Welcome
Bienvenue
Willkommen

ILNAS

ILNAS Breakfast “Standards Analysis ICT Sector – Luxembourg” - June 2023

Introduction

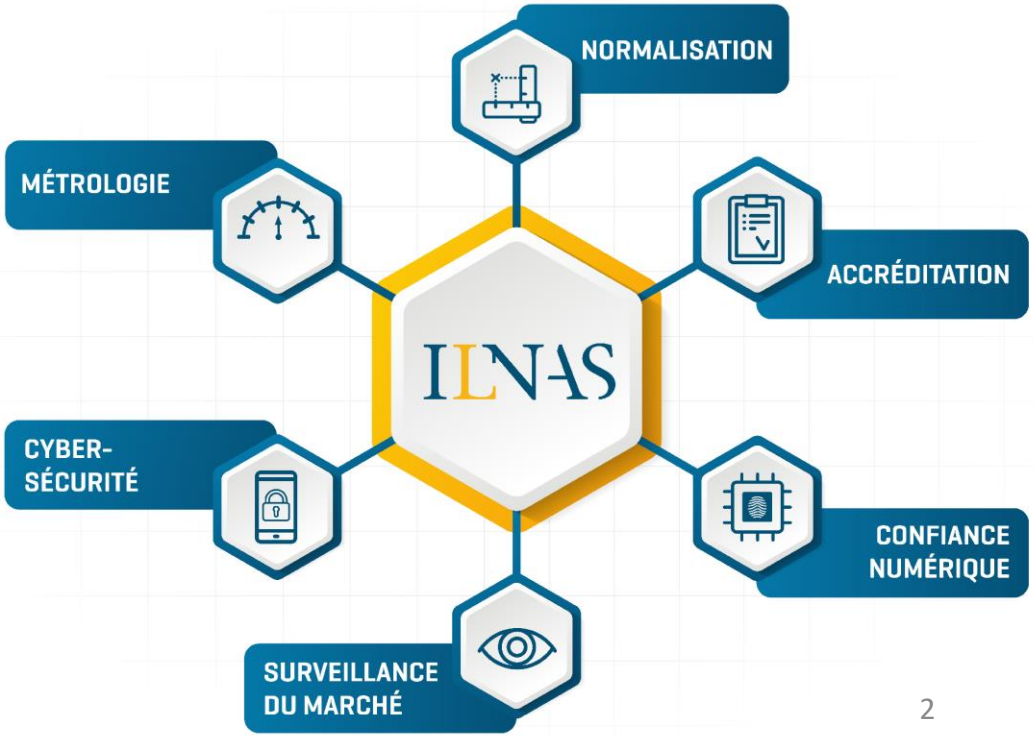
13 June 2023

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: 61 (June 2023)
  - ISO 9001:2015 certification (Budget and administration department, OLN, Digital Trust department, Market surveillance department, BLM, OEC)

- **National Standards Body**
  - Composed of 7 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**: 10 persons, including 4 employees in the standardization department (June 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**

Luxembourg standardization strategy 2020-2030

Technical standardization

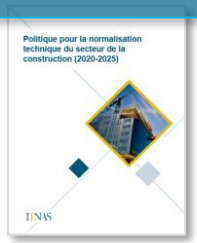
"Inclusive tool for performance and excellence to serve the economy"

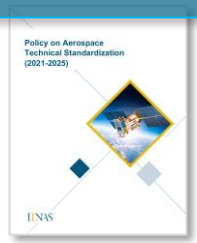
3 growth sectors identified

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
- …

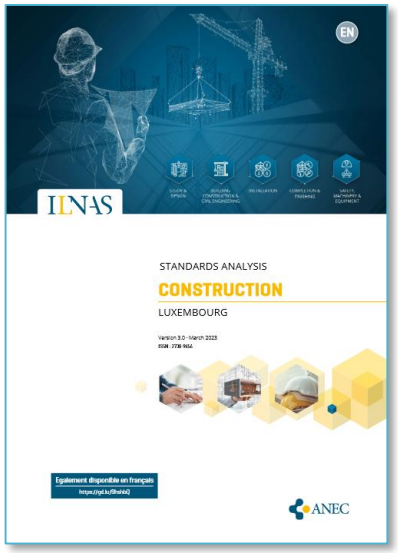
Luxembourg's policy on ICT technical standardization

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

→ Three lead projects

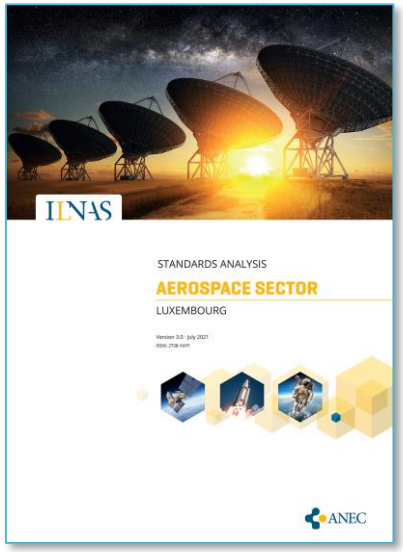
1. Promoting the ICT technical standardization to the market
2. Reinforcing the valorization and the involvement regarding ICT technical standardization
3. Supporting and strengthening the EaS and the related research activities

Promoting the ICT technical standardization to the market



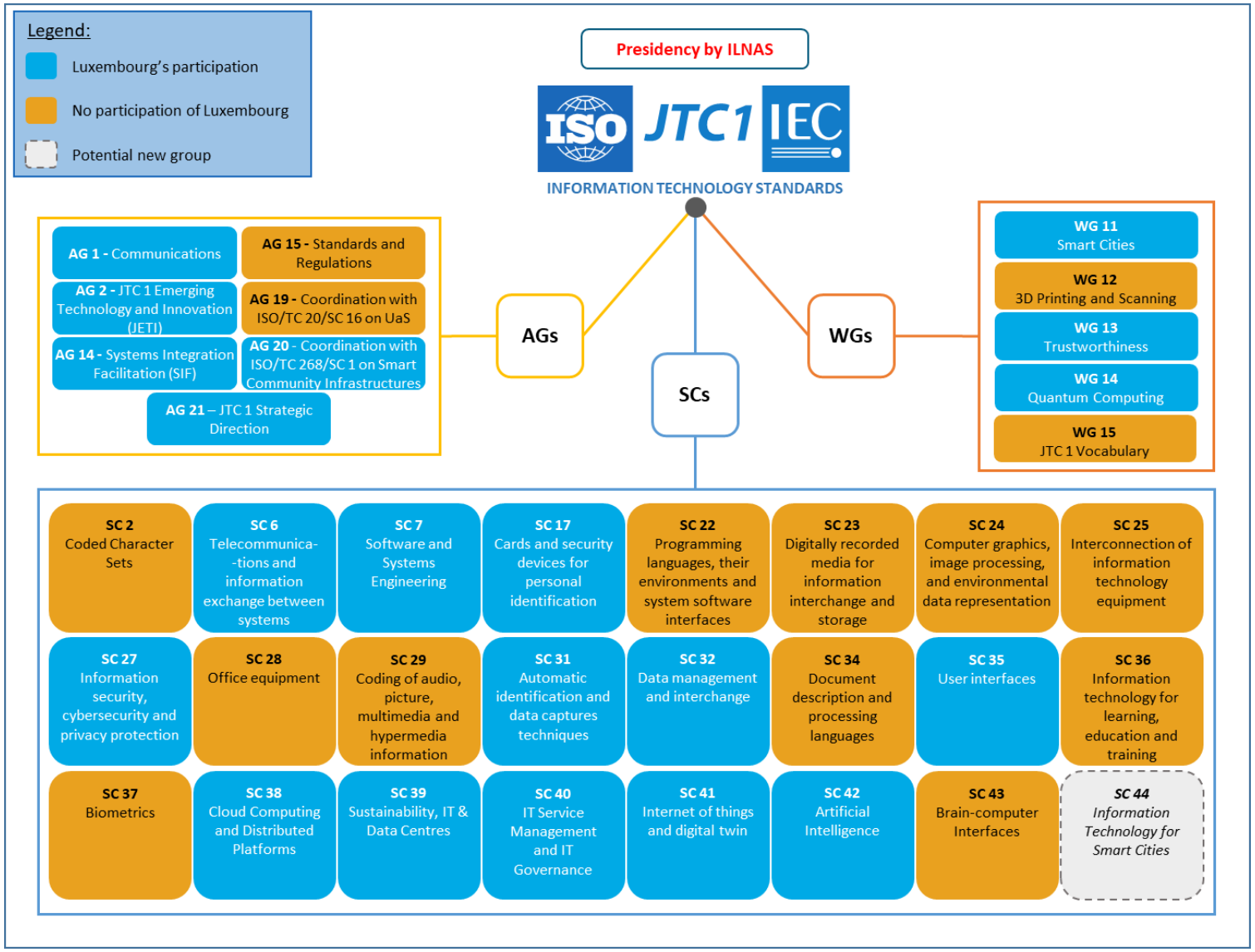
2023 - Standards Analysis

- **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)**



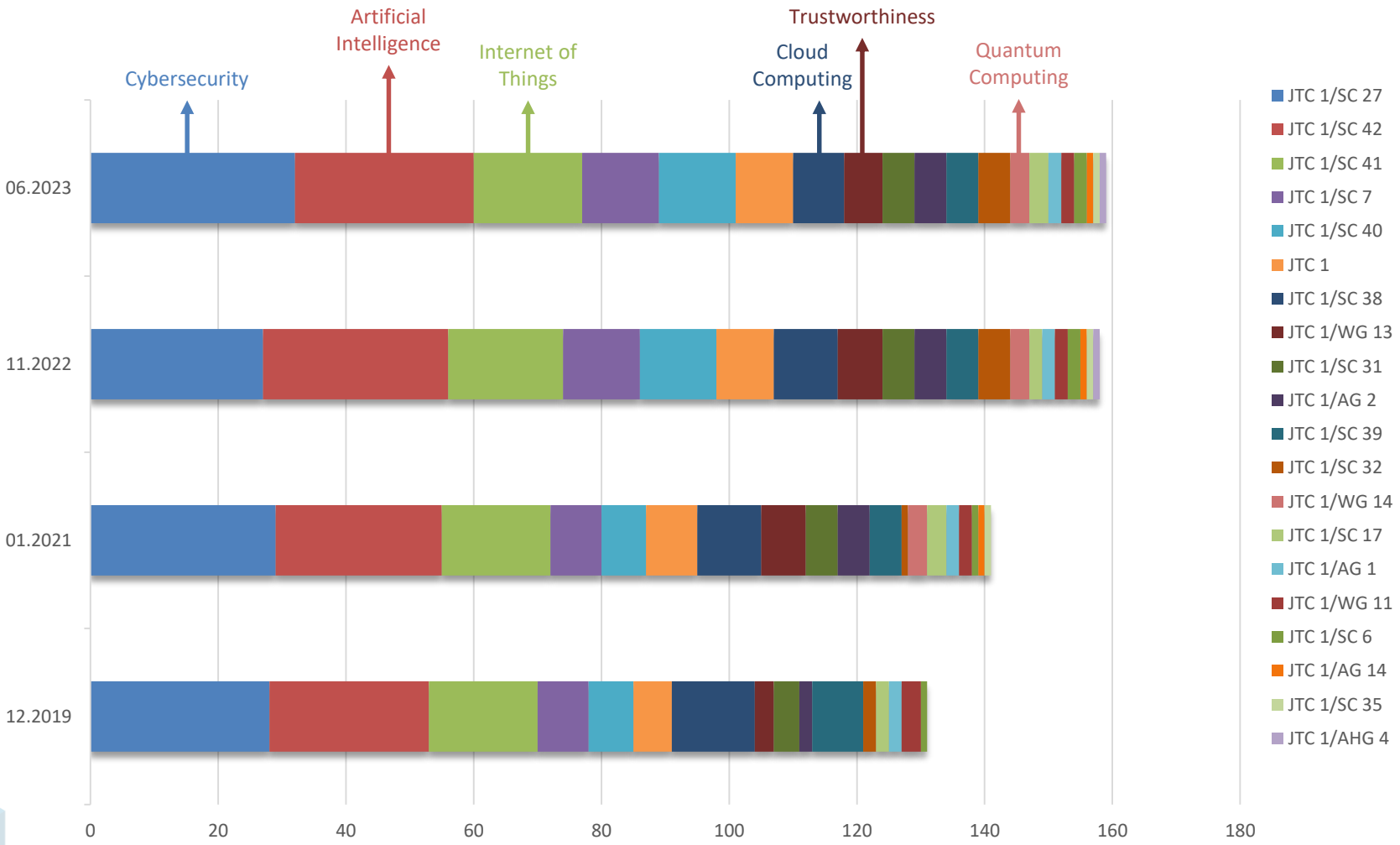
Reinforcing the valorization and the involvement regarding ICT technical standardization

ISO/IEC JTC 1



Reinforcing the valorization and the involvement regarding ICT technical standardization

ISO/IEC JTC 1



→ 78 national delegates registered in ISO/IEC JTC 1 (95 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

Trustworthiness

Security

Data Privacy

CONSTRUCTION

Building Information Modelling (BIM) and its integration with Artificial Intelligence (AI)

ICT

Satellite Images Data Marketplace

3 PhD students

1 postdoc

AEROSPACE

Swarms of Nano-satellites

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

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

9 students

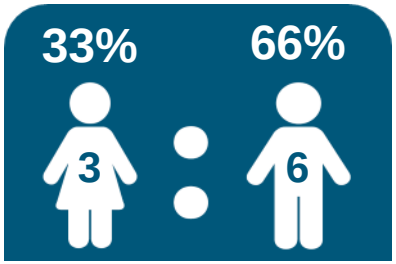
With the support of: THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBOURG Ministry of the Economy

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

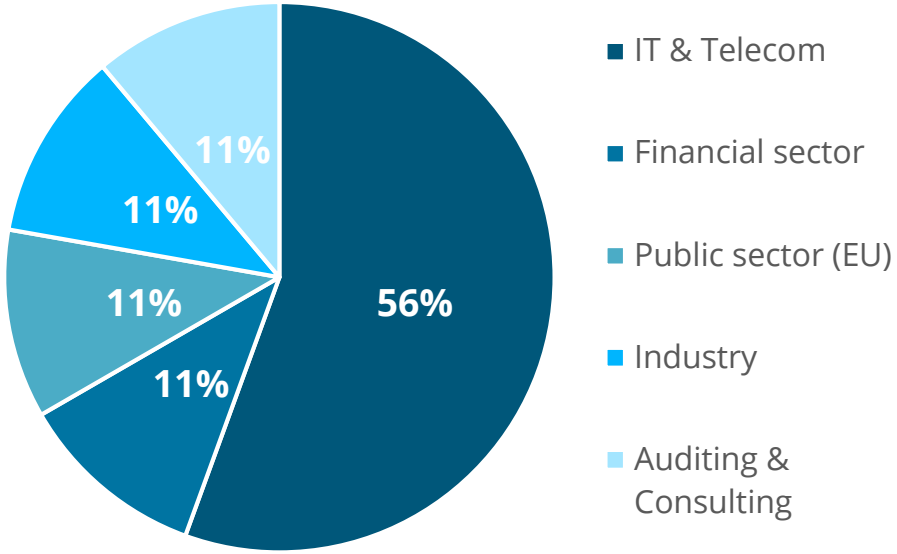
26 → 53

Average: 39

NATIONALITIES

8

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 “Standards Analysis ICT Sector – Luxembourg” - June 2023

Presentation of the National Standards Body

13 June 2023

Jérôme HOEROLD - Head of the Standardization department, ILNAS

1. Standardization activities

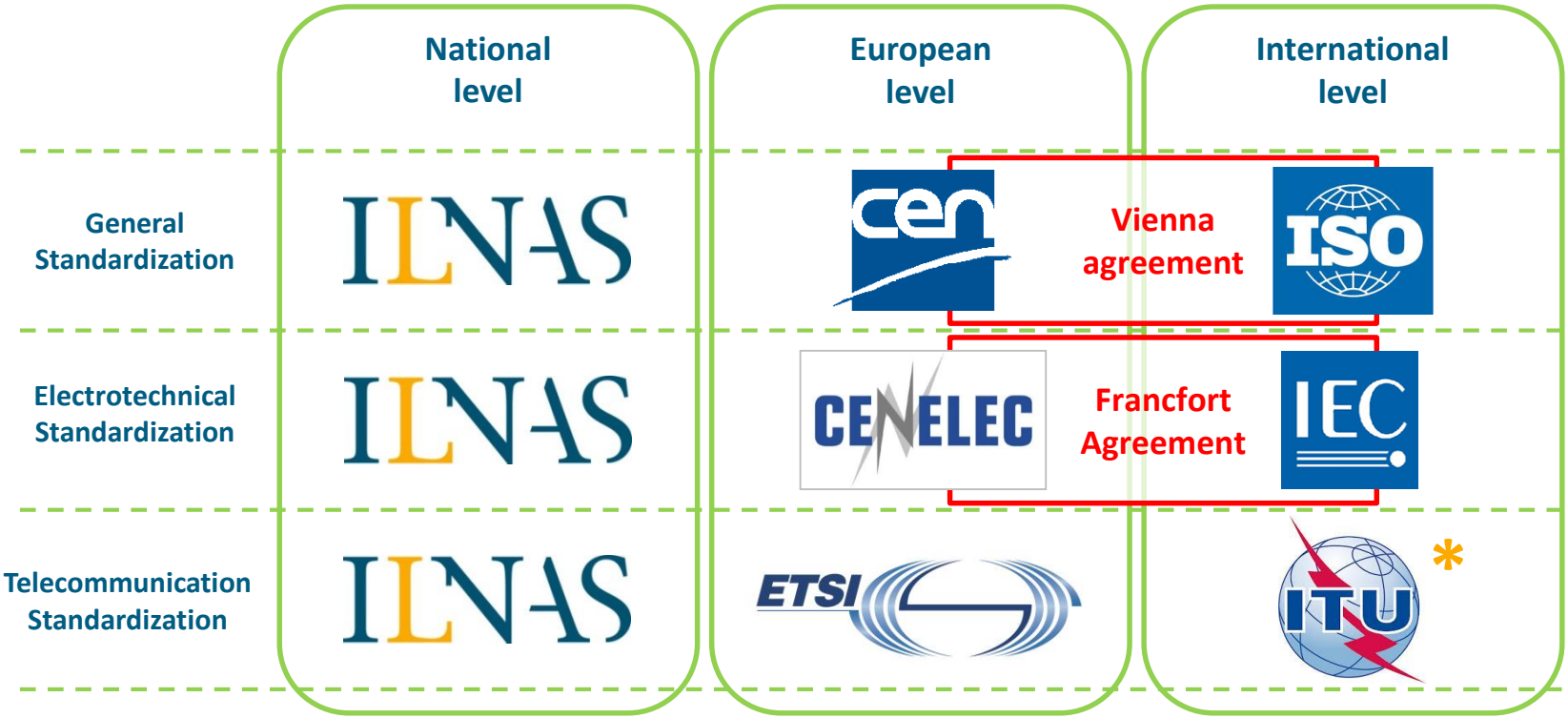
1.1 At national level

- **Coordinate and supervise the creation of national standards**
  - National annexes of the Eurocodes (2011 and 2019)
  - National annex concerning the Winter Diesel (published - 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 (ongoing work)
  - National standard on telecommunication cabling techniques in residential buildings (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 ?**

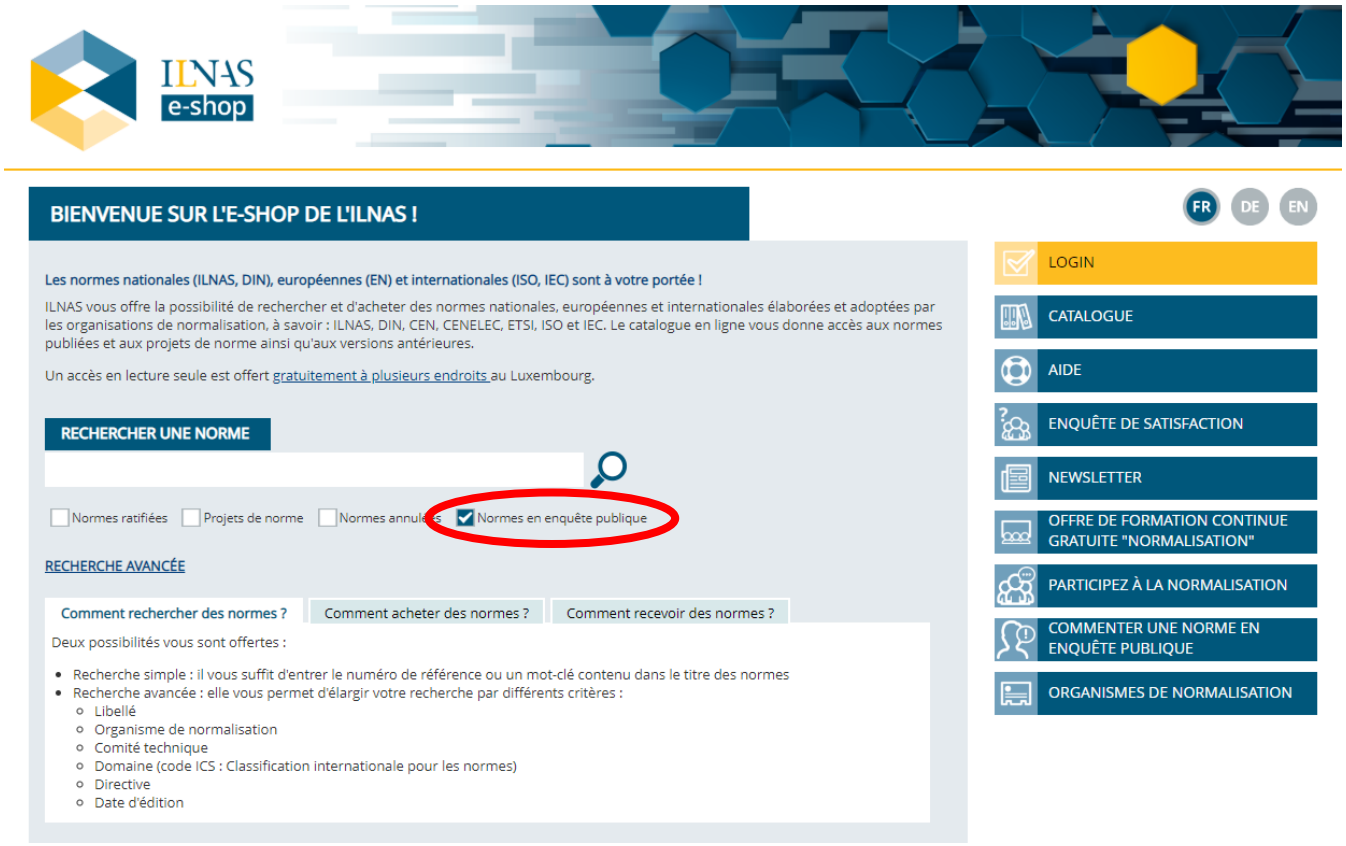
    1) Public enquiry of a draft standard

    2) Active participation in a technical committee

2. Participate in technical standardization

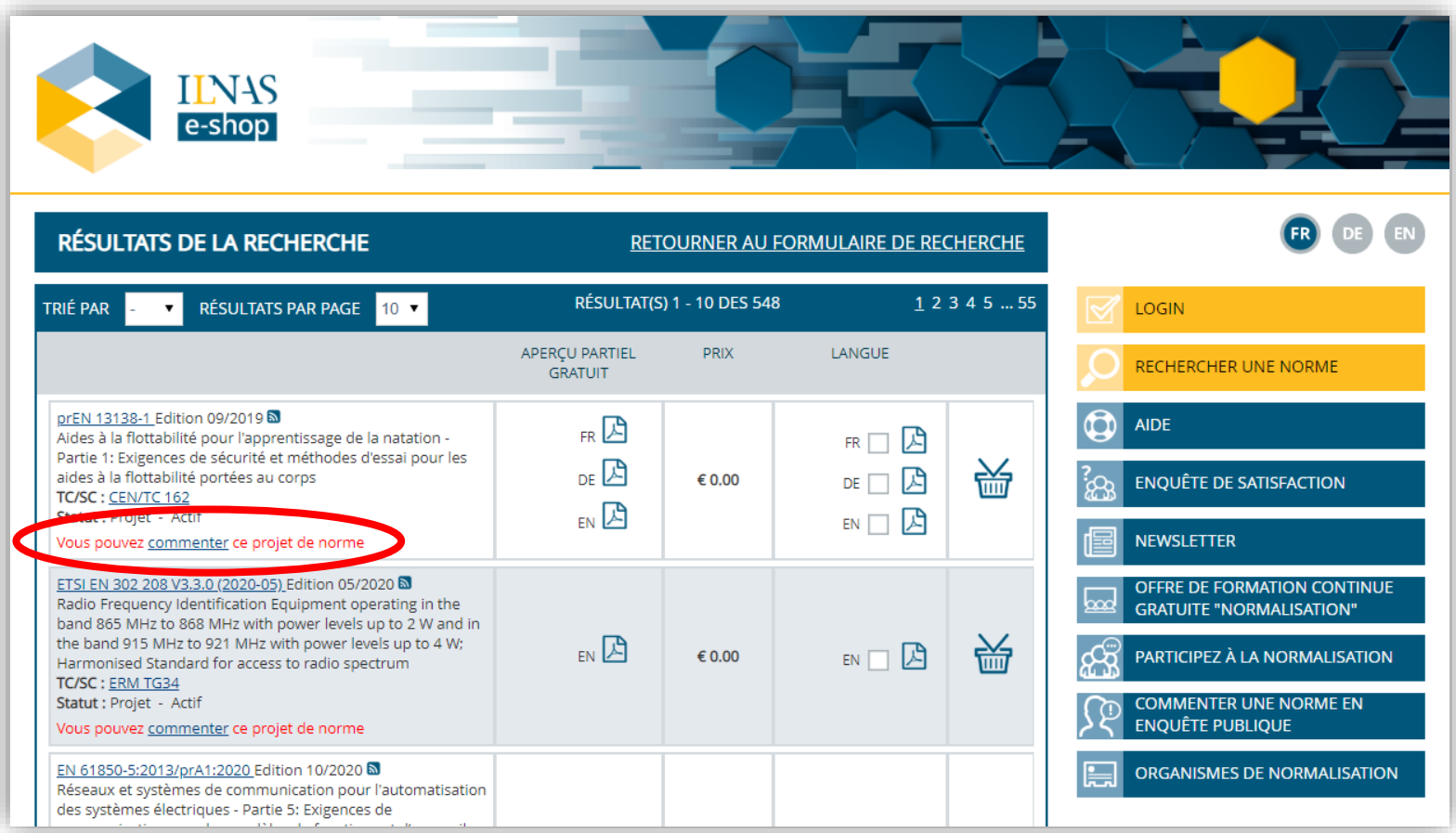
2.2 Public enquiry

- 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

2.2 Public enquiry



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?

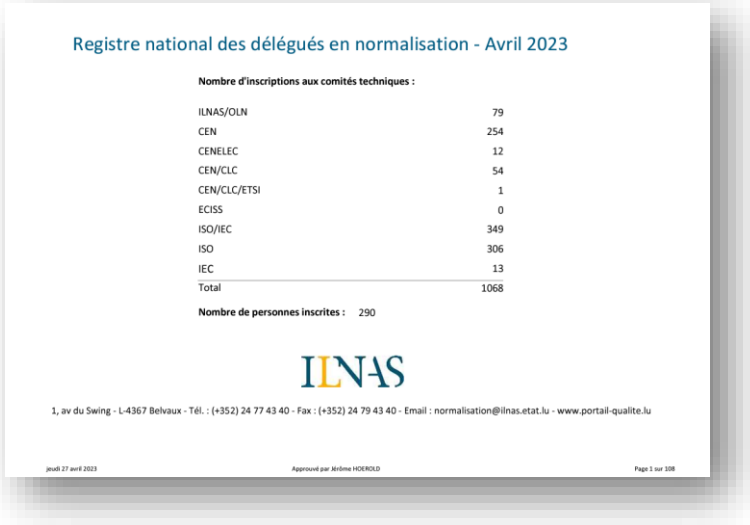
- Every socio-economic actor in Luxembourg with a certain expertise

Costs related to an active participation ?

- Free of charge

National register of standardization delegates

- 290 experts registered
- 1068 registrations in technical committees



Registre national des délégués en normalisation - Avril 2023

Nombre d'inscriptions aux comités techniques :

ILNAS/OLN	79
CEN	254
CENELEC	12
CEN/CLC	54
CEN/CLC/ETSI	1
ECISS	0
ISO/IEC	349
ISO	306
IEC	13
Total	1068

Nombre de personnes inscrites : 290

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

jeudi 27 avril 2023 Approuvé par Jérôme HOEROLD Page 1 sur 108

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

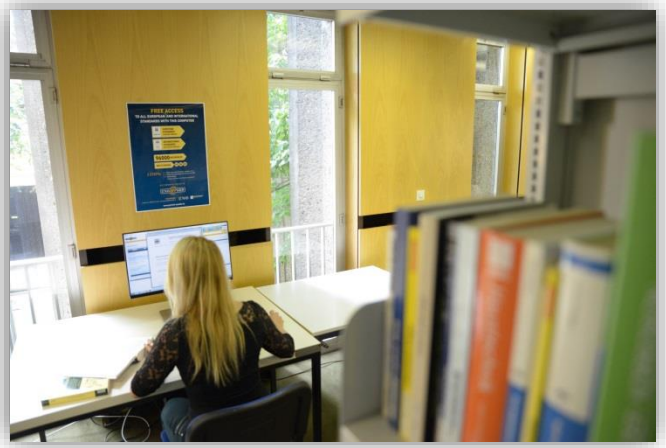
3. Availability of standards

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**



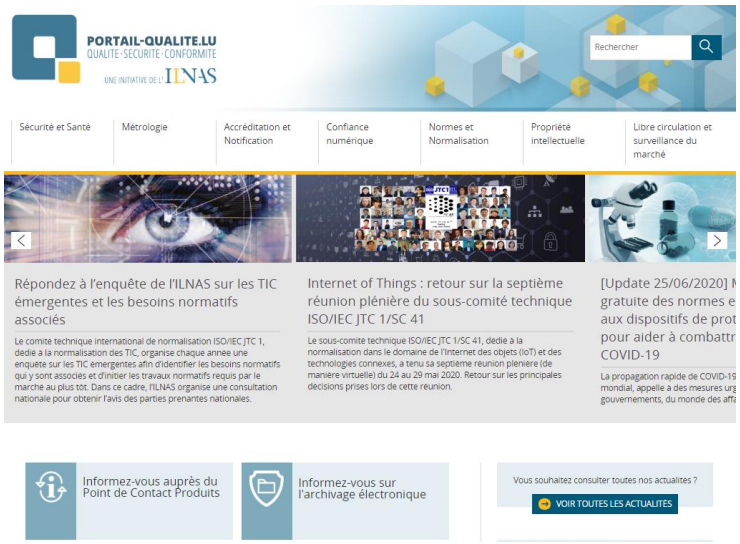
4. Products and services

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:

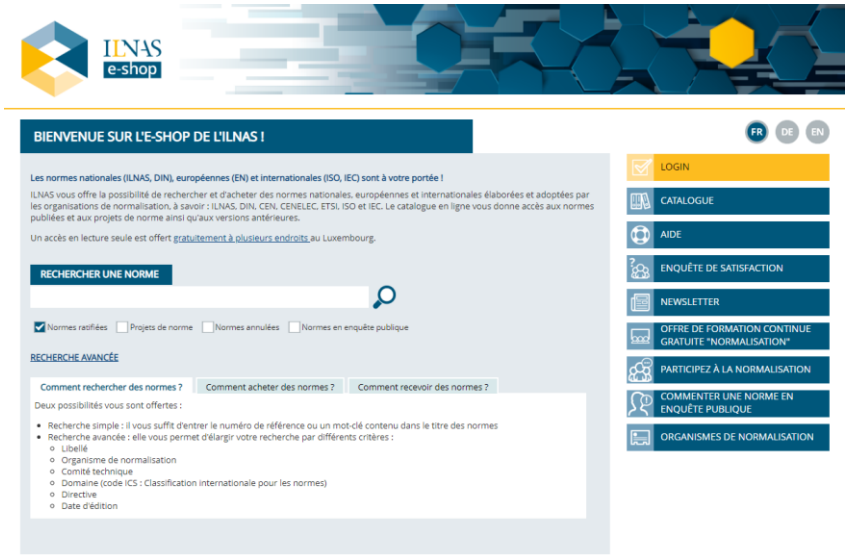
- Diffusion of normative information
- Continuous training in the field of technical standardization
- Standards watch
- National standards analysis (limited to the « priority » sectors defined in the national standardization strategy)

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

Welcome
Bienvenue
Willkommen

ILNAS

ILNAS Breakfast “Standards Analysis ICT Sector – Luxembourg” - June 2023

Standards Analysis ICT - Luxembourg - V12.0

13 June 2023

Nicolas DOMENJOUD - Responsible ICT & Technical Standardization, ILNAS
nicolas.domenjoud@ilnas.etat.lu

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

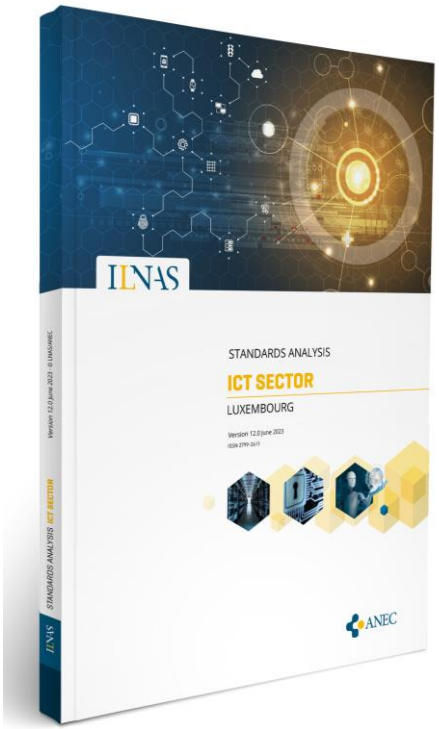
A main outcome of Project 1

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

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

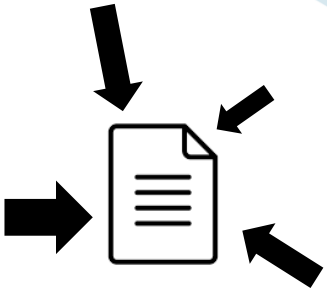
Twice a year, actually Spring and Autumn

What is this document?



Main information

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



CEN CENELEC ETSI

ISO IEC ITU

Purpose

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

What aims?

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

2018-2020 Standards Analyses: Smart ICT

Artificial Intelligence

Internet of Things

+ Digital Trust

Blockchain

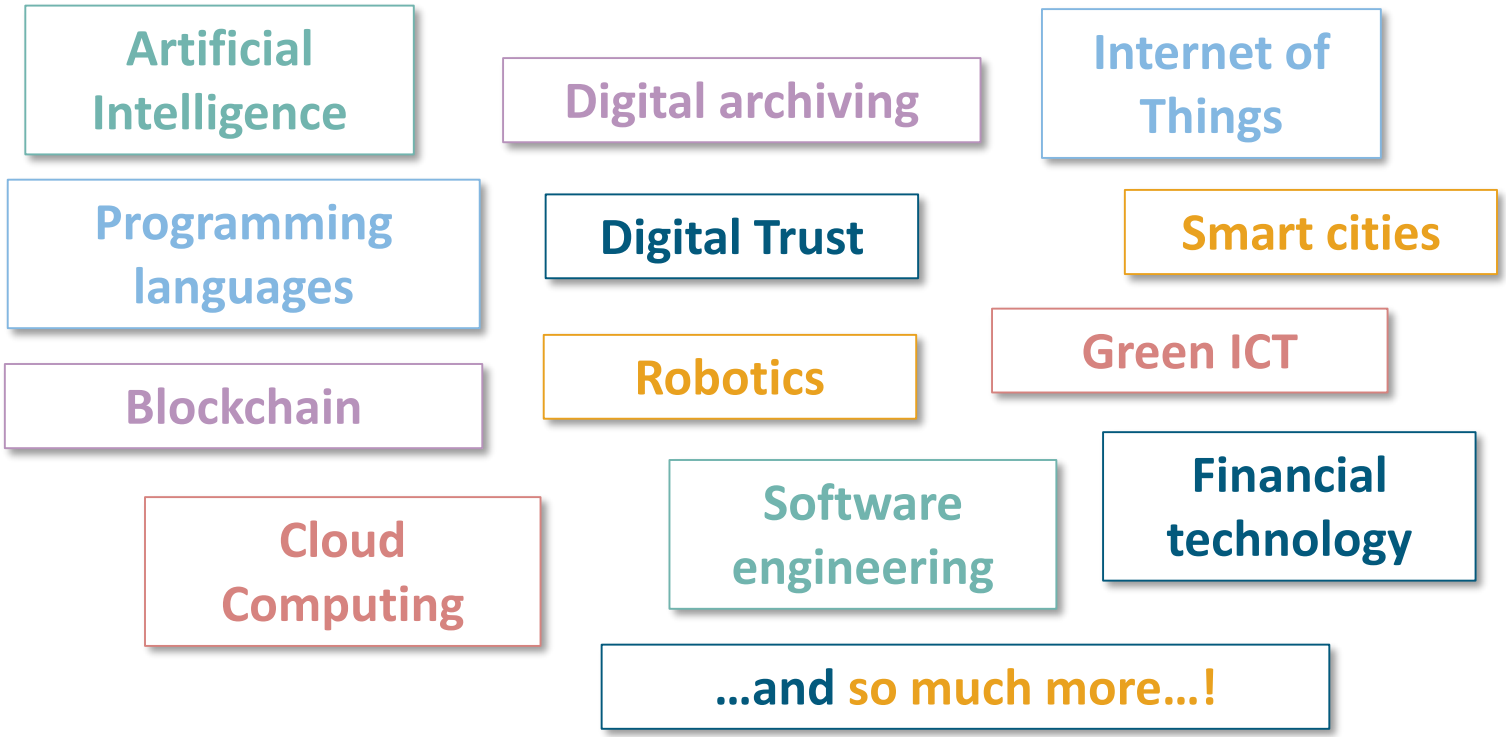
Cloud Computing

Fostering interest in Standardization of new technologies

- *Emerging technologies (and their security) → Recent committees in standardization*
- *A chance to join the efforts early*

ICT standardization in Luxembourg

Since 2021: a return to the promotion of ICT overall



A return to the development of a broader view for the market

- *Emerging technologies (and their security) → Recent 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

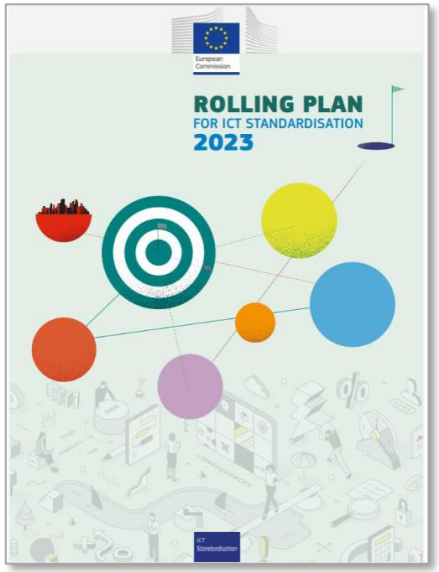
- ILNAS, your national standards body
- ANEC GIE, in support of ILNAS for the promotion and standardization…

…and the delivery of services!

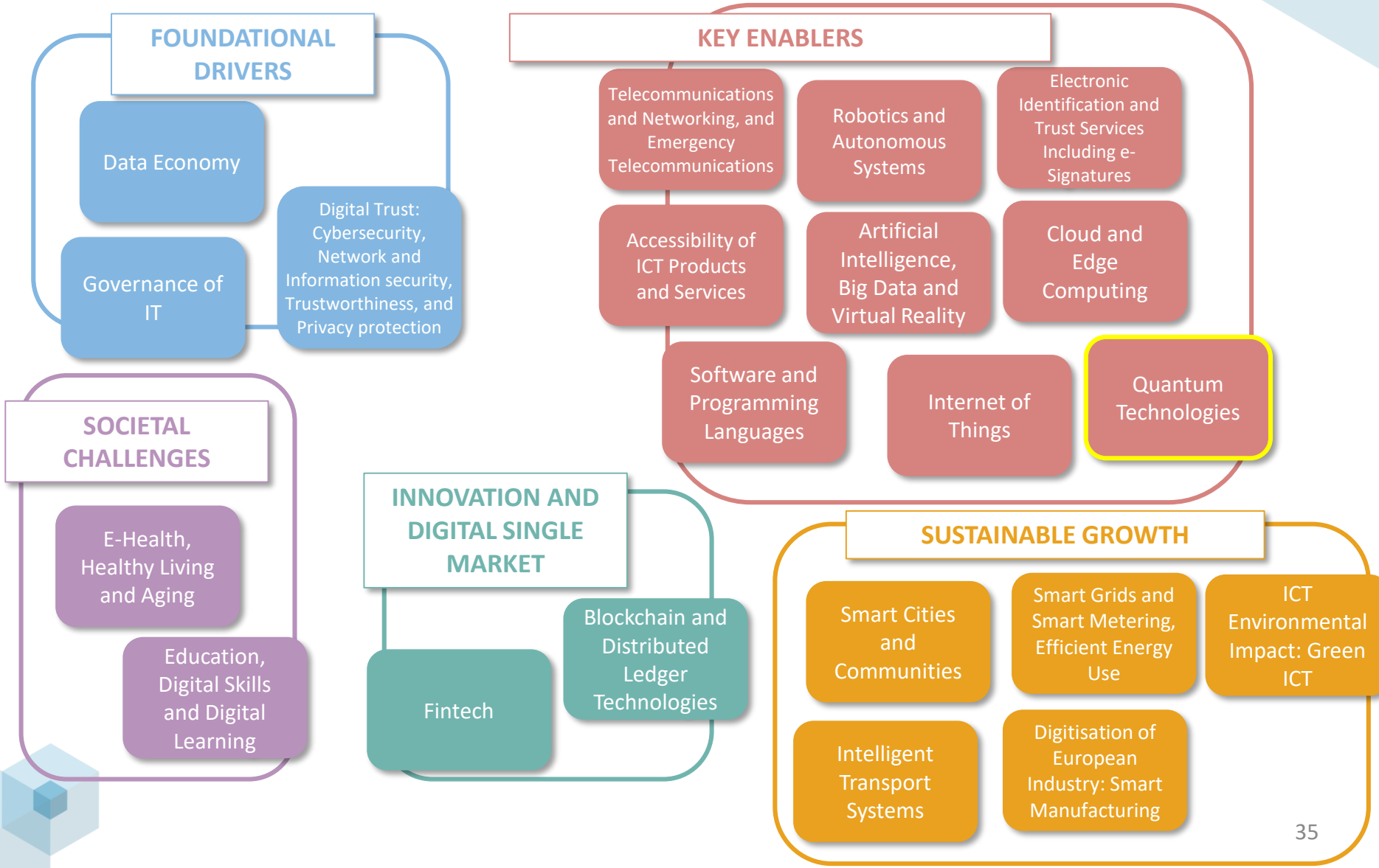
Your standardization partners in Luxembourg

Content - Chapter 2: ICT Subsectors definition

- Technical committees of interest broken down by sub-sector
- Sub-sectors inspired by the European Commission's Rolling Plan in ICT technical standardization
- 21 sub-sectors identified (themselves regrouped into 5 broad categories, also according to the RP)



Content - Chapter 2: Subsectors



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

CEN/CLC/JTC 22 Quantum Technologies			
GENERAL INFORMATION			
Creation date	2022	Secretariat	DIN (Germany)
Chairperson	Mr. Oskar Van Deventer	Secretary	Mr. Marius Loeffler
Scope	The JTC shall produce standardization deliver including quantum enabling technologies, qu systems, quantum composite systems as w following areas: Quantum metrology, sensing a and simulation; Quantum communication and c other technical committees concerned with Qu The JTC shall also consider the adoption of rel from other organisations, like ISO/IEC JTC 1 an standardization deliverables to address Europ underpinning EU legislation, policies, principles		
Structure	-		
Webpage	https://standards.cencenelec.eu/dyn/www/f?p= 3197951,25&cs=1D017DC1C3B0B85DF25A6		
STANDARDIZATION WO			
Published standards	0	Proje	
INTERNATIONAL MEMBERS AND NATIO			
Members	34 members of C		
Luxembourg's involvement	No (no register		

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 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	17	Projects	30
INTERNATIONAL MEMBERS AND NATIONAL INVOLVEMENT			
P-Members	36 participating members (including **Luxembourg**)		
O-Members	20 observing members		
Luxembourg's involvement	**29 national delegates**		

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

Also, some information on:

- ITU-T study groups
- ETSI Industry Specification Groups
- CEN/CENELEC workshop agreements

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	Telecommunications and Networking, and Emergency Telecommunication
SG 11	Protocols, testing & combating counterfeiting	
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

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	

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

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	Experimental 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	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

To conclude…

Main takeaways of the Standards Analysis

- **Know what committees are relevant to your work to:**
  - Know where standards that might impact you are developed
  - Follow the work of technical committees, the evolution of standards
  - Join the committees as a 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 in standardization
  - Serve as an interface to submit comments on standards under development
  - Consult published standards

DON'T HESITATE TO:

- **DIVE INTO THE DOCUMENT!**
- **CONTACT ILNAS!**

Thank you for your attention!

- *Satisfaction survey of the breakfast*
- *Declaration of interest*

ILNAS

Southlane Tower I · 1, avenue du Swing · L-4367 Belvaux

Tel. : (+352) 24 77 43 - 00 · Fax : (+352) 24 79 43 - 10

E-mail: info@ilnas.etat.lu

www.portail-qualite.lu