joint development review JWG 2 Joint Working Group ISO/IEC JTC1/SC 42 - ISO/IEC JTC1/SC 7: Testing of AI-based systems JWG 3 Joint Working Group ISO/IEC JTC1/SC42 - ISO/TC 215 WG: AI enabled health informatics JWG 4 Joint Working Group ISO/IEC JTC1/SC 42 - IEC TC 65/SC 65A: Functional safety and AI systems JWG 5 Joint Working Group ISO/IEC JTC1/SC 42 - ISO/TC 37 WG: Natural language processing systems WG 1 Foundational standards WG 2 Data WG 3 Trustworthiness WG 4 Use cases and applications WG 5 Computational approaches and computational characteristics of AI systems		
Webpage	https://www.iso.org/committee/6794475.html		
STANDARDIZATION WORK			
Published standards	20	Projects	35
INTERNATIONAL MEMBERS AND NATIONAL INVOLVEMENT			
P-Members	37 participating members (including **Luxembourg**)		
O-Members	23 observing members		
Luxembourg's involvement	**22 national delegates**		



- ISO/IEC JTC 1/SC 24 – Computer graphics, image processing and environmental data representation
- ISO/IEC JTC 1/SC 42 – Artificial Intelligence
- CEN/CLC JTC 21 – Artificial Intelligence
- ETSI/TC SAI – Securing Artificial Intelligence
- …

Content - Chapter 3: ICT Sector Standards Watch - Other information

Also, some information on:

- ITU-T Study Groups
- ETSI Industry Specification Groups
- CEN/CENELEC Workshops

WS	TITLE AND LINK	RELATED SUBSECTOR(S)
CEN/CLC/WS DSO	Digital sovereignty	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy protection
CEN/CLC/WS SEP2	Industry Best Practices and an Industry Code of Conduct for Licensing of Standard Essential Patents in the field of 5G and Internet of Things	Internet of Things Telecommunications and Networking, and Emergency Telecommunication
CEN/CLC/WS AADSF	Age Appropriate Digital Services Framework	Accessibility of ICT Products and Services
CEN/CLC/WS INACHUS	Urban search and rescue (USaR) robotic platform technical and procedural interoperability	Robotics and Autonomous Systems
CEN/CLC/WS Monsoon	Predictive management of data intensive industrial processes	Artificial Intelligence and (Big) Data Digitisation of European Industry: Smart Manufacturing
CEN/CLC/WS SEP-IoT	Workshop on Best Practices and a Code of Conduct for Licensing Industry Standard Essential Patents in 5G and the Internet of Things (IoT), including the Industrial Internet	Internet of Things Telecommunications and Networking, and Emergency Telecommunication
CEN/CLC/WS ZONeSEC	Interoperability of security systems for the surveillance of widezones	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy protection
CEN/CLC/WS WiseGRID	Reference model for distribution application for microgrids	Smart Grids and Smart Metering, Efficient Energy Use
CEN/CLC/WS EFPFInterOp	European Connected Factory Platform for Agile Manufacturing Interoperability	Digitisation of European Industry: Smart Manufacturing
CEN/CLC/WS ZDMterm	Zero Defects in Digital Manufacturing Terminology	
CEN/WS Smart-CE-Marking	Smart CE marking for the construction industry	
CEN/WS TDT	Trusted Data Transaction	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy protection

Table 3: CEN and CEN/CLC Workshops (WS)

SG	TITLE AND LINK	RELATED SUBSECTOR(S)
SG 2	Operational aspects	Telecommunications and Networking, and Emergency Telecommunication
SG 3	Economic & policy issues	
SG 5	Environment, EMF & circular economy	ICT Environmental Impact: Green ICT
SG 9	Broadband cable & TV	
SG 11	Protocols, testing & combating counterfeiting	Telecommunications and Networking, and Emergency Telecommunication
SG 12	Performance, QoS & QoE	
SG 13	Future networks	Cloud and Edge Computing Telecommunications and Networking, and Emergency Telecommunication
SG 15	Transport, access & home	Telecommunications and Networking, and Emergency Telecommunication
SG 16	Multimedia & digital technologies	
SG 17	Security	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy Protection
SG 20	IoT, smart cities & communities	Internet of Things

Table 1: ITU study groups

ISG	TITLE AND LINK	RELATED SUBSECTOR(S)
ARF	Augmented Reality Framework	Artificial Intelligence and (Big) Data
CDM	European Common information sharing environment service and Data Model	
CIM	Cross-cutting Context Information Management	Smart Cities and Communities, and Buildings
ENI	Experiential Networked Intelligence	Telecommunications and Networking, and Emergency Telecommunication
ETI	Encrypted Traffic integration	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy protection
F5G	5th Generation Fixed Network	Telecommunications and Networking, and Emergency Telecommunication
MEC	Multi-access Edge Computing	Internet of Things
mWT	Millimeter Wave transmission	Telecommunications and Networking, and Emergency Telecommunication
NFV	Network Functions Virtualisation	
NIN	Non-IP Networking	
OEU	Operational energy Efficiency for Users	ICT Environmental Impact: Green ICT
PDL	Permissioned Distributed Ledger	Blockchain and Distributed Ledger Technologies
QKD	Quantum Key Distribution	Digital Trust: Cybersecurity, Network and Information security, Trustworthiness, and Privacy protection
RIS	Reconfigurable Intelligent Surfaces	Telecommunications and Networking, and Emergency Telecommunication
SAI	Securing Artificial Intelligence[11]	Artificial Intelligence and (Big) Data
THz	TeraHertz technology	Telecommunications and Networking, and Emergency Telecommunication
ZSM	Zero-touch network and Service Management	

Table 2: ETSI's Industry Specification Groups (ISG)

Content - Chapter 4: Opportunities for the National Market

Details on ILNAS and ANEC GIE products and services, related especially to ICT

- **Information dissemination**
  - Market meetings
  - News items in standardization
  - Standards watch service
- **Consulting and purchasing standards**
  - Reading stations
  - e-Shop
- **Getting involved in standards development**
  - Public enquiry commenting
  - Becoming a delegate in standardization
- **Research and education**
  - White papers and technical reports
  - General and technical training sessions

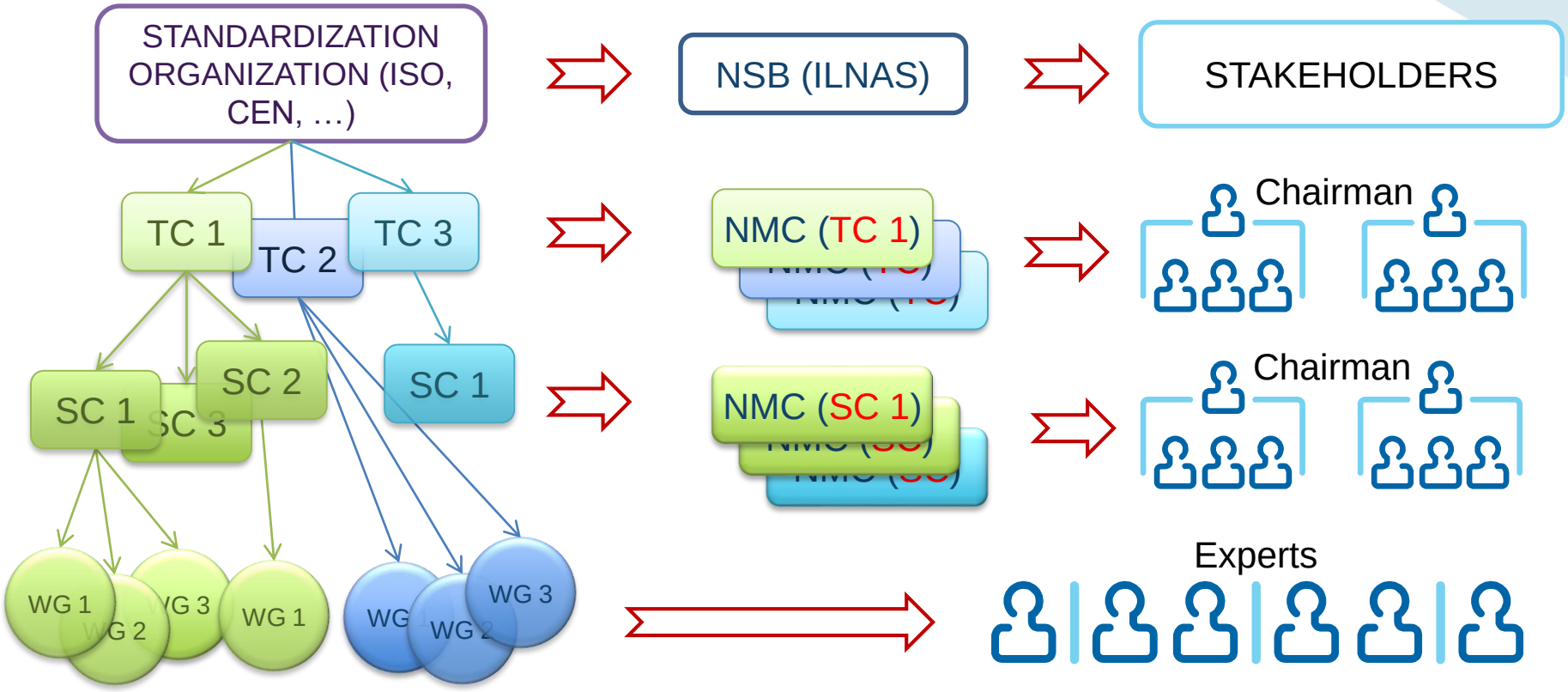
Additional information

Participation of ILNAS to the JTC 1 Plenary Meeting (13-17/11/2023 - Berlin)

Main takeaways:

- ✓ The new ISO/IEC JTC on Quantum technologies, proposed by BSI (UK) should be created soon
- ✓ The ISO/IEC JTC 1/WG 14 on Quantum information technology should be disbanded when the new JTC will be created
- ✓ Metaverse is gaining more and more attention from the standardization point of view – different technical committees have started working on the topic but no dedicated TC
- ✓ Sustainability of ICT is a topic considered by most of the JTC 1/SCs with the creation of new projects

How to participate concretely



- **NSB**: National Standards Body
- **TC**: Technical Committee
- **SC**: Subcommittee - Entity established within a TC responsible for a large work program (focuses on an area of interest of the TC)
- **WG**: Working Group - Group established by a TC or SC that develops standards project(s) within the scope of activity of the TC/SC
- **NMC**: National Mirror Committee

Thank you for your attention!

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