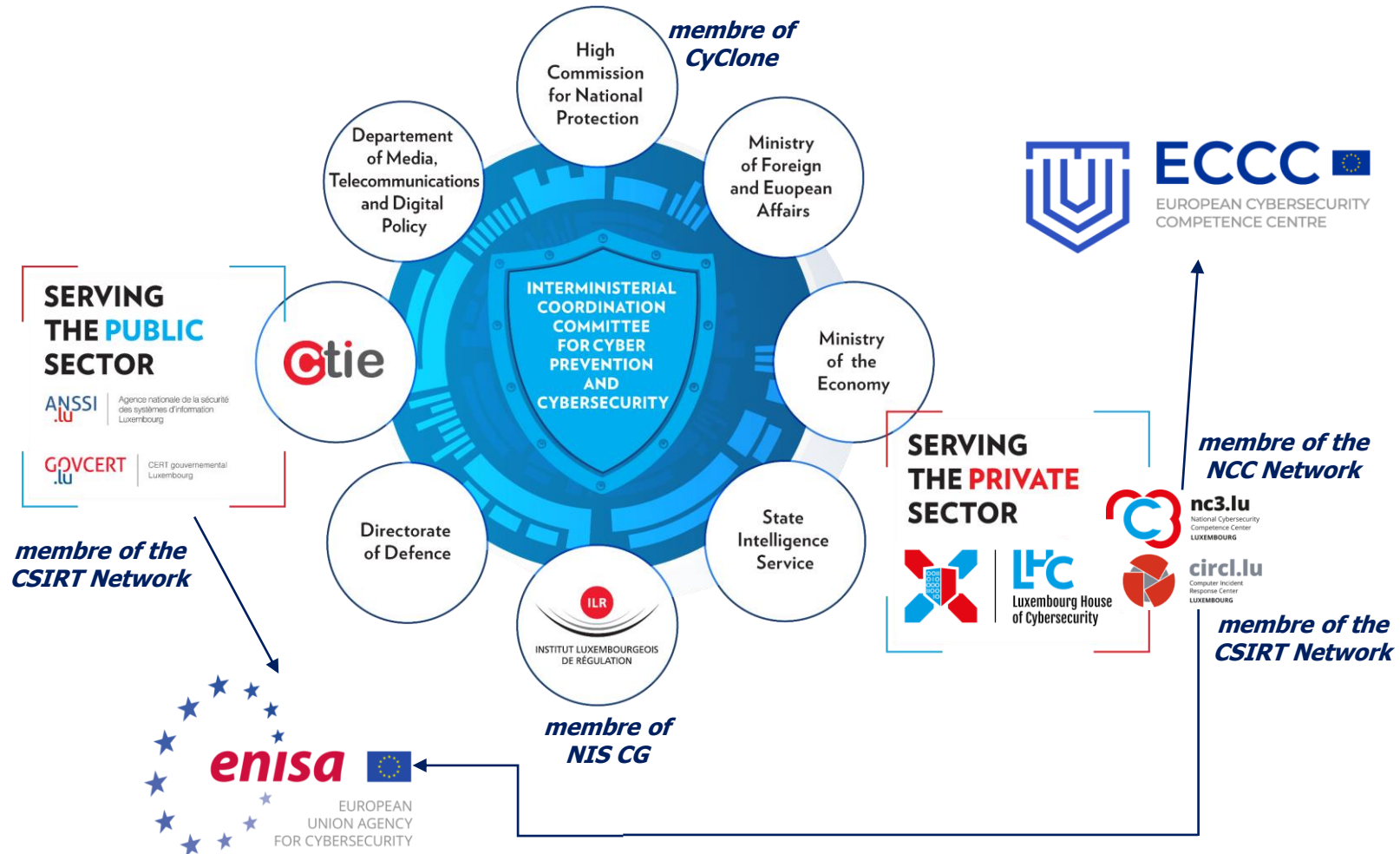


**LUXEMBOURG  
HOUSE OF  
CYBERSECURITY**

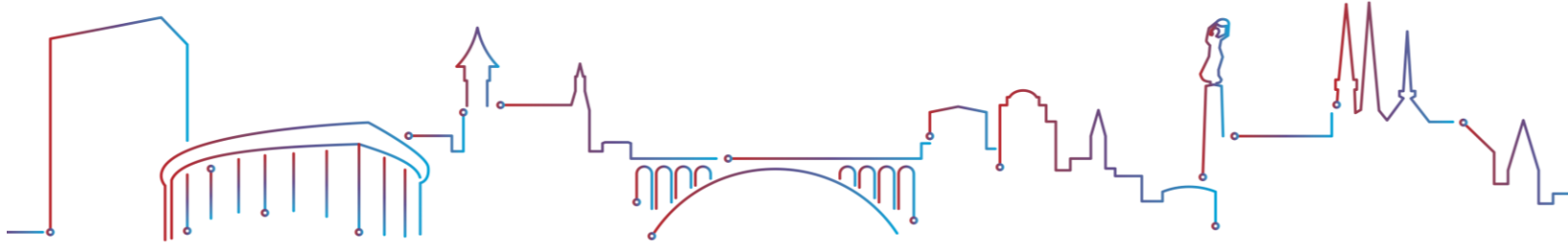
# National Governance



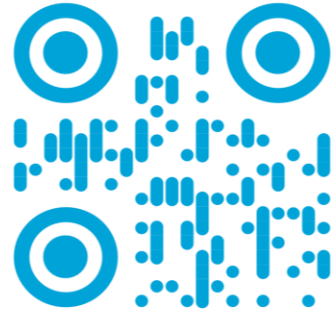


**LHC**  
Luxembourg House  
of Cybersecurity

## THE GATEWAY TO CYBER RESILIENCE



**Luxembourg,  
a pioneer in the open  
cybersecurity data economy**



[lhc.lu](http://lhc.lu)

**CYBERSECURITY  
LUXEMBOURG**

**310+** ACTIVE ACTORS  
IN CYBERSECURITY

**90+** WITH CYBERSECURITY  
AS A CORE BUSINESS

**70+** STARTUPS

More about  
the ecosystem





# National *cybersecurity* Portal



🔍 SEARCH

📊 DASHBOARD

👤 LOG IN/REGISTER

IMMEDIATE SUPPORT

The Ecosystem ▾

News & Events ▾

Skills & Jobs ▾

Resources & Support ▾

About ▾

Contact

## The national cybersecurity portal, for everyone

All in one place, explore & be a part of this community-driven platform whether you are a seasoned pro or just starting out.

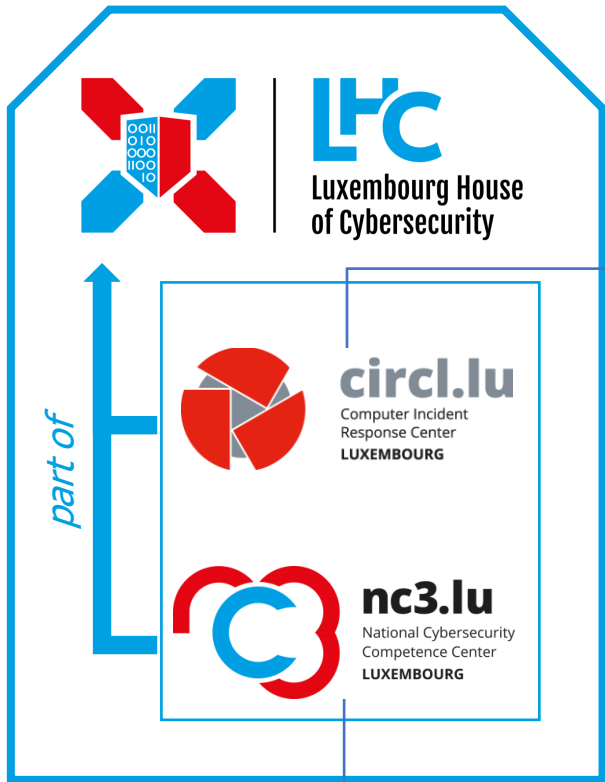
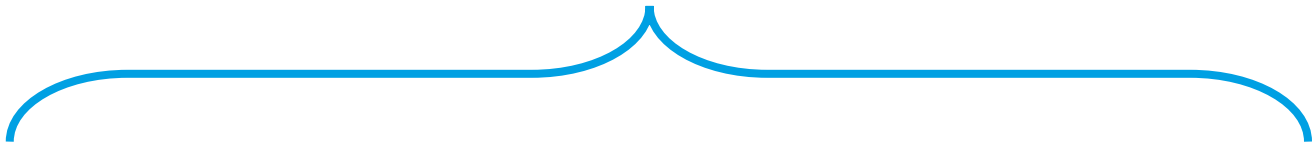
The Ecosystem

How can we help?





**The national cybersecurity brand and ecosystem**



**Host for all types of cybersecurity-related activities**

*member of the CSIRT Network*



**Incident Response & Cyber Threat Intelligence**

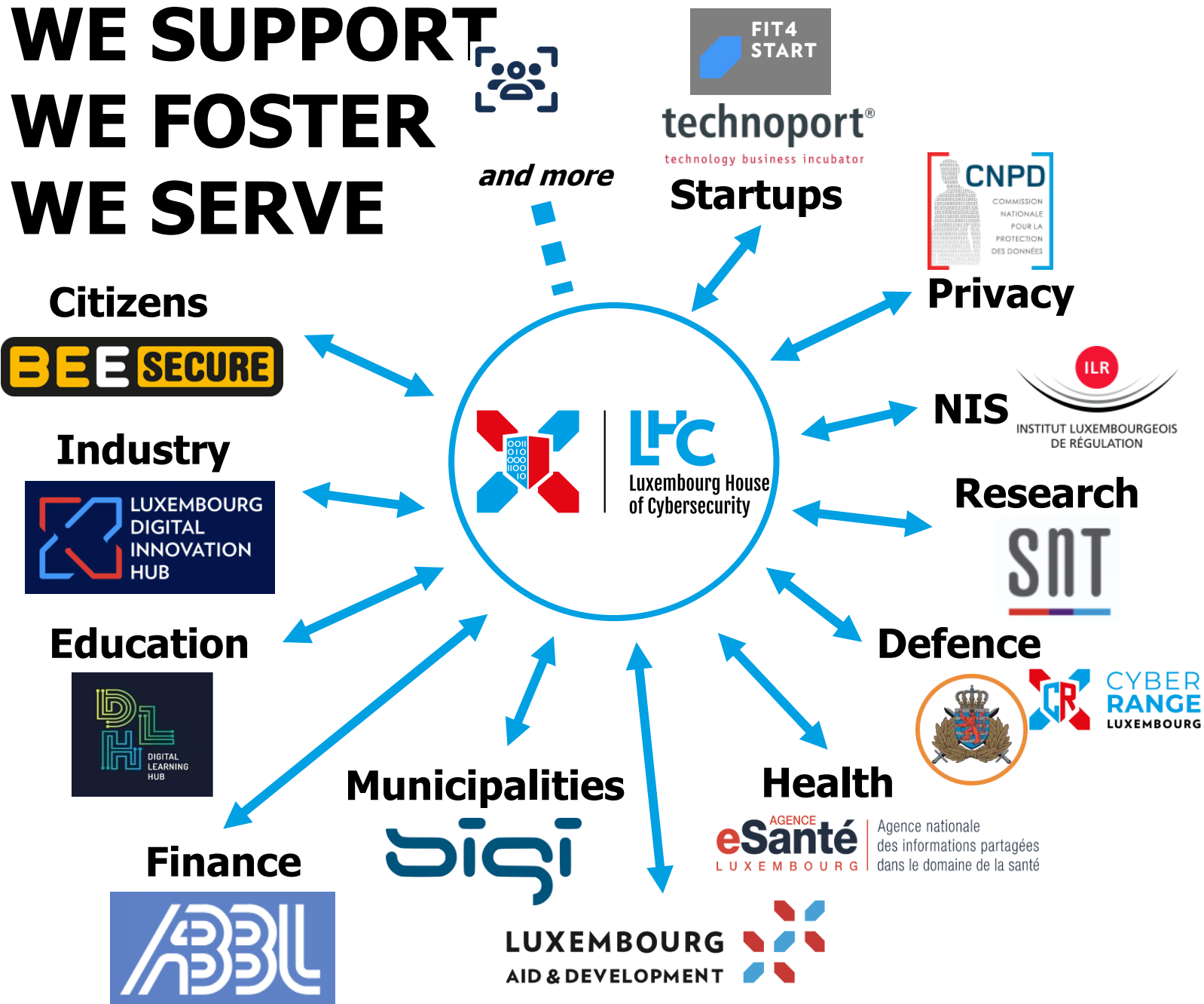


**Competence & Capacity Building  
Research & Innovation  
Market Intelligence**

*member of the NCC Network*



**WE SUPPORT  
WE FOSTER  
WE SERVE**



**WE HOST**

ENCRYPTION EUROPE

ISACA Luxembourg Chapter

CWF DIVERSITY & INNOVATION IN CYBERSECURITY BRUSSELS | LUXEMBOURG

Women Cyber Force

clusil/

# National Cybersecurity Competence Centre

- Competence and Capabilities Building
- Ecosystem and Industrialisation
- Research, Data and Innovation
- NCC-LU



**FIT4CYBERSECURITY** - is a self-assessment tool designed for a non-expert audience to estimate in a general way the degree of maturity of its security posture and obtain some basic recommendations.

This tool can be complemented by:

**FIT4CONTRACT**, to support business owners in verifying if contracts for the procurement of ICT services cover the essential information security aspects.

**FIT4PRIVACY**, to provide business owners with a good initial overview of their maturity in the field of privacy and data protection (as required by the GDPR).



**TESTING PLATFORM** - holds the tools and services that will help organisations to perform basic tests on their most commonly exposed infrastructures, starting with email and web servers.



**TOP** - aims to support its users with evidence-based information on cybersecurity emerging threats, in order to facilitate their decision-making processes regarding the prevention strategies to be undertaken.



**TRUST BOX** - is the ideal toolset to raise cybersecurity awareness and empower all users with better cyber hygiene.



**MONARC** - is a tool and a method allowing an optimised, precise and repeatable risk assessment.



# Computer Incident Response Center Luxembourg



- CSIRT (Incident Coordination and Incident Handling)
- Cyber Threat Intel and support tools
- CSIRT NIS



**CIRCL TYPOSQUATTING**  
Typosquatting finder

TYPOSQUATTING FINDER is a free and public service to quickly find typosquatted domains to assess if an adversary uses any existing fake domains. You can enter a domain to discover potentially typo-squatted domains. An advanced option allows you to select the algorithms used.

**CIRCL LOOKYLOO**

LOOKYLOO is a web interface that captures a webpage and then displays a tree of the domains that call each other. Lookyloo can be used to test unknown or potential malicious links safely.

**CIRCL PANDORA**

PANDORA is an analysis framework to discover if a file is suspicious and conveniently show the results. You can safely use this free online service to review files or documents received by a third party.

**CIRCL URL ABUSE**

URL ABUSE is a public CIRCL service to review the security of an URL (Internet link). Users regularly encounter links while browsing the Internet or receiving emails. When there are some doubts regarding an URL (e.g. potential phishing attacks or malicious links), users can submit an URL for review, and a take-down process of the fraudulent content is initiated.

More public services are listed on <https://www.circl.lu/services/>

**CIRCL ALSO OFFERS ACCESS TO PRIVATE SERVICES OR CLOSED COMMUNITIES:**

**CIRCL MISP**  
Threat Sharing

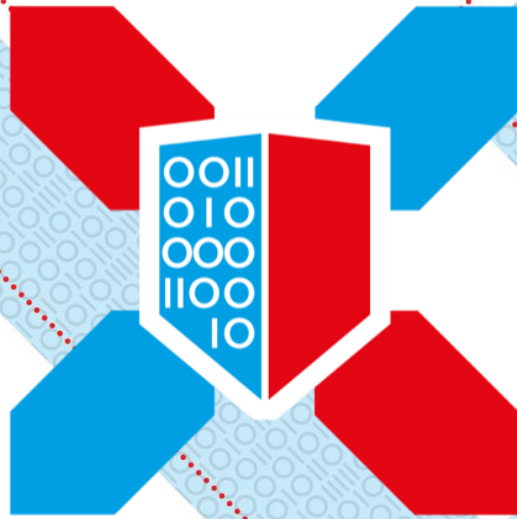
MISP - Open Source Threat Intelligence and Sharing Platform (formerly known as Malware Information Sharing Platform) access is available on request. MISP gives an overview of the current trends of attacks and threat indicators, it is a sharing platform that enables teams to collaborate and provides API access to ingest the information for detection and remediation into the security tools by the organisations.

**CIRCL AIL**  
Analysis of Information Leaks

AIL LEAK DETECTION AIL Project is an open source framework to collect, crawl, dig and analyse unstructured data, like information leaks publicly available on the Internet or Darknet. Organisations in Luxembourg can benefit from the service by being notified based on contextual keyword lists.

**Thank you for your attention**

*Time to discover the*



**LHC**

**Luxembourg House  
of Cybersecurity**



*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

## Presentation of ILNAS

14<sup>th</sup> December 2023

Dr. Jean-Philippe Humbert  
*Adjoint à la Direction - ILNAS*





**I - PRESENTATION OF ILNAS AND ANEC EIG**

**II - PRESENTATION OF THE NATIONAL STANDARDS BODY**

**III - PARTICIPATION IN TECHNICAL STANDARDIZATION**

**IV - WHITE PAPERS, TECHNICAL REPORTS AND GUIDES**

**V - RESEARCH ACTIVITIES**

**VI - EDUCATION ABOUT STANDARDIZATION**



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



## - National Standards Body (OLN)

- Composed of 8 persons
- Close collaboration with the E.I.G. ANEC-N







- **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 (October 2023)
- **Partners:**



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

ILNAS



➔ Support for the implementation of the Luxembourg standardization strategy

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### A. Main missions



- Coordinate and supervise the creation of national standards
- Make standards available to the market
  - ILNAS eShop
  - ILNAS reading stations
- Represent Luxembourg in the standardization related organizations



- Manage the participation of national stakeholders in the international standardization organizations (ISO, IEC, CEN and CENELEC)
- Develop a normative culture in Luxembourg
  - Promotion
  - Education
  - Research





→ Strategy signed by the  
Minister of the Economy  
of Luxembourg

### Technical standardization

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

#### PERFORMANCE



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

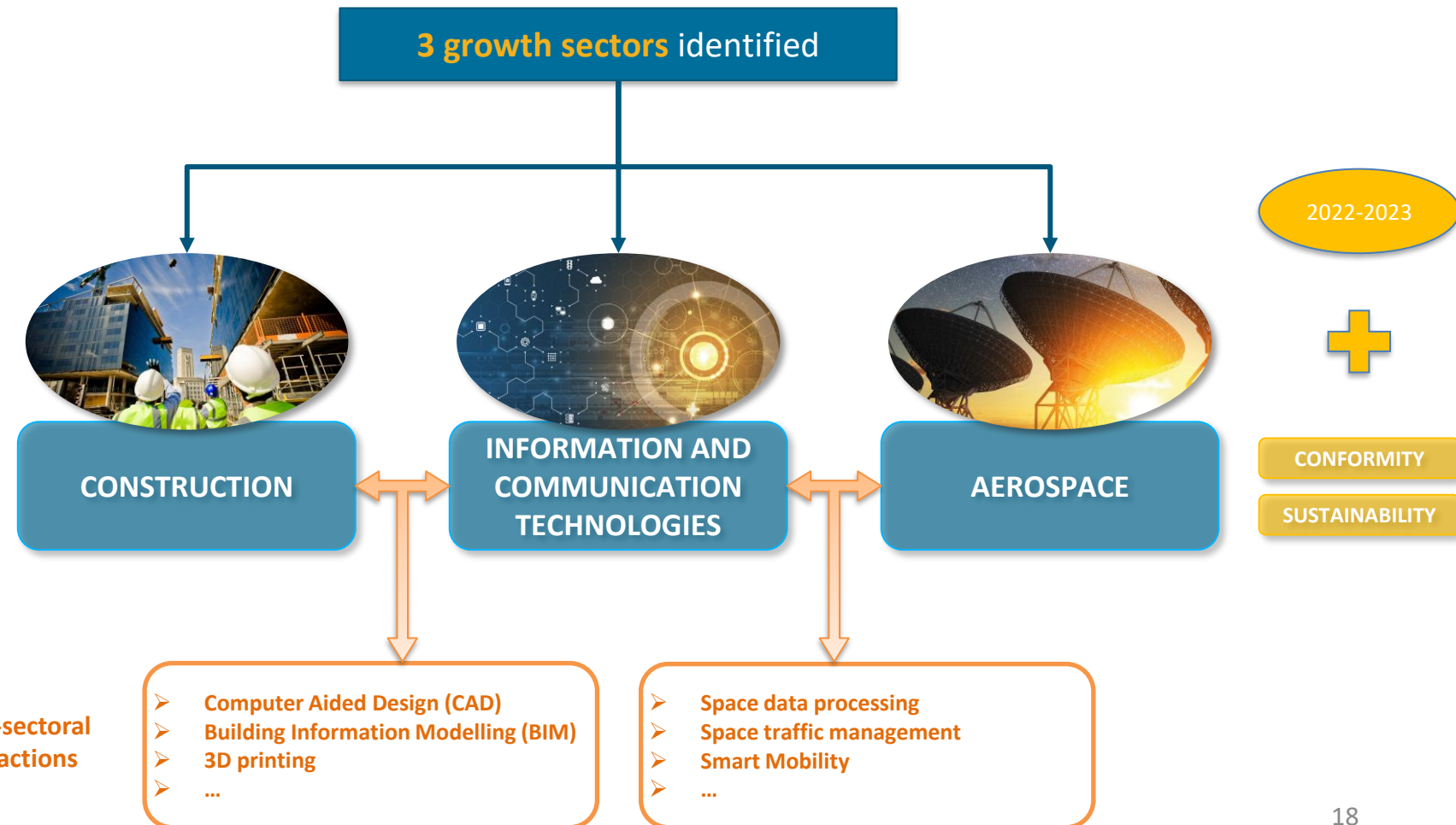
#### EXCELLENCE



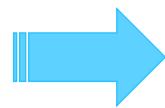
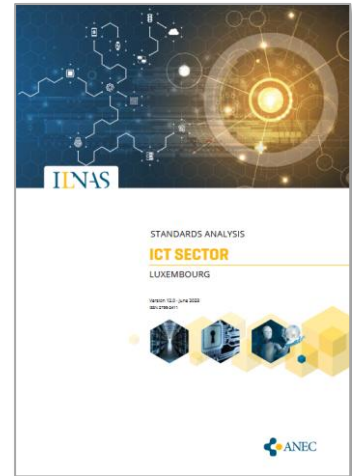
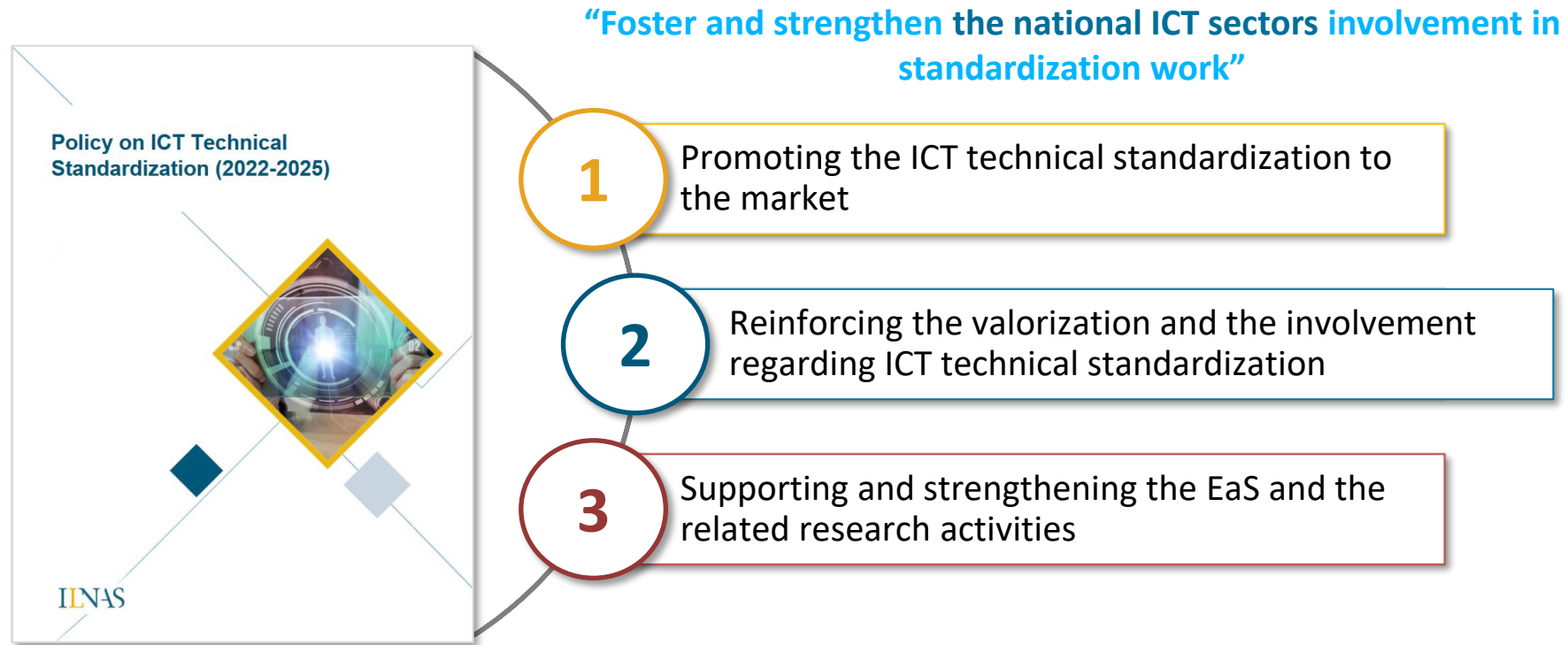
- Pillar 3 – Active participation of the NSB in the European and international standardization organizations
- Pillar 4 – Development of research and education about standardization



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



### C. Luxembourg’s policy on ICT technical standardization



Policies for the Construction, Aerospace and Conformity domains are based on similar lead projects



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- **New paradigm in the European standardization ecosystem - European Standardisation Strategy ([COM\(2022\) 31](#))**
  - o Five key sets of actions:
    1. Anticipate, prioritize and address **standardization needs in strategic areas**
    2. Improve the governance and integrity of the European standardization system
    3. Enhance **European leadership** in global standards
    4. Support innovation
    5. Enable the **next generation** of standardization experts

*“Technical standards are of strategic importance. Europe's **technological sovereignty, ability to reduce dependencies and protection of EU values** will rely on our **ability to be a global standard-setter**. With today's Strategy, we are crystal-clear on our standardisation priorities and create the conditions for European standards to become global benchmarks. **We take action to preserve the integrity of the European standardisation process, putting European SMEs and the European interest at the centre**”*

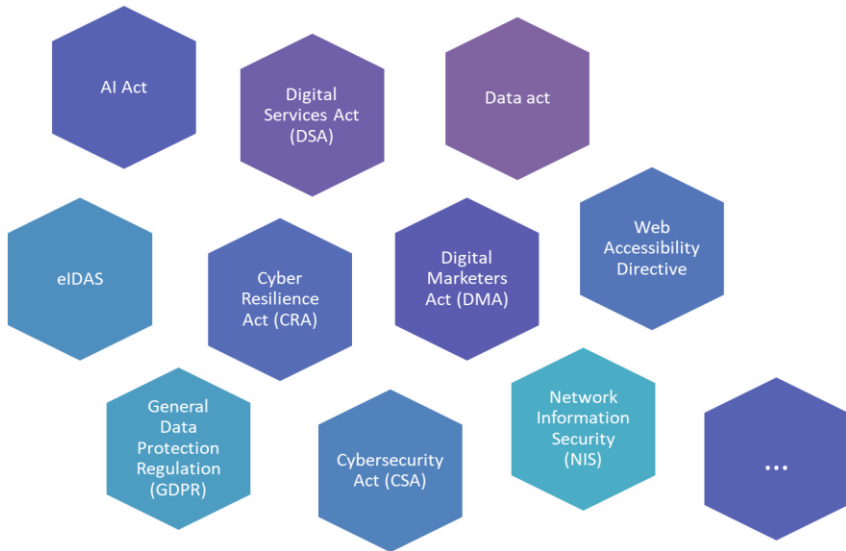
Commissioner for the Internal Market, Thierry Breton

### Technical standardization

### A support for complying with the EU regulatory ecosystem

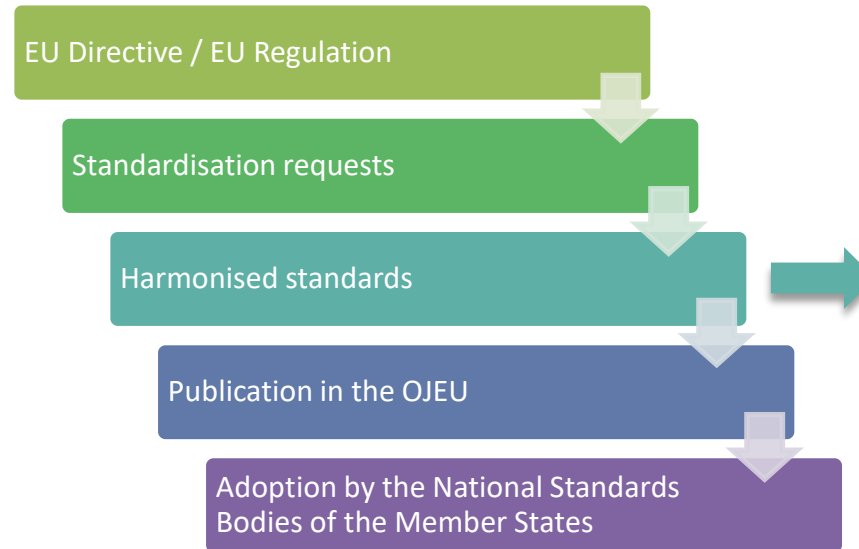


A more and more complex EU regulatory ecosystem for the ICT sector



Actions for the development and revision of European standards or European standardisation deliverables supporting the strategic priorities				
Ref	Title	Reference	European standards/European standardisation deliverables	Specific objectives and policies for European standards/European standardisation deliverables
5	Cybersecurity requirements for products with digital elements	<a href="#">COM(2022)454 - Proposal for a Regulation on horizontal cybersecurity requirements for products with digital elements and amending Regulation (EU) 2019/1020 (Cyber resilience Act)</a>	Develop European standards and European standardisation deliverables corresponding to essential cybersecurity specifications as set out by the Cyber Resilience Act and notably concerning: (i) security specifications relating to the properties of products with digital elements and vulnerability handling specifications (ii) methodologies concerning assurance levels relating to products with digital elements as referred to above; (iii) evaluation methodologies for evaluating cybersecurity risks associated with products with digital elements.	The main objective is to create conditions for developing secure products with digital elements by ensuring that hardware and software products are placed on the market with fewer vulnerabilities and ensure that manufacturers take security seriously throughout a product's life cycle.

The 2023 annual EU work program for European standardization (02/2023) - <https://ec.europa.eu/docsroom/documents/53720>



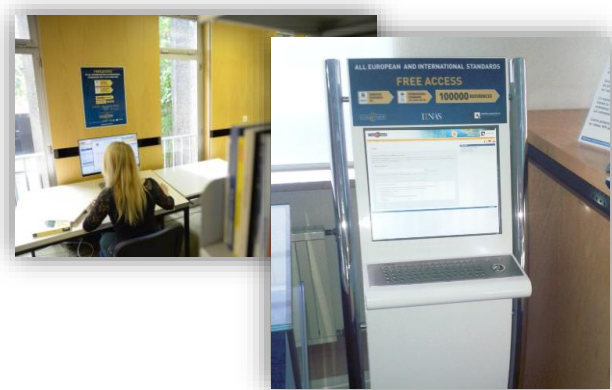
Can be used by manufacturers, other economic operators and conformity assessment bodies to demonstrate that their product, service or process complies with relevant EU legislation

How to be involved in this framework?



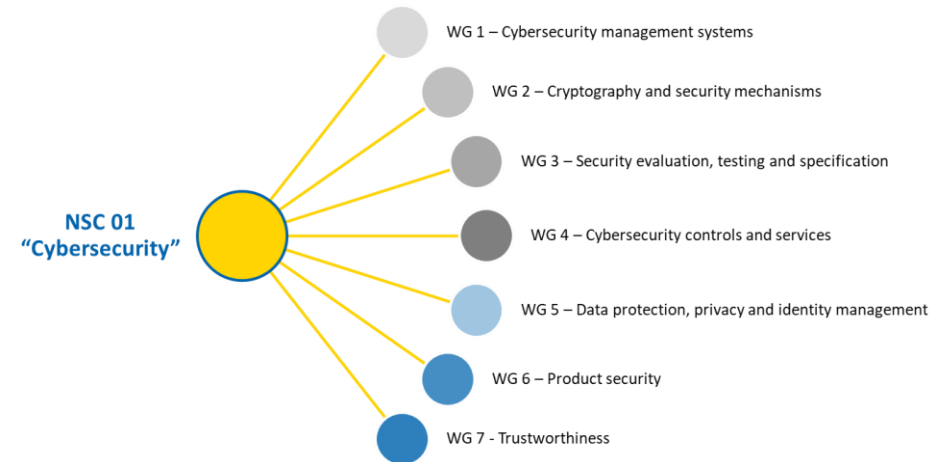
Passive - Use Standards

ILNAS eShop  
Reading stations



Active - Participate in Standards' development

Become a national delegate in standardization





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2023 – Recent ILNAS Research activities



**21/11/2023**  
 Technical Standardization  
 Report on Quantum  
 Technologies



**14/12/2023**  
 White Paper Digital Trust 4.0  
*Trust services*  
*Cybersecurity certification*  
*Technical Standardization*



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



<https://gd.lu/8WJHCK>



### B. Research project “cybersecurity Certification based On Risk evALuation and treatment (CORAL)” (2021-2023)



<https://youtu.be/kmMHJ-lj4FY>



**CORAL - cybersecurity Certification based On Risk evALuation and treatment**



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

### 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.

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### Master MTECH – 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
<b>TOTAL</b>	<b>4</b>

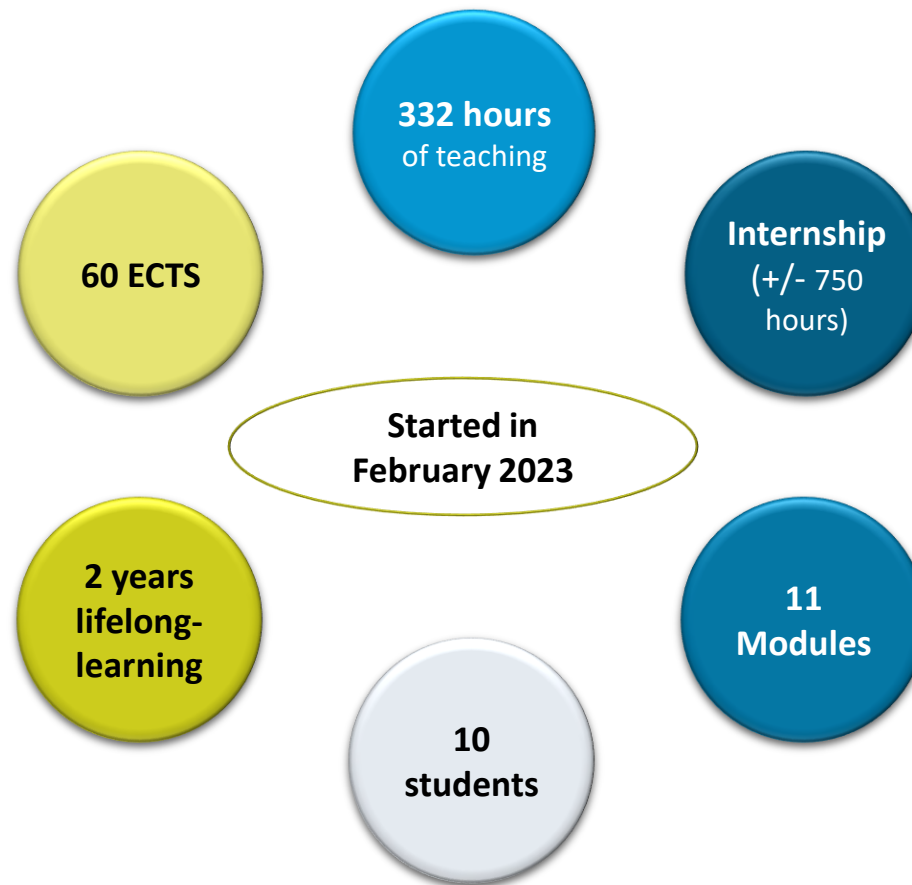
SMART ICT	ECTS
Smart ICT Technologies I	5
Smart ICT Technologies II	5
<b>TOTAL</b>	<b>10</b>

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

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

MASTER THESIS	ECTS
Master Thesis	30
<b>TOTAL</b>	<b>30</b>

[mtech.uni.lu](http://mtech.uni.lu)



With the support of:

THE GOVERNMENT OF THE GRAND DUCHY OF LUXEMBOURG  
Ministry of the Economy



*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

## Introduction

14<sup>th</sup> December 2023

Mr. Alain Wahl

*Chef du Département de la Confiance Numérique - ILNAS*





- **National supervisory body for**
  - Trust service providers
  - Digitisation or e-archiving service providers (PSDCs – « Prestataires de Services de Dématérialisation ou de Conservation »)
- **Management and publication of Luxembourg's trusted list**
- **Member of the European Cybersecurity Certification Group ('ECCG') and National cybersecurity certification authority ('NCCA')**
- **Promotion of good practices**
- **National participant in the *European Multistakeholder platform on ICT standardisation***



EUCC



EUCS



EU5G

**Find more information:**

- News and newsletters
- DLH trainings, Master in Technopreneurship
- <https://portail-qualite.public.lu>



**Strengthen the national and EU Single Market by boosting TRUST and CONVENIENCE in secure and seamless cross-border electronic transactions.**

### Trust services

Ensure a level playing field for the security of trust services

- Contributing to the protection of users
- Contributing to the functioning of the EU internal market (Recital (36) eIDAS Regulation)

### E-archiving services

Guarantee that the dematerialization and preservation process of documents meets specific technical and organizational requirements based on ISO/IEC 27001

- Ensure confidentiality, integrity, availability (ISO/IEC 27001)
- Authenticity, trustworthiness, and operability for digitized or preserved documents

### Cybersecurity certification

Ensure a level playing field for the certification of ICT products, ICT services and ICT processes



1. **Introduction**
2. **Electronic identification and electronic signatures**
3. **E-archiving and dematerialization**
4. **Cybersecurity certification**
5. **Technical standardization**



**eIDAS revision => eIDAS 2**

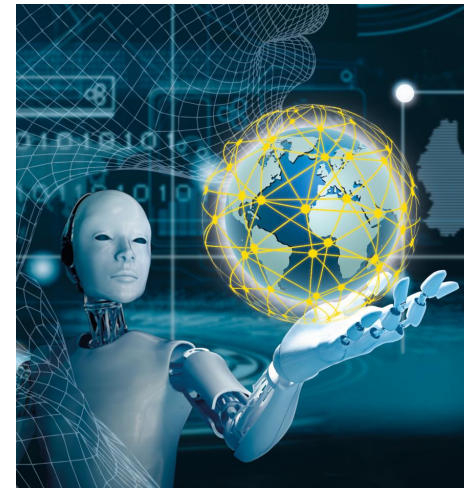
- European Digital Identity Wallet
- *Electronic archiving services*
- *Electronic ledgers*
- *Management of remote electronic signature devices*
- *Electronic attestation of attributes*

**Cyber Resilience Act**

- *Proposal for a regulation of the European Parliament and of the Council on horizontal cybersecurity requirements for products with digital elements*

**AI Act**

- *Proposal for a regulation of the European Parliament and of the Council laying down harmonized rules on AI*





*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

## Electronic identification and electronic signatures

14<sup>th</sup> December 2023

Mr. Jean-François Gillet

Chargé de mission – *Département Confiance Numérique - ILNAS*





Strengthen the national and EU Single Market by boosting **TRUST** and **CONVENIENCE** in secure and seamless cross-border electronic transactions

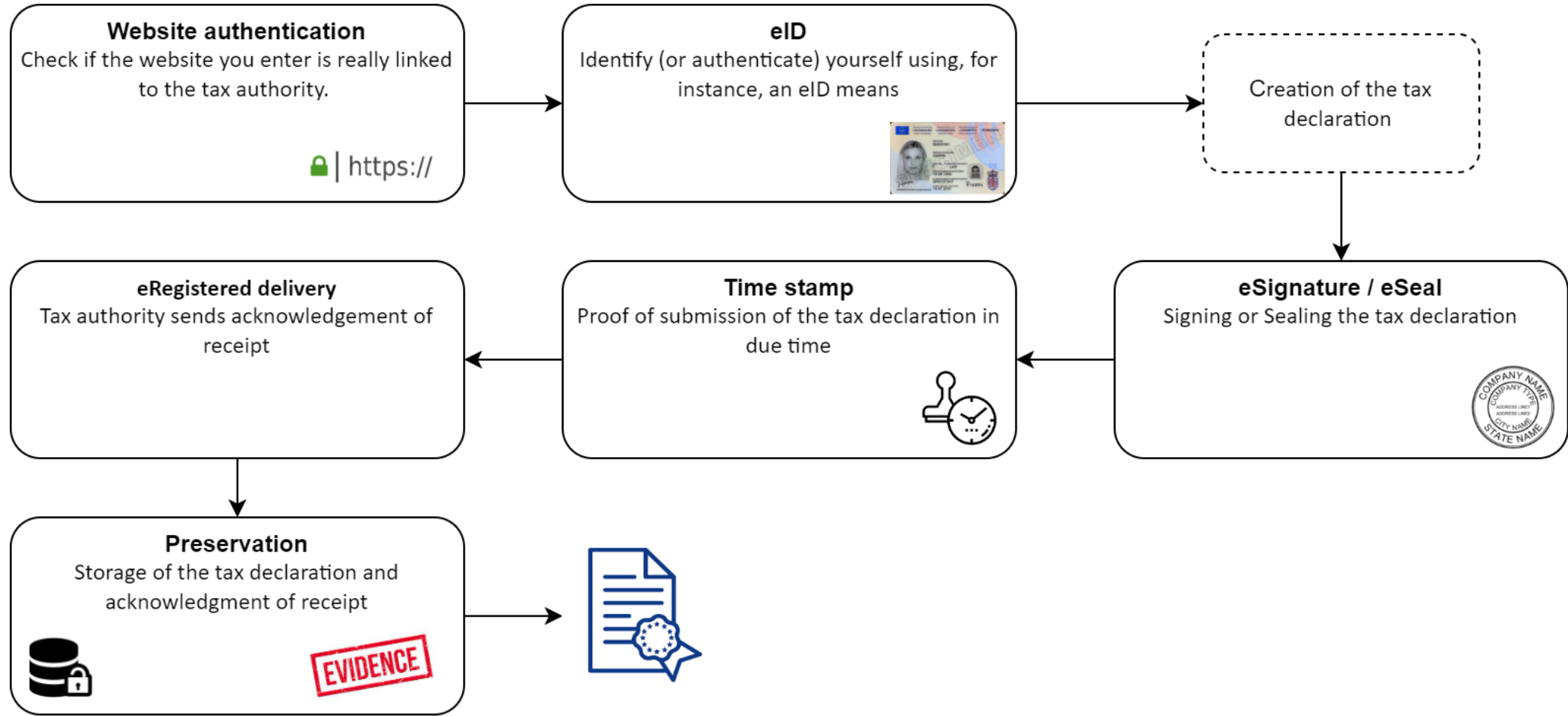


The screenshot shows the eIDAS website interface. On the left, there is a filter sidebar with various categories and counts:
 

- All: 260
- CA: 192
- TSA: 145
- PresS: 21
- EDS: 35
- ValS: 32

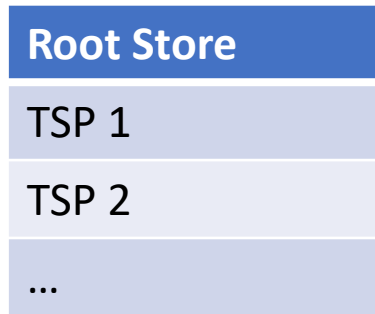
 The main area features a map of Europe with numbered markers indicating the location of trust service providers. On the right, a list titled "Trust Service Providers" includes:
 

- A-Trust GmbH
- e-commerce monitoring GmbH
- PrimeSign GmbH
- Swisscom IT Services Finance S.E.
- Certipost n.v./s.a.
- DigiCert Europe Belgium B.V.
- Zetes S.A./N.V.
- Connect Solutions
- Universign
- Belgian Mobile ID SA/NV
- GlobalSign NV/SA
- SA UNIFIEDPOST
- Kingdom of Belgium - Federal Government
- IPEX



Website authentication certificate (WAC) and Qualified website authentication certificate (QWAC)

## Browser:



## Supervisory bodies of EU Member States:



**Different requirements!**

Certificate Viewer: legilux.public.lu

General Details

Issued To

Common Name (CN)	legilux.public.lu
Organization (O)	Le Gouvernement du Grand-Duché de Luxembourg
Organizational Unit (OU)	<Not Part Of Certificate>

Issued By

Common Name (CN)	GEANT OV RSA CA 4
Organization (O)	GEANT Vereniging
Organizational Unit (OU)	<Not Part Of Certificate>

Validity Period

Issued On	Monday, September 25, 2023 at 2:00:00 AM
Expires On	Wednesday, September 25, 2024 at 1:59:59 AM

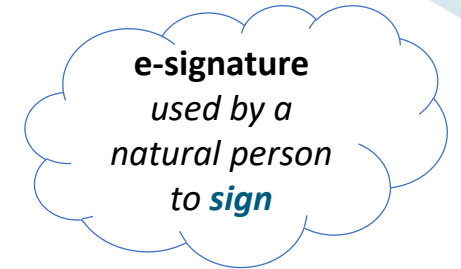
SHA-256 Fingerprints

Certificate	9ea06b2de0f1d8a8713ca7425baaebd11110ad4309f5346960b6f5b4ec157df4
Public Key	de3b6202e29968d6af94d860b51b9d407fd1231006d02b8311ebd2b35984b8c1

- **Qualified website authentication certificate (QWAC)**

- *“a certificate for website authentication, which is issued by a qualified trust service provider and meets the requirements laid down in Annex IV” (Article 3(39) eIDAS)*

- Electronic **seal**: “data in electronic form, which is attached to or logically associated with other data in electronic form **to ensure the latter’s origin and integrity;**” (Article 3 (25) eIDAS)
- Certificate for electronic **seal**: “an electronic attestation that links electronic seal validation data to a **legal person** and confirms the name of that person;” (Article 3 (29) eIDAS)



	Certificates for eSignatures	Certificates for eSeals
<b>Can be issued to</b>	Natural persons	Legal persons
<b>Usage</b>	Sign data	Ensure integrity and authenticity of data
<b>Use case</b>	Contracts	Invoices

Signed and all signatures are valid.

Signatures

Validate All

Rev. 1: Signed by Ministère d'État

Signature is valid:

- Source of Trust obtained from European Union Trust
- Document has not been modified since this signature
- Signer's identity is valid
- The signature includes an embedded timestamp.
- Signature is not LTV enabled and will expire after:

Signature Details

Last Checked: 2018.06.18 11:40:28 +02'00'

Field: Signature1 (invisible signature)

[Click to view this version](#)

## JOURNAL OFFICIEL

DU GRAND-DUCHÉ DE LUXEMBOURG

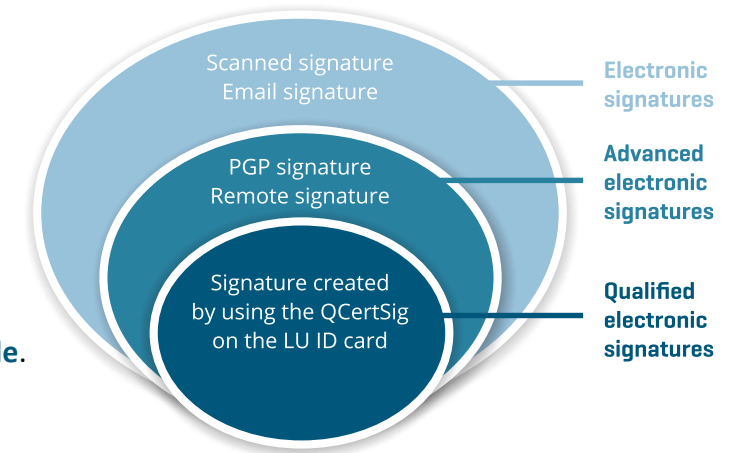
MÉMORIAL A

N° 563 du 14 juin 2017

**Règlement grand-ducal du 22 mai 2017 modifiant le règlement grand-ducal du 25 juillet 2015 portant exécution de l'article 4, paragraphe 1<sup>er</sup>, de la loi du 25 juillet 2015 relative à l'archivage électronique.**

Nous Henri, Grand-Duc de Luxembourg, Duc de Nassau,  
Vu la loi du 25 juillet 2015 relative à l'archivage électronique et notamment son article 4, paragraphe 1<sup>er</sup>;  
Vu les avis de la Chambre de commerce et de la Chambre des métiers;  
Notre Conseil d'État entendu;  
Sur le rapport de Notre Ministre de l'Économie et après délibération du Gouvernement en conseil;

- Different categories of electronic signatures
  - **Electronic signature**
  - **Advanced electronic signature:**
    - ✓ **uniquely** linked to the signatory;
    - ✓ capable of **identifying** the signatory;
    - ✓ created using electronic signature creation data  
that the signatory can, *with a high level of confidence*, use under his **sole control**; and
    - ✓ it is linked to the data signed therewith in such a way that any subsequent **change in the data is detectable**.
  - **Qualified electronic signature:** an **advanced electronic signature** that is
    - ✓ created by a **qualified signature creation device** (QSigCD)
    - ✓ based on a **qualified certificate for electronic signatures** (QCertSig)



**signatures** (QCertSig) which contains: **Name of the user**, Name of the QTSP, Validity period, **Public key**, Indication of “**qualified**” certificate, Advanced electronic signature of the **QTSP**



- Electronic time stamp: “*data in electronic form which binds other data in electronic form to a particular time establishing evidence that the latter data existed at that time;*” (Article 3 (33) eIDAS)
- **Qualified** electronic time stamp (Art. 41(1) eIDAS):
  - time stamped **data cannot be changed** undetectably,
  - based on an **accurate time source** linked to Coordinated Universal Time (UTC), and
  - **signed** or **sealed** with an advanced electronic signature resp. an advanced electronic seal of the QTSP

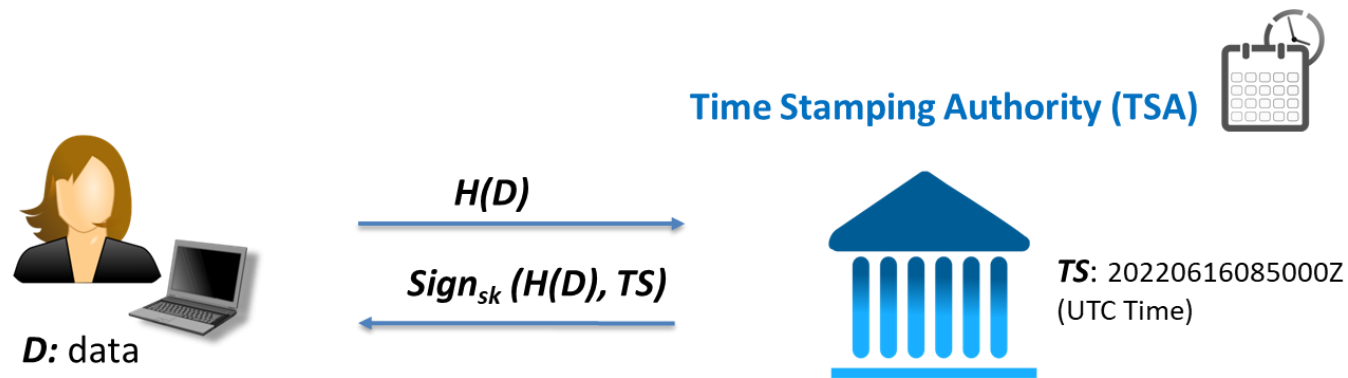
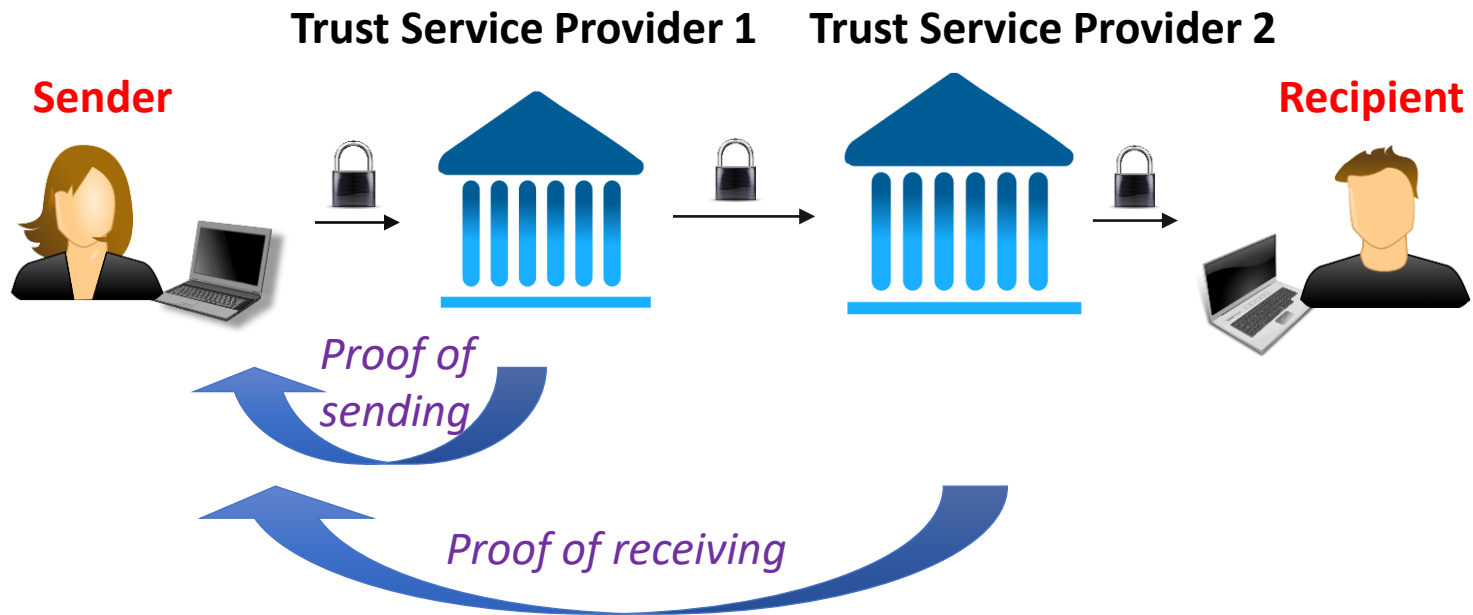


Figure: Time-stamp protocol (IETF RFC 3161)




- Requirements for **all** trust service providers (TSPs):
  - Notification of security breaches to ILNAS (Art. 19(2))
  - Have an up-to-date **termination plan**,
  - Ensure lawful processing of personal data in accordance with the GDPR,...
- Requirements for **qualified** trust service providers (**QTSPs**) (Art. 24):
  - **Verify the identity** of the natural or legal person who requests a **qualified** certificate,
  - Employ staff who possess the necessary qualifications,
  - **Use trustworthy systems and products**
  - Take appropriate measures against forgery and theft of data,
- **QTSPs: Supervision by ILNAS**
  - Initial audit, notification and conformity assessment report
  - Surveillance audit (after 1 year)
  - Reassessment audit (after 2 years)

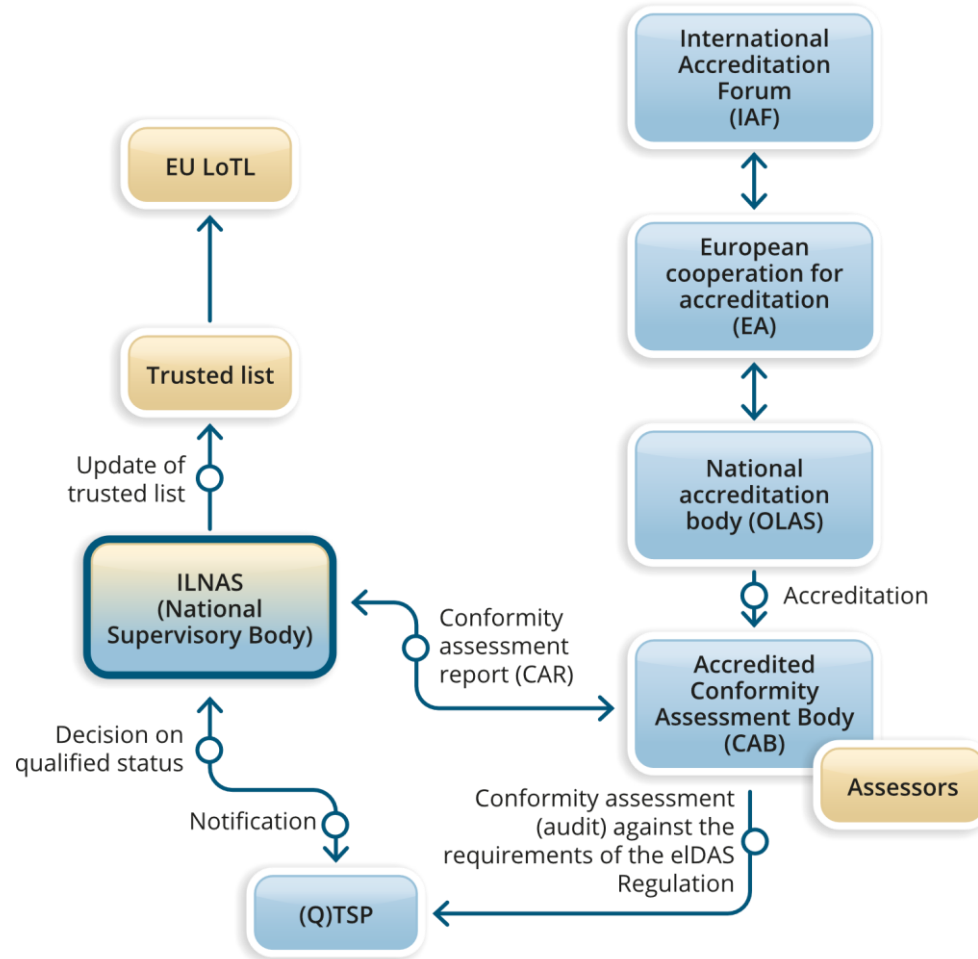
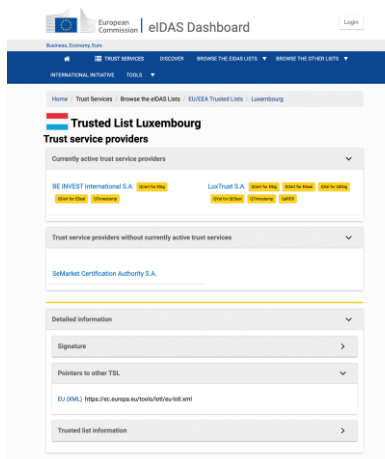
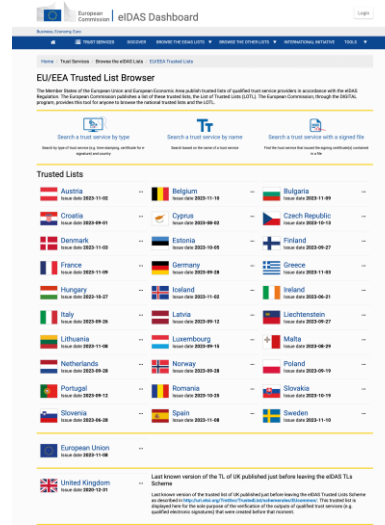
## I. eIDAS REGULATION

Legal effects (eSignatures, eSeals, eTimeStamps and eRegistered Delivery Services)

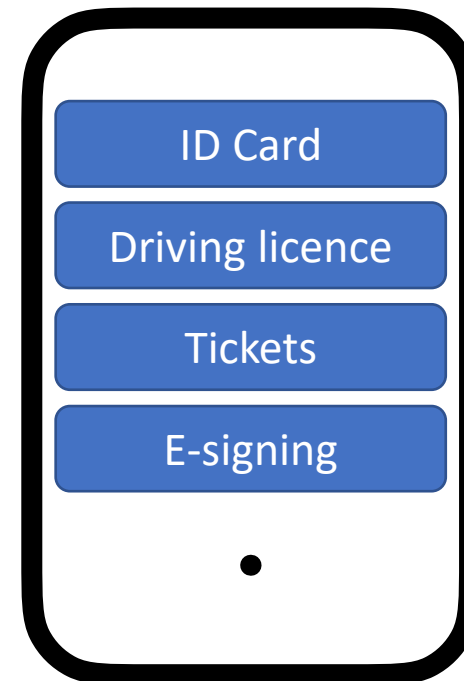
	eSignatures	eSeals	eTimeStamp
Non-discrimination	Yes	Yes	Yes
Legal effect of <b>qualified</b> type	<b>Equivalent legal effect of handwritten signatures</b>	Presumption of <b>integrity</b> and of <b>correctness of the origin</b> of the data	<ul style="list-style-type: none"> <li>Presumption of <b>accuracy of the date and the time</b> it indicates</li> <li>Presumption of the <b>integrity of the data</b> to which the date and time are bound</li> </ul>
Cross-border recognition within EU	Yes, for <b>qualified</b> eSignatures	Yes, for <b>qualified</b> eSeals	Yes, for <b>qualified</b> eTimeStamps

	eRegistered Delivery Services	Qualified eRegistered Delivery Services
Non-discrimination	Yes (for sent and received data)	Yes (for sent and received data)
Legal effect	No	<ul style="list-style-type: none"> <li>Presumptions of the <b>integrity of the data</b>, the sending of that data by the <b>identified sender</b>, the receipt of the data by the <b>identified addressee</b> and the <b>accuracy of the date and time</b> of the data.</li> <li><b>Equivalent legal effect of registered postal mail</b> </li> </ul>
Cross-border recognition within EU	No	Yes

## Role of ILNAS

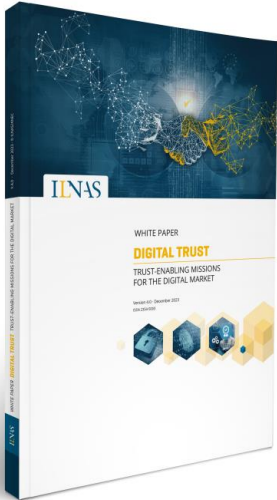


- **eIDAS 2.0 (Regulation) (2023):**
  - Further trust services:
    - ✓ (qualified) electronic archiving,
    - ✓ (qualified) electronic attestation of attributes,
    - ✓ the management of remote qualified electronic signature and seal creation devices,
    - ✓ (qualified) electronic ledgers.
  - “EU Digital Identity Wallet”





For more details



## Chapter 2 of the Digital Trust White Paper 4.0

*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

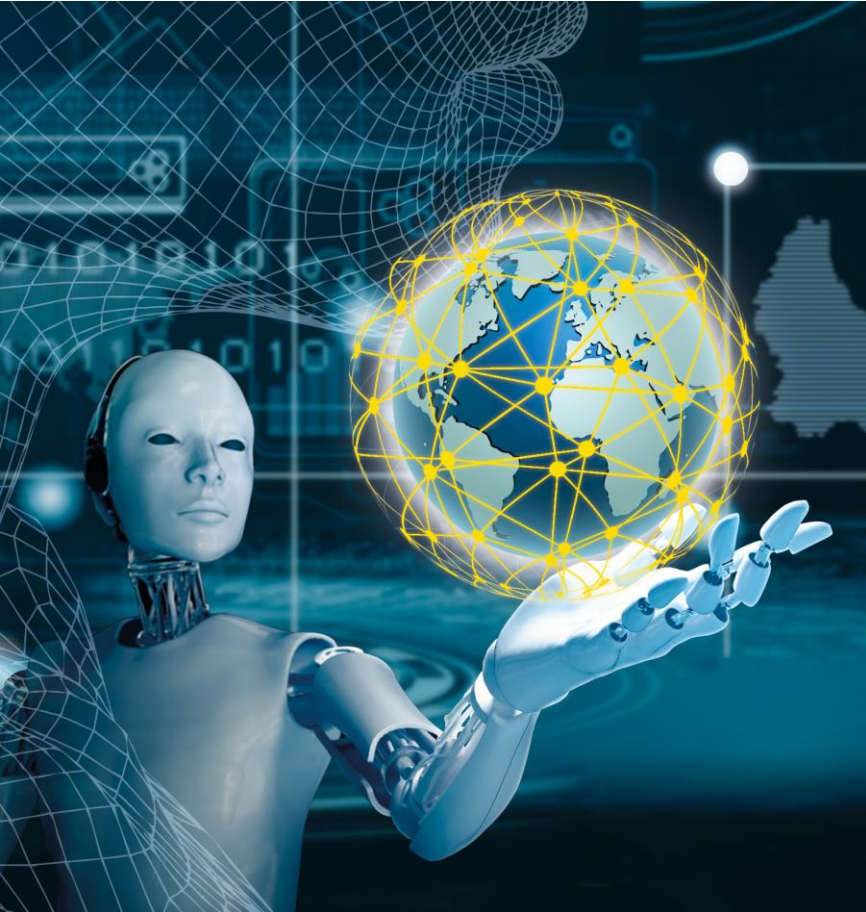
## E-archiving and Dematerialization

14<sup>th</sup> December 2023

Dr. Michel Ludwig

*PSDC Supervision Manager - ILNAS*





### Electronic archiving

- Goal:

preserve **integrity, confidentiality, availability** of digital documents over extended periods of time

- Legal value of archived electronic documents:

Law of 25 July 2015 on electronic archiving

- Revolutionary aspect of the e-archiving framework in Luxembourg:

**digitization of analog documents, preserving their probative value**



## Digitization

- Goal: **transform analog documents** into **digital documents**
- Typically: scanning of paper documents
- Reduce operational costs & provide additional services:
  - large, physical archives not needed anymore
  - mitigation of threats: e.g. theft / destruction of analog documents that possess legal value
  - Easy access to digital documents, even from remote locations
  - Searching through documents possible



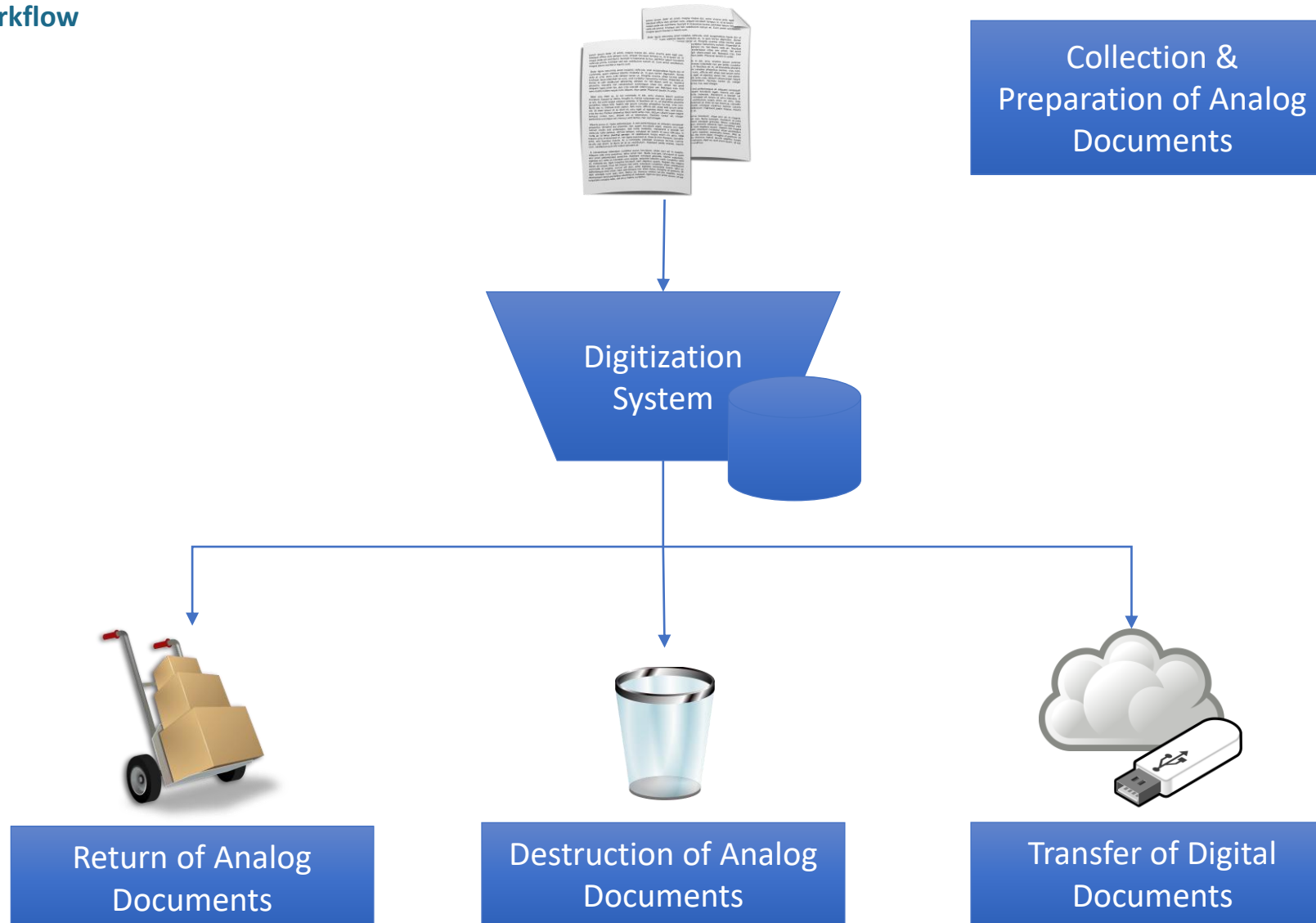
### Law of 25 July 2015 on electronic archiving

- introduces the **main legal context** concerning electronic archiving in Luxembourg, covering
  - digitization of analog documents
  - archiving of digital documents
- Defines conditions under which digital documents **benefit from a presumption of conformity** w.r.t. originals:
  - analog document ↔ digitized version
  - digital document to be archived ↔ digital archive
- Technical requirements regarding digitization / electronic archiving defined in the national standard

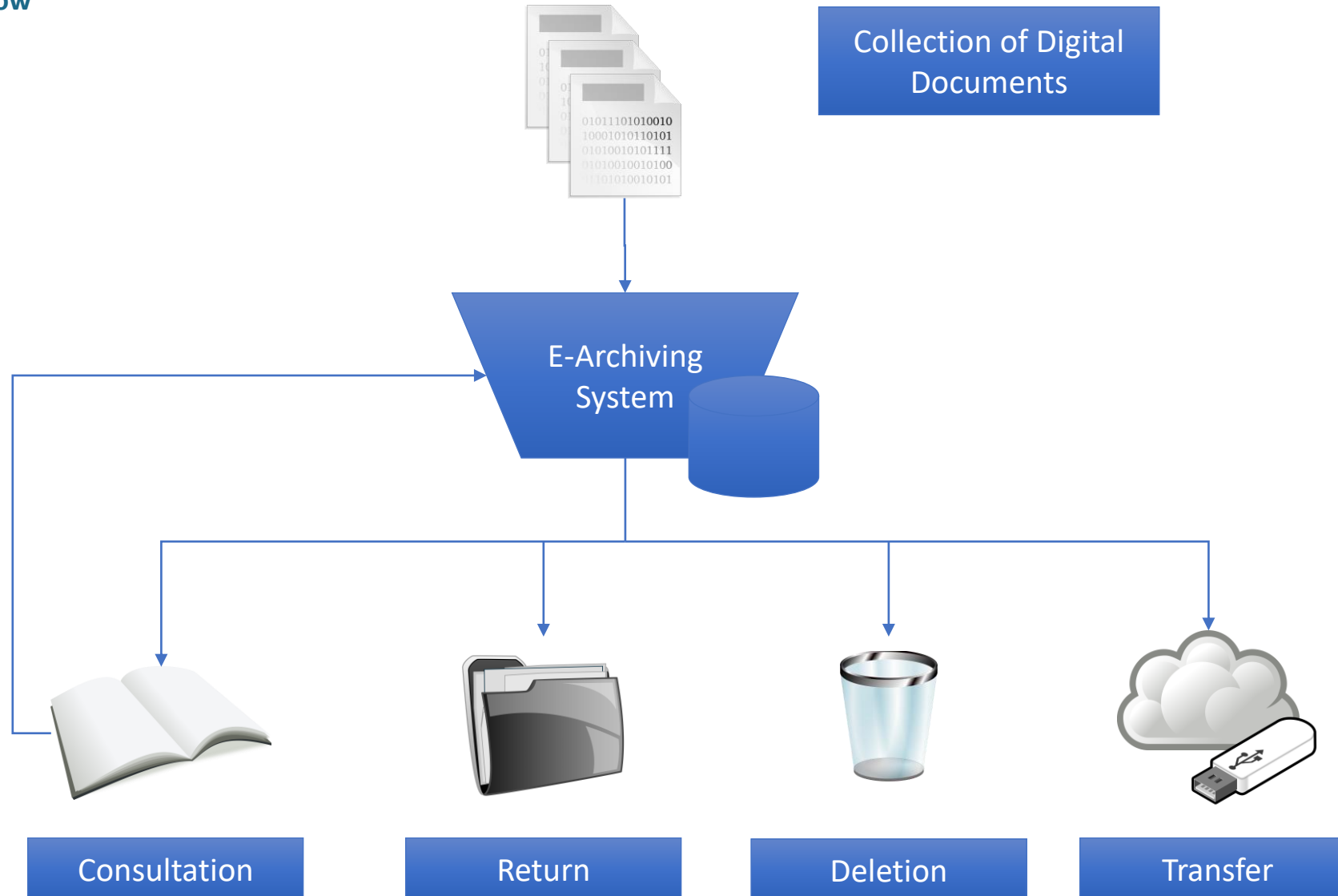
**ILNAS 106:2022 - Archivage électronique - Référentiel d'exigences pour la certification des prestataires de services de dématérialisation ou de conservation (PSDC)**



## Digitization Workflow



E-archiving Workflow



### Law of 25 July 2015 on electronic archiving

- Introduces the legal status of  
**prestataire de services de dématérialisation ou de conservation (PSDC)**
- i.e. “provider of digitization or e-archiving services” in English
- PSDC status granted by ILNAS only
- Organizations with PSDC status supervised by ILNAS

Documents digitized or archived by PSDCs will have the same legal value as the corresponding original documents (presumption of conformity w.r.t. the originals)!

## List of PSDCs

Organization	Notification ID	PSDC Status Since	Scope
Lab Luxembourg S.A. 3, rue Dr. Elvire Engel L-8346 Grass	2016/9/001	01/02/2017	Digitization & E-archiving
Numen Europe S.A. 2, rue Edmond Reuter L-5326 Contern	2016/9/002	26/09/2017	Digitization & E-archiving
Syndicat Intercommunal de Gestion Informatique 11, rue Edmond Reuter L-5326 Contern	2017/9/005	26/02/2018	E-archiving
KPMG Services S.à.r.l. 39, avenue John F. Kennedy L-1855 Luxembourg	2017/9/004	20/08/2018	Digitization & E-archiving
Centre des technologies de l'information de l'Etat 560, rue de Neudorf L-2220 Luxembourg	2017/9/006	23/08/2018	E-archiving

(as of 14 December 2023)

### Law of 25 July 2015 on electronic archiving

Prerequisite for PSDC status: **certification** by a conformity assessment body (CAB)

Aims of certification:

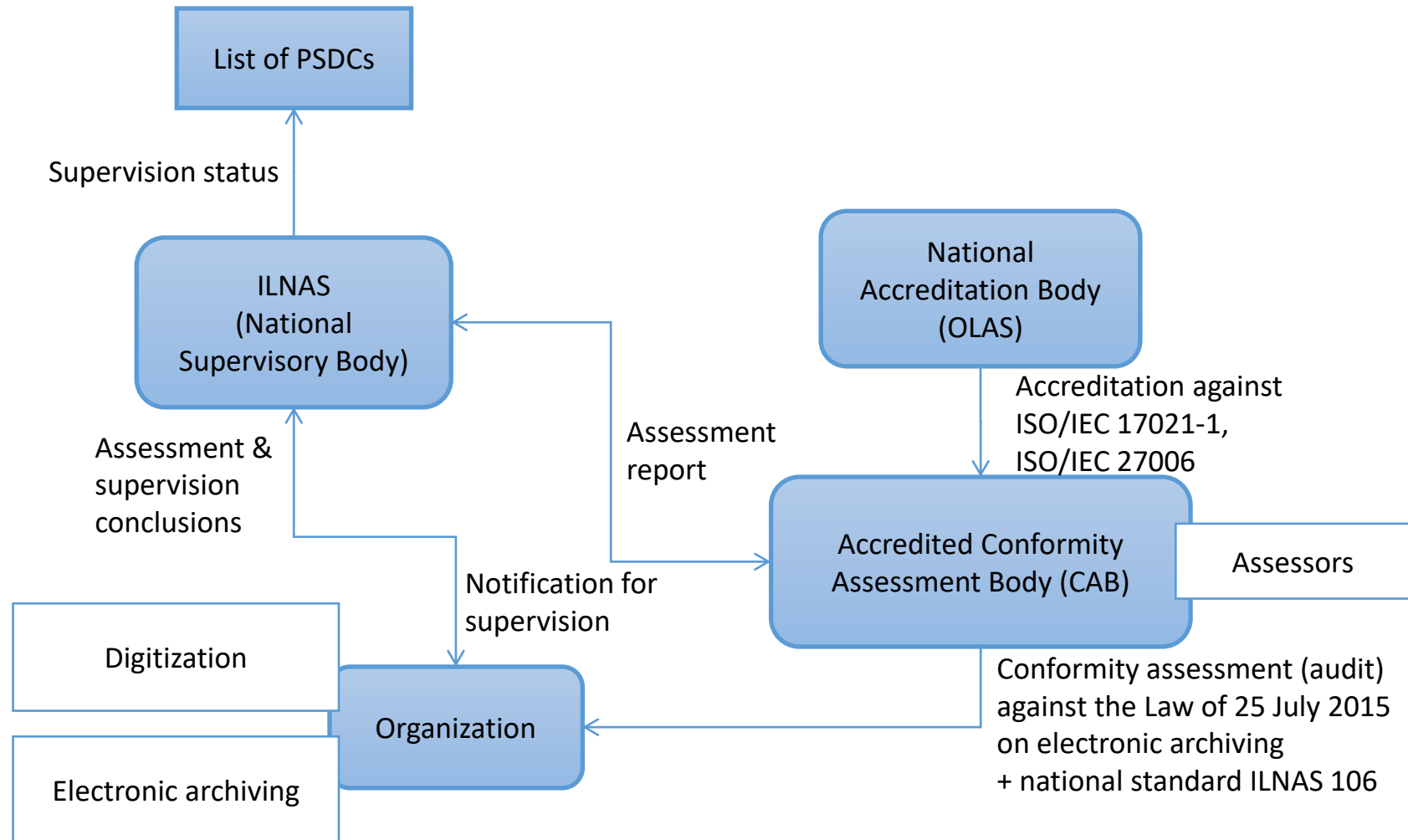
- Verify that digitization / e-archiving follows predetermined procedures
- Procedures have to respect the Law of 25 July 2015 on e-archiving + national standard ILNAS 106

Establish a trust relationship:

- External verification
- Return / transfer of digital documents or archives if a PSDC ceases its activities

Concerning analog documents, the legal context only applies to “private deeds” or to the documents referred to in Article 16 of the “Code de commerce” (accounting and supporting documents)





### National Standard ILNAS 106:2022

- developed by the technical committee ILNAS/TC 106 (founded in 2018)
- Aim: develop a national standard on digitization and e-archiving that can serve as the basis for the certification of PSDCs
- published as a national standard in July 2022
- national standard ILNAS 106:2022 is based on the international standards
  - ISO/IEC 27001:2013: Information Technology — Security Techniques — Information Security Management Systems — Requirements
  - ISO/IEC 27002:2013: Information Technology — Security Techniques — Code of Practice for Information Security Controls
  - ISO 14641: Electronic document management — Design and operation of an information system for the preservation of electronic documents — Specifications
- a few additional security controls (e.g., on cryptography, regular verifications of the integrity of archived documents, etc.)



Available free of charge at

<https://portail-qualite.public.lu/fr/documentations/confiance-numerique/>

*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

## Cybersecurity Certification

14<sup>th</sup> December 2023

Dr. Jean Lancrenon

Chargé de mission – *Département Confiance Numérique - ILNAS*



Regulation (EU) 2019/881 of the European Parliament and of the Council of 17 April 2019 on ENISA (the European Union Agency for Cybersecurity) and on information and communications technology cybersecurity certification and repealing Regulation (EU) No 526/2013 (Cybersecurity Act)

[Here](#)

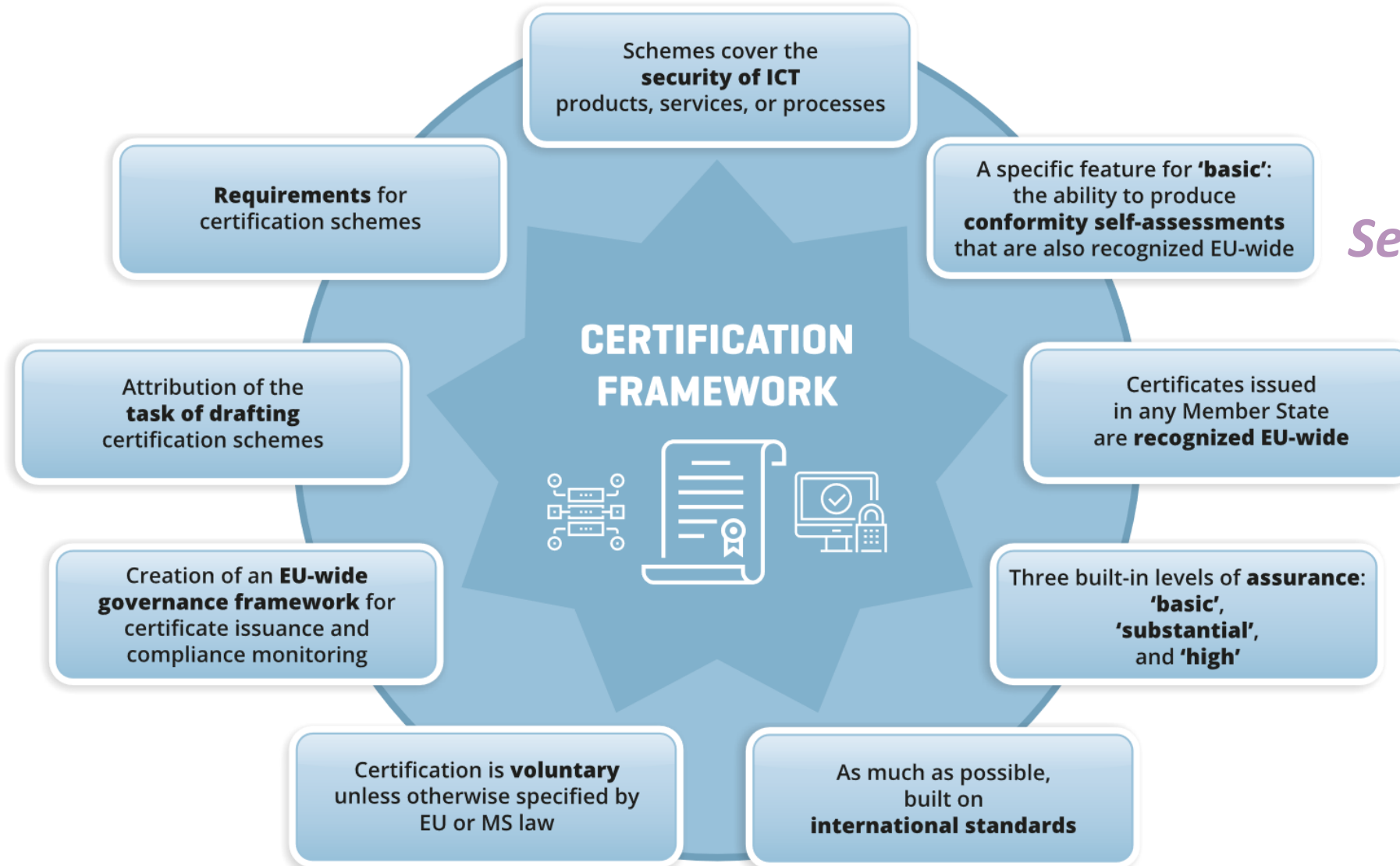
*Adopted* on 17 April 2019

*Fully entered into force* on 28 June 2021

*Two* major parts



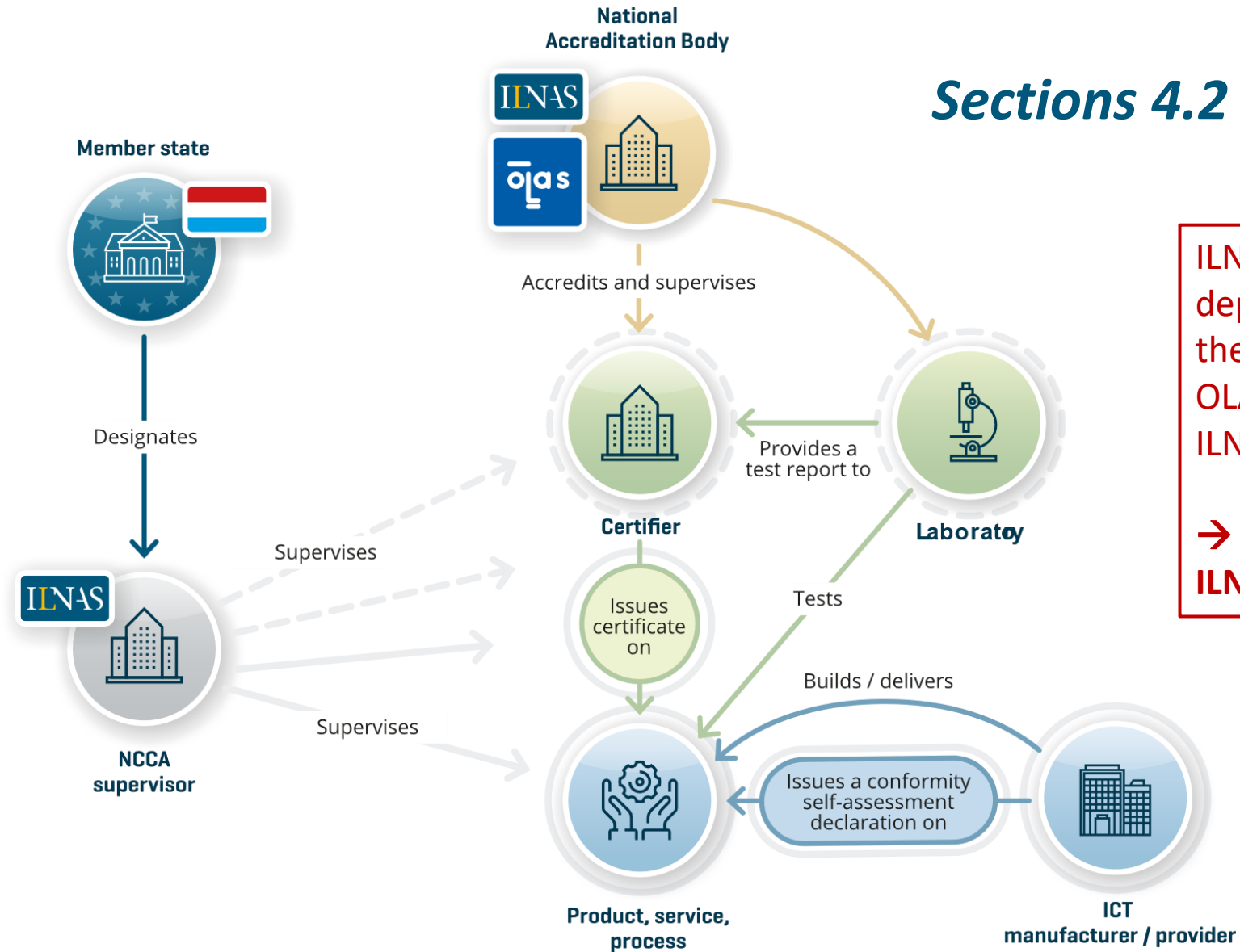
*Main objectives:* Increase cybersecurity in the Union and support the digital single market



## Section 4.1







Sections 4.2 and 4.4

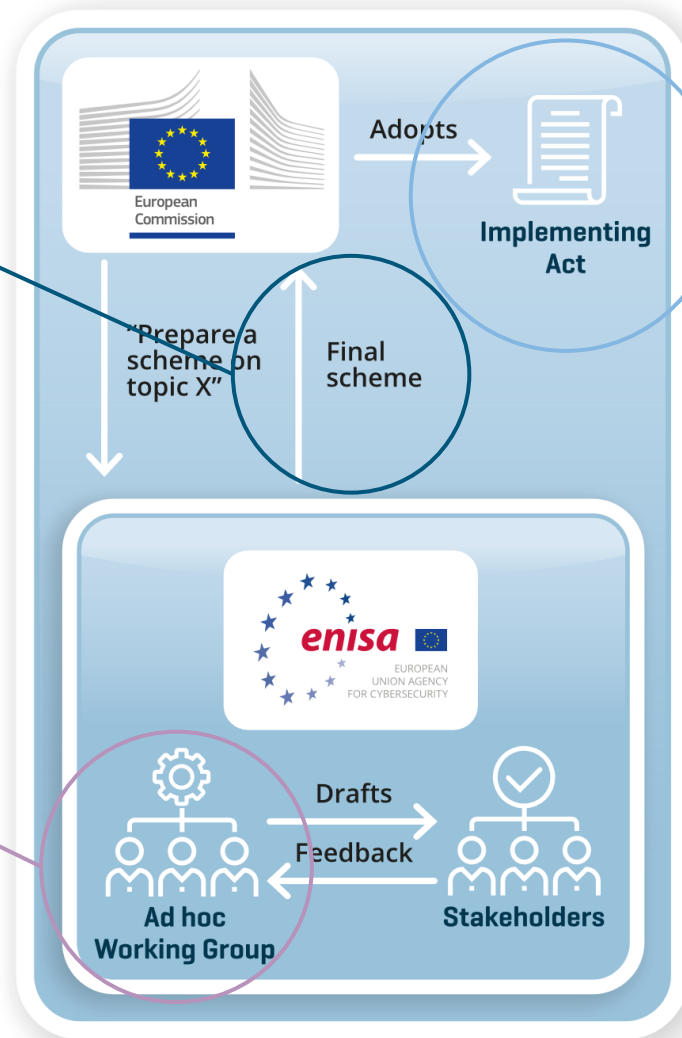


ILNAS' Digital Trust department is taking the NCCA tasks, and OLAS is also a part of ILNAS

→ Hence no plans for ILNAS to be a certifier

**EUCS is somewhere here: ongoing negotiations between COM and AHWG**

**EU5G is here: AHWG formed, and preparing first draft**



**EUCC is around here: Implementing Act almost ready**



**Certification scheme following CSA format [Art. 54]**

*Section 4.2*



## Which standards and for what?

Technical requirements for the **schemes themselves**



Technical requirements for **evaluation against the schemes**

*All throughout,  
but mostly  
Section 4.2*

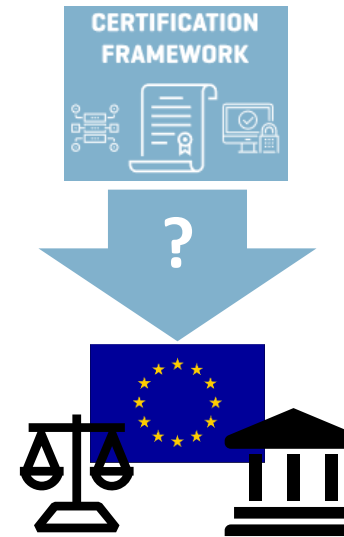


Technical requirements for evaluating **laboratories/certifiers**

## Potential applications of the CSA elsewhere in European legislation

The **NIS2** Directive

The **eIDAS2** Regulation



*Section 4.3*



The list is **certainly not exhaustive**



## Section 4.4



### WORK RELATED TO THE CSA

#### Directly in the Luxembourg market

- Monitor that schemes' rules are being respected by products, processes, and services that are certified or the subject of a conformity self-assessment
- Cooperate with other market surveillance authorities
- Collaborate actively with OLAS to monitor CAB activity and if needed give authorizations

#### Within CSA governance

- Participate in the ECCG
- Collaborate with the Commission and other NCCAs in sharing knowledge and for continuous improvement of schemes

#### Ongoing

- Updating the DTD documentation to accommodate supervision requests
- Collaborating with OLAS to:
  - cooperate efficiently in CAB supervision
  - Support in the establishment of the accreditation program related to the CSA

#### Other activities

- Participating in the European project CORAL\*

#### Contact info

- Jean-François GILLET and Jean LANCRENON
- CSA-matters email [supervision-cybersecurite@ilnas.etat.lu](mailto:supervision-cybersecurite@ilnas.etat.lu)
- <https://portail-qualite.public.lu/fr/cybersecurity-act.html>



*Welcome*

**ILNAS**

*Digital Trust White Paper 4.0*

# TRUST-ENABLING MISSIONS FOR THE DIGITAL MARKET

## Technical Standardization

14<sup>th</sup> December 2023

Mr. Nicolas Domenjoud

*Responsible "ICT & Technical Standardization" – ILNAS/OLN*



E-archiving



ILNAS  
Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

ILNAS 106:2022

ARCHIVAGE ÉLECTRONIQUE -  
RÉFÉRENTIEL D'EXIGENCES POUR LA  
CERTIFICATION DES PRESTATAIRES DE  
SERVICES DE DÉMATÉRIALISATION OU  
DE CONSERVATION (PSDC)

07/2022

Reference number  
ISO/IEC 27001-2:2022(E)

© ISO/IEC 2022

eIDAS



ETSI TS 119 612 v2.1.1 (2015-07)

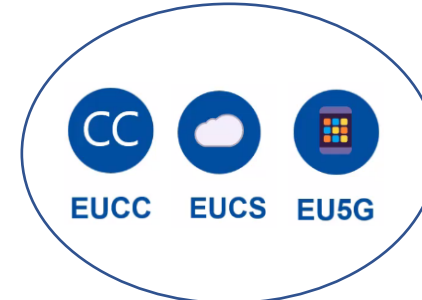
TECHNICAL SPECIFICATION

Electronic Signatures and Infrastructures (ESI);  
Trusted Lists

Reference number  
ISO/IEC 15408-1:2022(E)

© ISO/IEC 2022

CSA



INTERNATIONAL STANDARD ISO/IEC 15408-1

Fourth edition 2022-08

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security —  
Part 1: Introduction and general model

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security —  
Part 1: Introduction and general model

Reference number  
ISO/IEC 15408-1:2022(E)

© ISO/IEC 2022

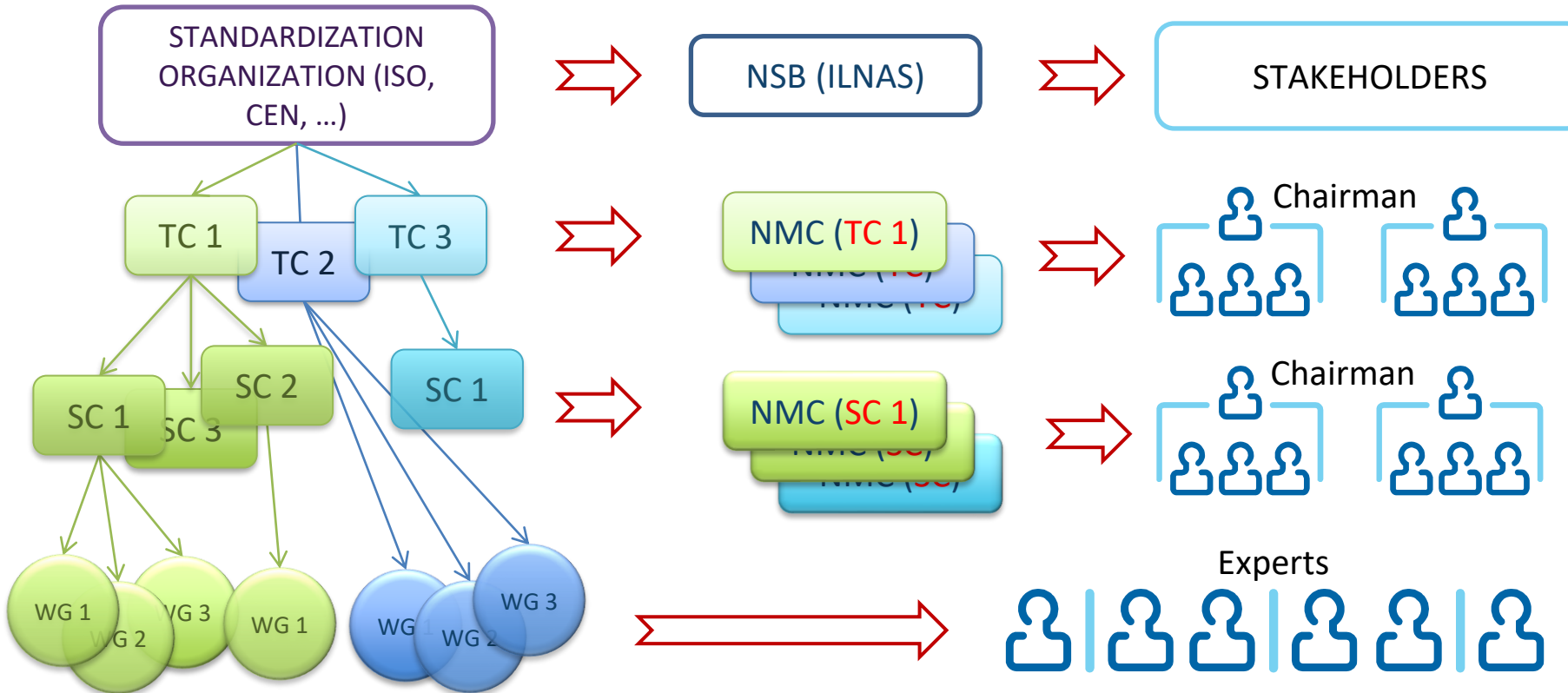
### What is a Standard?

*"[...] A technical specification, adopted by a recognized standardization body, for repeated or continuous application, with which compliance is not compulsory [...]"*

### Standardization Organizations

	General Standardization	Electrotechnical Standardization	Telecommunications Standardization
International level			
European level			
National level			

## II. What are standards and how are they developed?



- **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





## CEN/CLC JTC 13 “Cybersecurity and Data Protection”

### Scope:

- **Development of standards for cybersecurity and data protection** covering all aspects of the evolving information society including but not limited to:
  - **Management systems, frameworks, methodologies**
  - **Data protection and privacy**
  - **Services and products evaluation standards suitable for security assessment for large companies and small and medium enterprises (SMEs)**
  - **Competence requirements for cybersecurity and data protection**
  - **Security requirements, services, techniques and guidelines for ICT systems, services, networks and devices, including smart objects and distributed computing devices**
- Included in the scope is the **identification and possible adoption of documents already published or under development by ISO/IEC JTC 1 and other SDOs and international bodies** such as ISO, IEC, ITU-T, and industrial fora. Where not being developed by other SDO's, the development of cybersecurity and data protection CEN/CENELEC publications for safeguarding information such as organizational frameworks, management systems, techniques, guidelines, and products and services, including those in support of the EU Digital Single Market.

Working group	Title
<a href="#">CEN/CLC/JTC 13/WG 1</a>	Chair's Advisory Group
<a href="#">CEN/CLC/JTC 13/WG 2</a>	Management systems and controls sets
<a href="#">CEN/CLC/JTC 13/WG 3</a>	Security evaluation and assessment
<a href="#">CEN/CLC/JTC 13/WG 5</a>	Data Protection, Privacy and Identity Management
<a href="#">CEN/CLC/JTC 13/WG 6</a>	Product security
<a href="#">CEN/CLC/JTC 13/WG 7</a>	Adhoc group EU 5G Certification scheme support group
<a href="#">CEN/CLC/JTC 13/WG 8</a>	Special Working Group RED Standardization Request
<a href="#">CEN/CLC/JTC 13/WG 9</a>	Special Working Group on Cyber Resilience Act





## CEN/TC 224 “Personal identification and related personal devices with secure element, systems, operations and privacy in a multi sectorial environment”

### Scope:

- The **development of standards for strengthening the interoperability and security of personal identification and its related personal devices, systems, operations and privacy in a multi sectorial environment.** It covers:
  - Operations such as applications and services like **electronic identification, electronic signature**, payment and charging, access and border control;
  - Personal devices with secure elements independently of their form factor, such as cards, mobile devices, and their related interfaces;
  - Security services including authentication, confidentiality, integrity, biometrics, protection of personal and sensitive data;
  - System components such as accepting devices, servers, cryptographic modules;
- CEN/TC 224 multi-sectorial environment involves sectors such as Government/Citizen, Transport, Banking, e-Health, as well as Consumers and providers from the supply side such as card manufacturers, security technology, conformity assessment body, software manufacturers.

Working group	Title
<a href="#">CEN/TC 224/WG 11</a>	Transport applications
<a href="#">CEN/TC 224/WG 17</a>	Protection Profiles in the context of SSCD
<a href="#">CEN/TC 224/WG 18</a>	Biometrics
<a href="#">CEN/TC 224/WG 19</a>	Breeder Documents
<a href="#">CEN/TC 224/WG 20</a>	Ad Hoc Group on European Digital Identity Wallets



## ETSI/TC CYBER “Cybersecurity”

### Scope:

- To act as the **ETSI centre of expertise in the area of Cyber Security**
- Advise and assist all ETSI Groups with the development of Cyber Security requirements
- To develop and maintain the Standards, Specifications and other deliverables to support the development and implementation of Cyber Security standardization within ETSI
- To collect and specify Cyber Security requirements from relevant stakeholders
- To identify gaps where existing standards do not fulfil the requirements and provide specifications and standards to fill these gaps, without duplication of work in other ETSI committees and partnership projects
- To ensure that appropriate Standards are developed within ETSI in order to meet these requirements
- To perform identified work as sub-contracted from ETSI Projects and ETSI Partnership Projects
- **To coordinate work in ETSI with external groups such as ENISA**
- **To answer to policy requests related to Cyber Security, and security in broad sense in the ICT sector**



## ETSI/TC ESI “Electronic Signatures and Infrastructures”

### Scope:

- **TC ESI is responsible for standardization within ETSI supporting current and upcoming technology for trust services relating to Electronic Signatures and other trust services such as registered electronic delivery, electronic seals, electronic attestation of attributes and electronic archival.** This includes trust service data formats, Identification procedures and policy and audit requirements for trust infrastructures supporting such trust services. This is aimed at supporting regulatory requirements such as the eIDAS Regulation as well as general international and commercial requirements.
- TC ESI is the lead body within ETSI in relation to electronic signatures, and other trust service Infrastructures, to ensure trust and confidence in electronic transactions by:
  - Developing European Standards and other standardisation deliverables, generic standards, guides and reports
  - Liaising with other ETSI bodies
  - Liaising with bodies external to ETSI
  - Establishing a continuing work plan.
- TC ESI has over 20 years experience in standardisation for Electronic Signatures and Trust Infrastructures. Its standards for signature formats have been recognised under European regulations and adopted by a number of countries around the world. It's best practices standards for trust service providers and their audit have been adopted across Europe and is recognised by major IT providers.

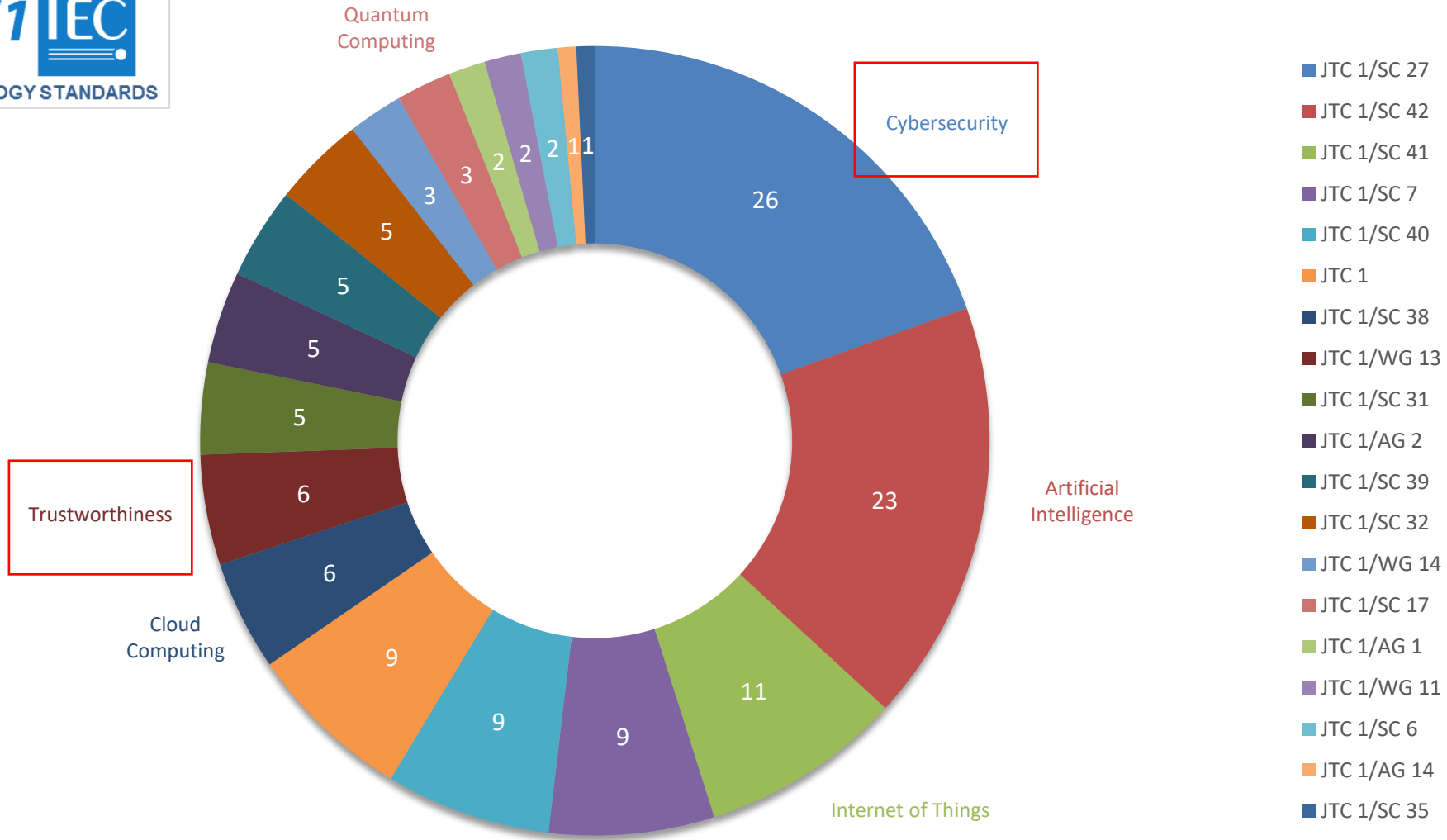


## ISO/IEC JTC 1/SC 27 “Information security, cybersecurity and privacy protection”

### 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;

ISO/IEC JTC 1/SC 27/JWG 6	Joint ISO/IEC JTC1/SC 27 - ISO/TC 22/SC 32 WG : Cybersecurity requirements and evaluation activities for connected vehicle devices
ISO/IEC JTC 1/SC 27/WG 1	Information security management systems
ISO/IEC JTC 1/SC 27/WG 2	Cryptography and security mechanisms
ISO/IEC JTC 1/SC 27/WG 3	Security evaluation, testing and specification
ISO/IEC JTC 1/SC 27/WG 4	Security controls and services
ISO/IEC JTC 1/SC 27/WG 5	Identity management and privacy technologies



Trustworthiness

Cybersecurity

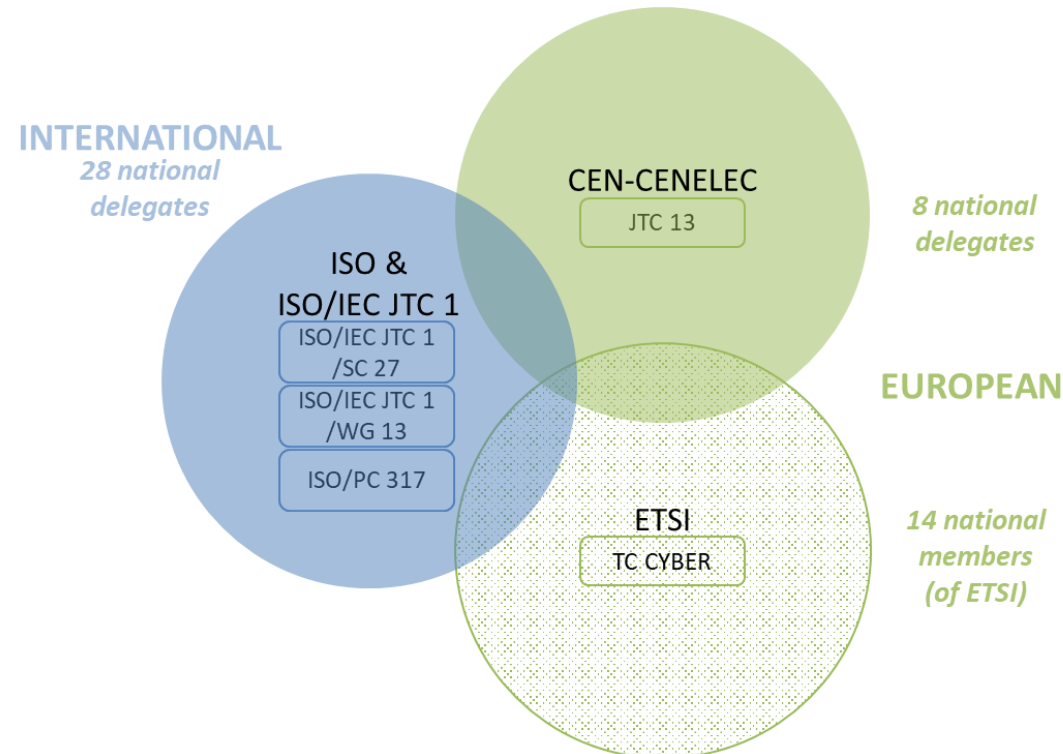
Cloud Computing

Artificial Intelligence

Internet of Things

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

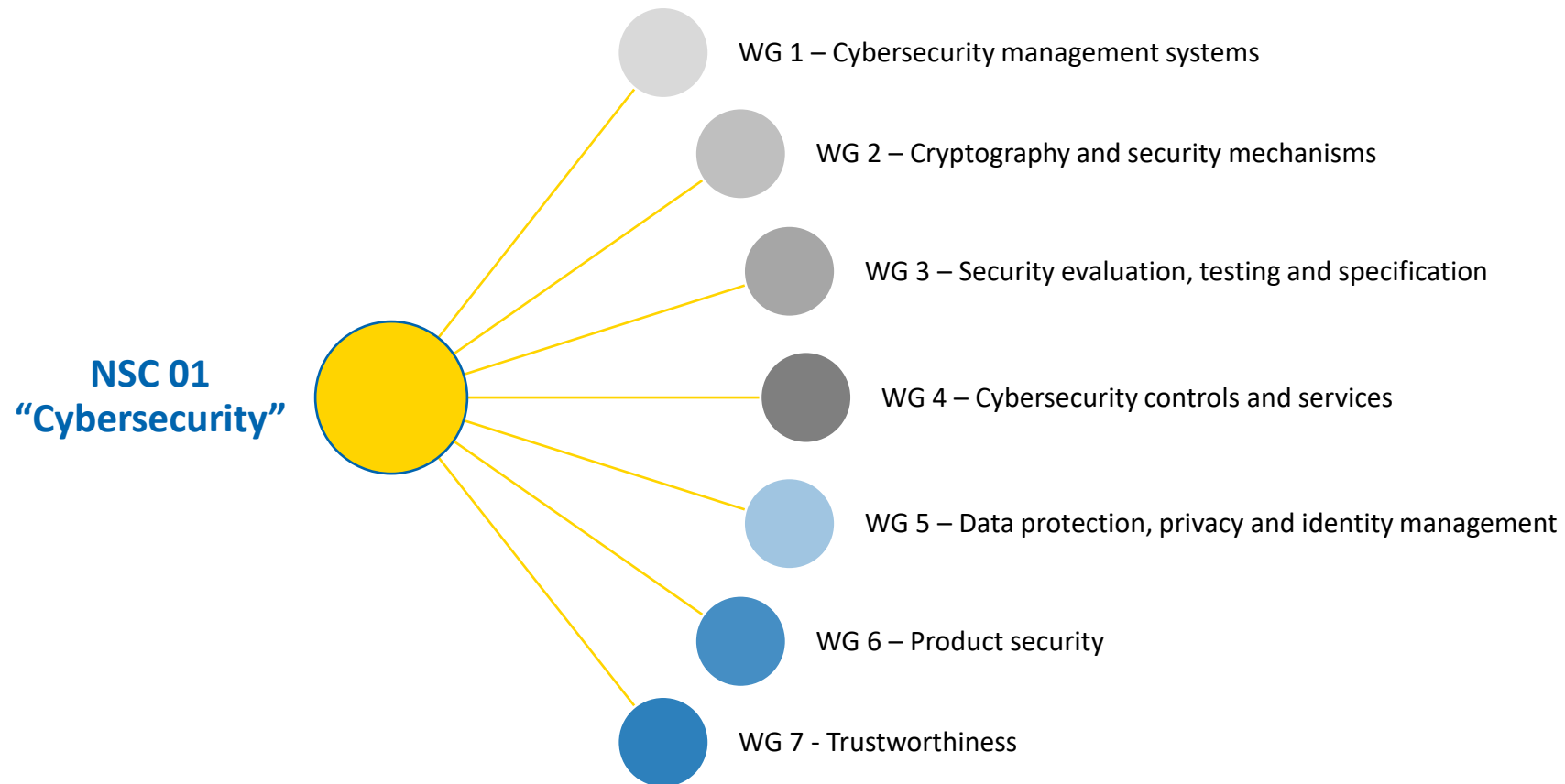
## Multiple technical committees dealing with similar or complementary projects



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



## National Standardization Commission (NSC 01) “Cybersecurity”



*30 national delegates*

*Portfolio of more than 80 projects*

- **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



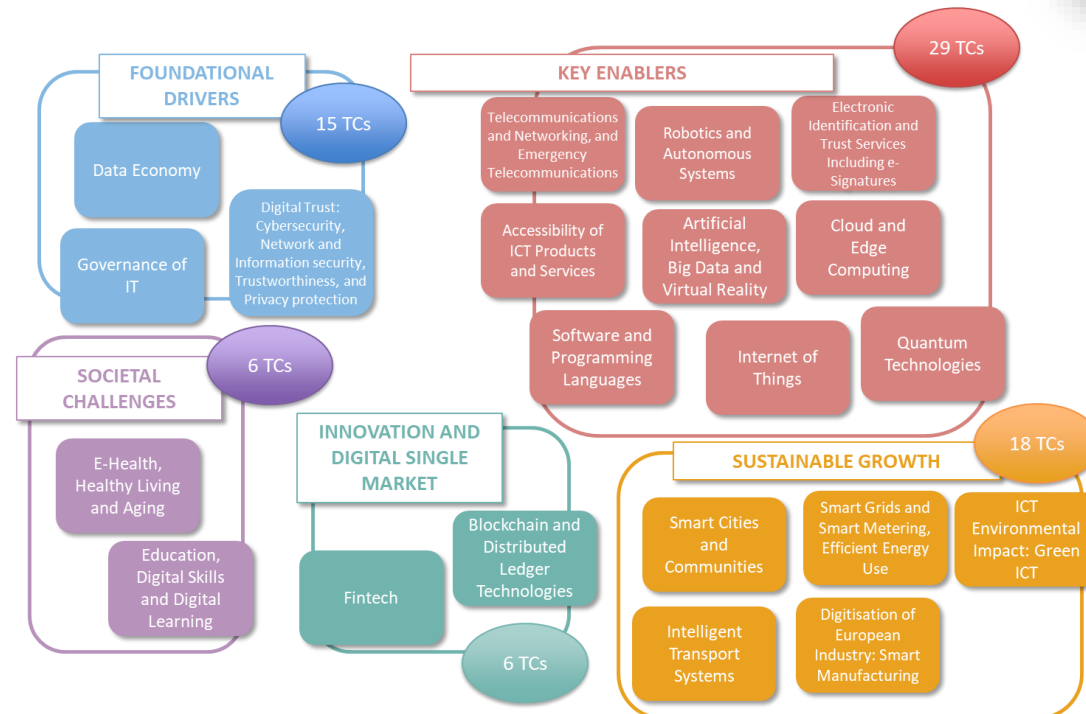
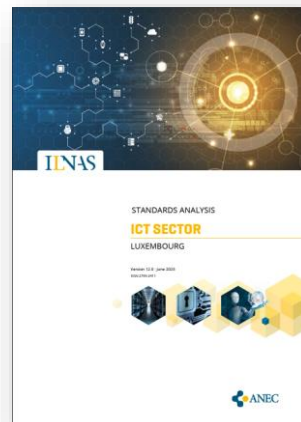
1, av du Swing - L-4367 Belvaux - Tél. : (+352) 24 77 43 40 - Fax : (+352) 24 79 43 40 - Email : normalisation@ilnas.etat.lu - www.portail-qualite.lu

mercredi 8 novembre 2023

Approuvé par Jérôme HOEROLD

Page 1 sur 102

- 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:
  - o Diffusion of normative information
  - o Continuous training in the field of technical standardization
  - o Standards watch
  - o National standards analyses (limited to the “priority” sectors defined in the national standardization strategy)





*Thank you*

**ILNAS**

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[www.portail-qualite.lu](http://www.portail-qualite.lu)