# ETSI ESI:
# Electronic Signatures and Trust Infrastructures Standards Update

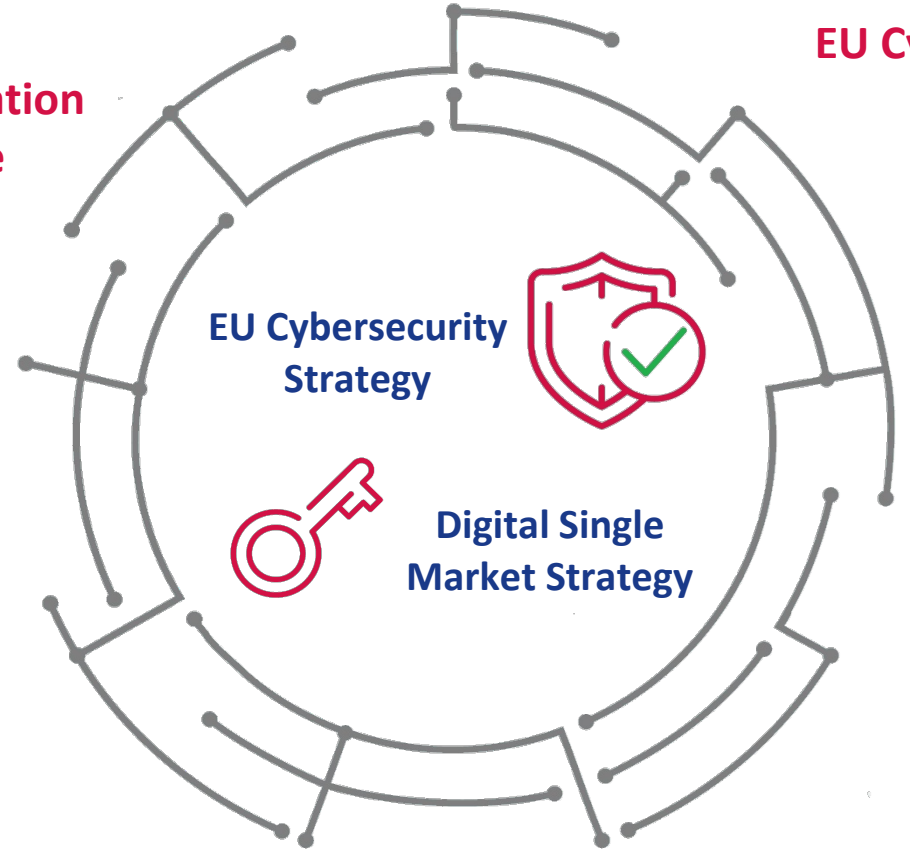
## CA/B Forum Tokyo– March, 25th 2025

Presented by: Arno Fiedler – Vice chair ETSI ESI



The European Telecommunication Standards Institute was founded in 1998 supporting GSM, the 900+ member organizations are drawn from over 60 countries and five continents.

# EU LEGISLATION – CYBERSECURITY LANDSCAPE




Network and Information Security Directive

EU Cybersecurity Act

Radio Equipment Directive

General Data Protection Regulation

EU Chips Act

Cyber Resilience Act

eIDAS Regulation

Artificial Intelligence Act

Supply chain

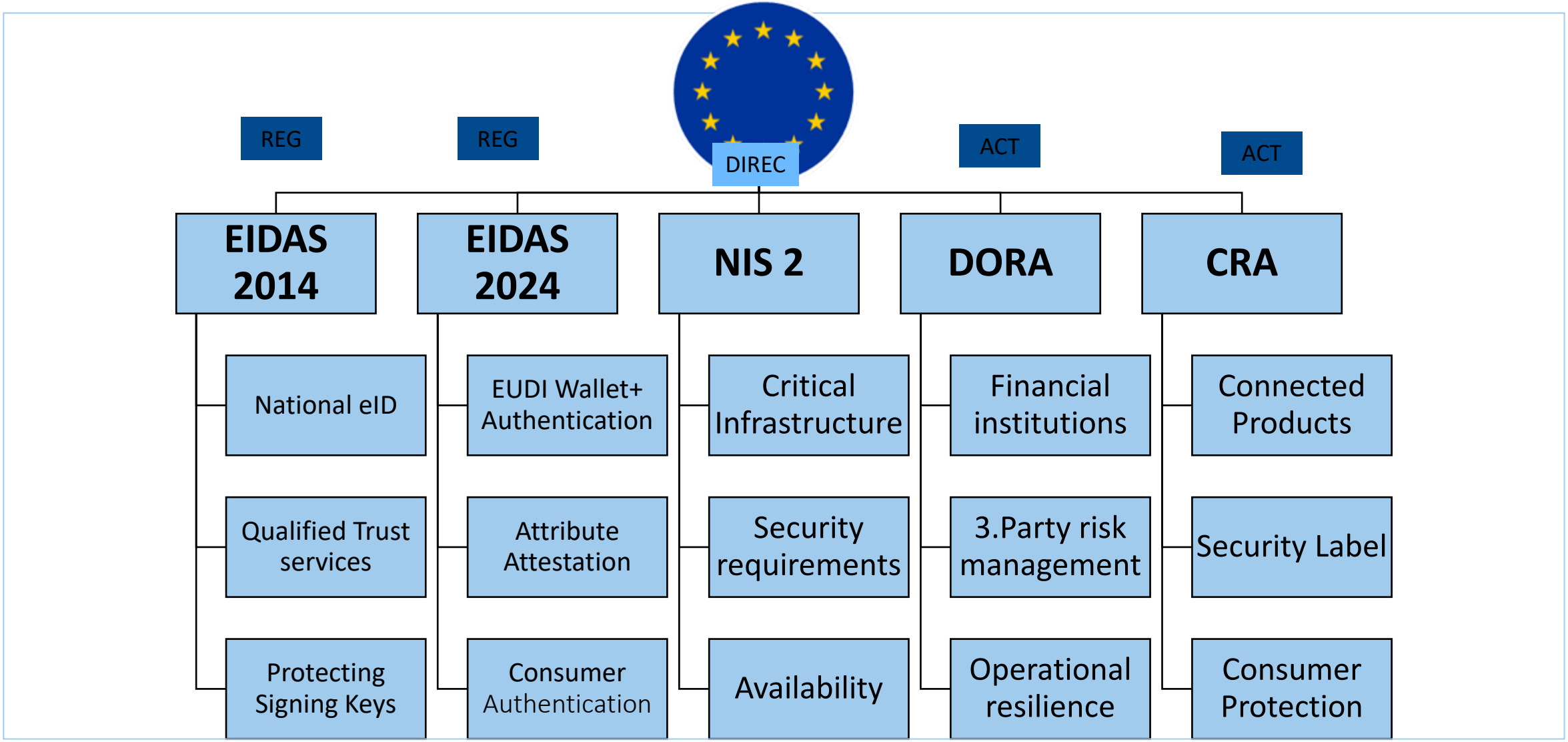
EU Cyber Solidarity Act

Data Act

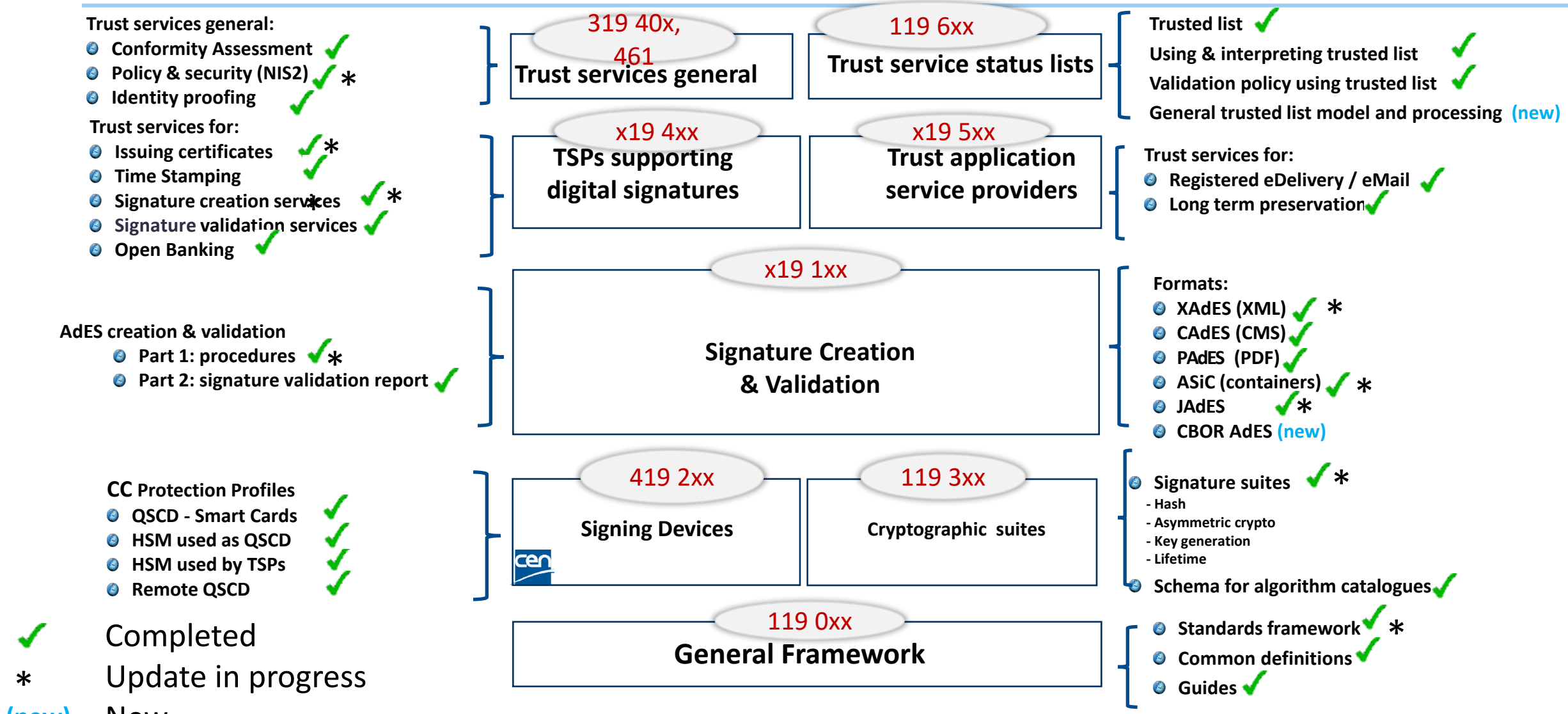
Digital Operational Resilience Act

Role of standards

# PKI relevant European Regulations in 2025



# First Quarter of 2025: Maintenance of Existing Standards




✓ Completed

* Update in progress

(new) New

# EN 319 401 – General Policy Requirements for TSPs

**Update aimed to align with NIS2**

- New version 3.1.1 published 2024-06
- Aims to fully align with  NIS2 implementing act
- Updated EN 319 401 incorporated by reference from all TSP Policy standards
- Other standards which follow general topics structure unaffected.

Supports ACAB'c strategy for single audit covering NIS2 and eIDAS (and DORA via update in late 2025)

# TS 119 461: Identity Proofing finalized

- New Extended LoIP (Level of Identity Proofing)

- Strengthening requirements for threats and risk assessment and for keeping solutions up to date
  - Threats intelligence process, pointing at ENISA “Methodology for sectoral cybersecurity assessments” as a hint towards future cybersecurity certification requirements

- Adding requirements to enhance Baseline LoIP to reach Extended LoIP

- New Annex C on requirements for identity proofing for eIDAS qualified trust services
  - Qualified certificates according to eIDAS v1
  - Qualified certificates and qualified electronic attestation of attributes for eIDAS v2
  - Qualified registered delivery same for eIDAS v1 and eIDAS v2

- References CEN standard on biometric injection attack detection for remote registration

# EN 319 411-1/2 Certificate Policy Updates

- EN 319 411-1 General Requirements
  - Key ceremonies
  - Identify last CRL issued (on termination)
  - Alignment with EN 319 401 NIS2 version

- EN 319 411-2 Qualified
  - Support for validity assured / short term certificates
  - Alignment with CAB Forum Extended Validation

# EN 319 412-x Certificate Profile Updates

- EN 319 412-1
  - NTR trade identified region identifier
  - Alignment with EN 319 401 NIS2 version
- EN 319 412-2 Natural person
  - Status services for validity assured / short term certificates
  - Clarification on identification common name vs given name and pseudonym
  - CAB Forum OCSP alignment
- EN 319 412-5 QC Statement
  - QC Statement on verification method (whether have used QES)
  - ASN.1 encoding of non-EU QSCD

# eSignature/ eSeal Standards - formats

- EN 319 142-1 PadES : Updates to align with the latest version of ISO 32000 (pdf)
- EN 319 132-1 XAdES (XML): Changes includes update to archive timestamp
- EN 319 162-1 Associated Signature Container (ASiC):
  Adding alternative forms (e.g. time assertion),
- TS 119 182 JAdES (JSON) Changes includes replacing claimed signing time:
  *sigT* with *iat* to facilitate IETF alignment
- TS 119 152 CB-AdES (CBOR):
  Adopting IETF allocation of numbers to new header parameters
- EN 319 102-1: AdES Signature creation and Validation : 17 Detailed changes
- TS 119 172-4 -1: Validation Policy on EU Qualified e-Seals and e-Signatures:
  Remain open issue on revocation checks on preserved signatures

# QWACs Spec ETSI TS 119 411-5 finalized

The TS defines multiple approaches for issuing qualified certificates for website authentication, deploying them to websites, and their consumption by user agents.

- 1. “1-QWAC Approach”: Single certificate that meets both browser root store **and** EU Qualified requirements both aligned with CA/Browser Forum requirements
- 2. “2-QWAC with Certificate Binding Validation Approach”
  - EU Qualified Certificate signed binding to TLS Certificate
  - + TLS Certificate meets browser root store requirements aligned with CA/Browser Forum requirements
  - Browser validates TLS Certificate against binding

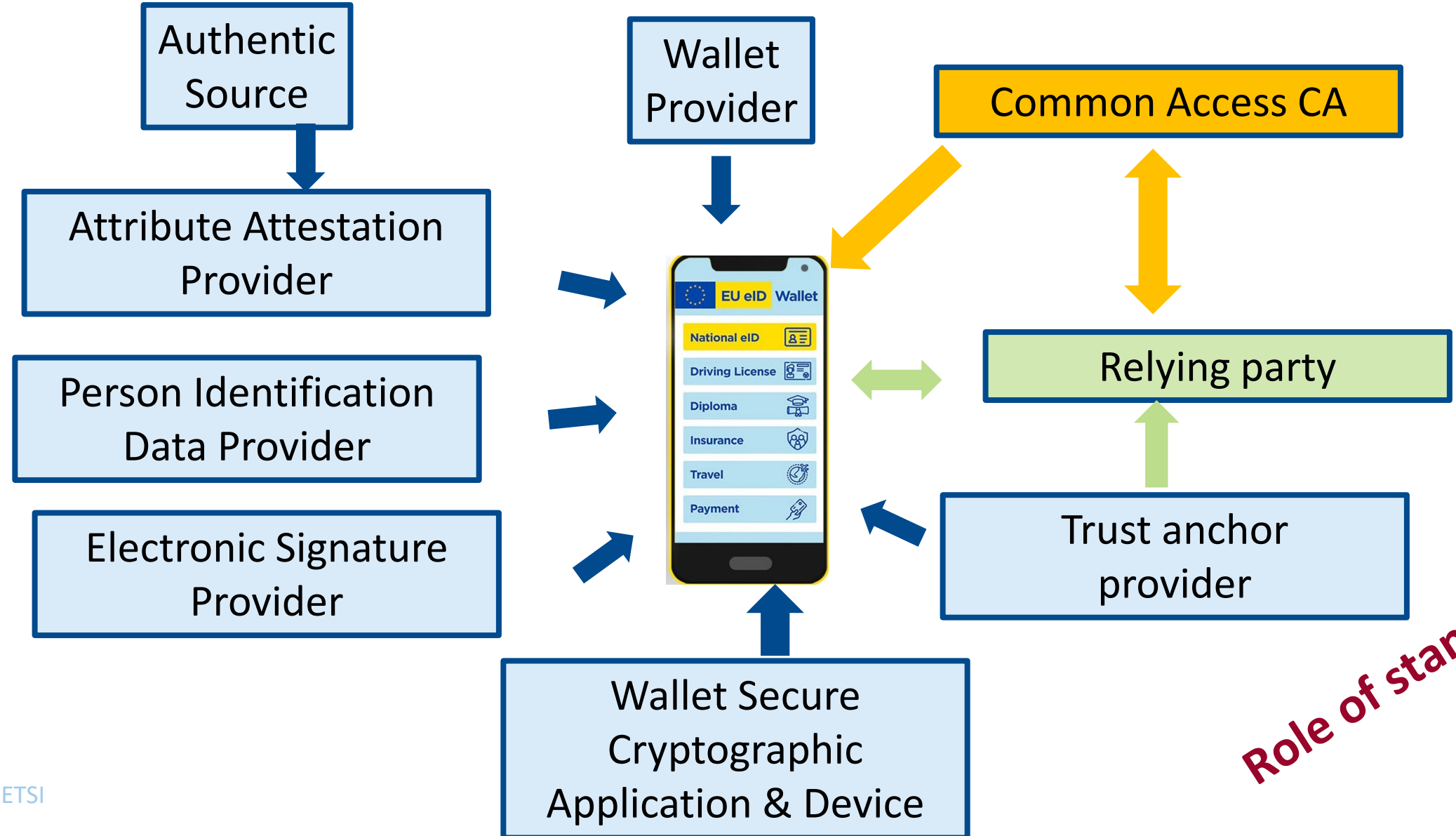
# EU Certificate Transparency Ecosystem: NWI at ESI

- Title:
  Requirements on a Certificate Transparency (CT) Ecosystem to make the issuing of certificates transparent and verifiable

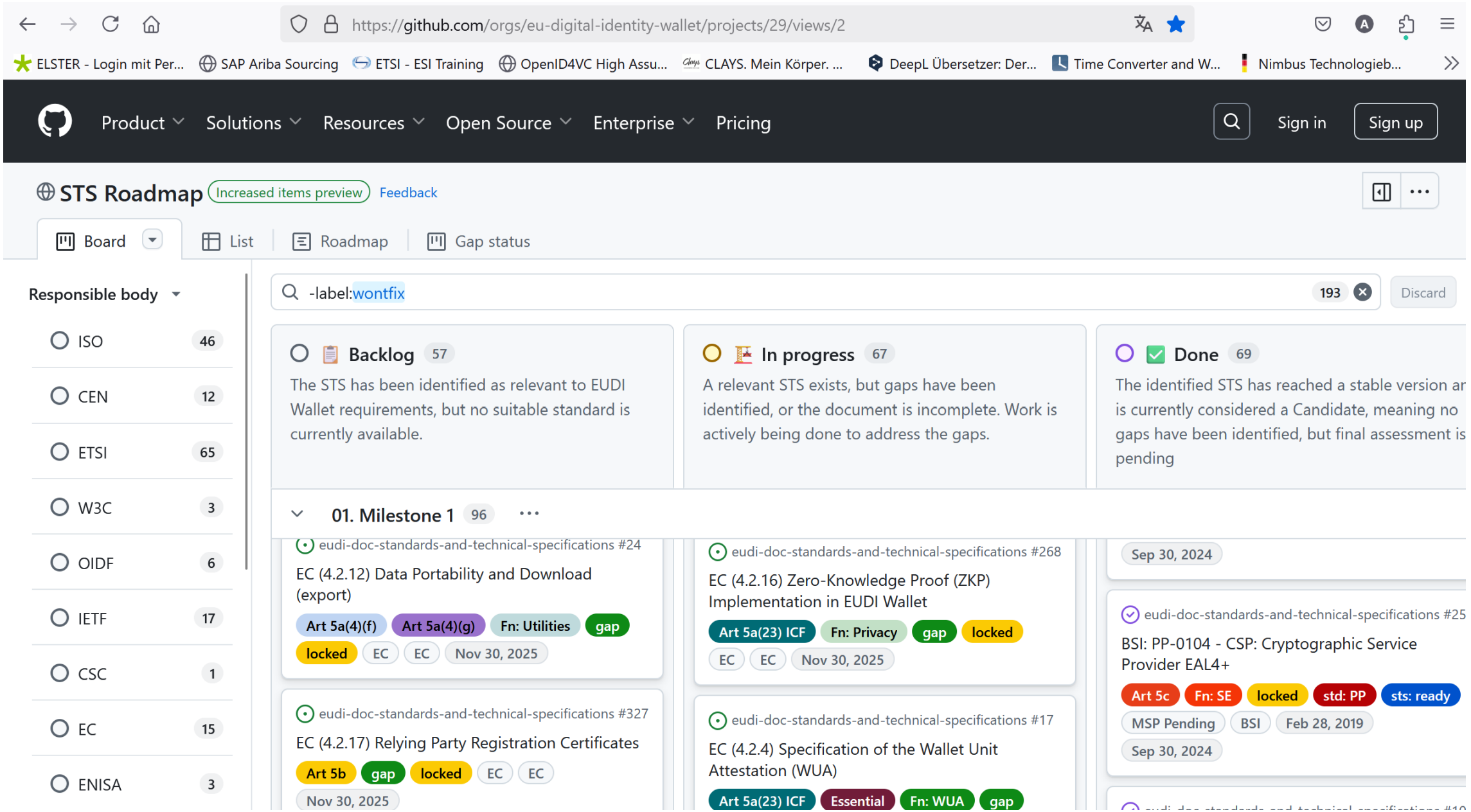
- Scope and Field of Application:
  Report on existing Certificate Transparency approaches and on standardisation requirements for equivalent of Certificate Transparency as specified in RFC 6962 and concepts such as Static Certificate Transparency supporting log of certificates, as defined in amended Regulation (EU) 910/2014

- Supporting Organizations:
  Microsec Ltd, Nimbus Technologieberatung, Google Ireland Limited, DigiCert, Sectigo, ESD, D-TRUST (Enrico Entschew)

# Main components and Interfaces for EUDI Wallet:



# https://github.com/orgs/eu-digital-identity-wallet/projects/29/views/2



# Further information

Information on available standards and current activities:
https://portal.etsi.org/TBSiteMap/ESI/ESIActivities.aspx

ETSI standards: available for free download
http://www.etsi.org/standards-search

CEN standards: available through National Standards Organisations

Updates on standardisation:
https://list.etsi.org/scripts/wa.exe?SUBED1=e-signatures_news&A=1

Next ESI Meetings:
25.-28.05.25 Sophia Antipolis, France
16.-18.09.25 Bilbao, Spain
24.-25.09.25 Split Croatia, CA-Day+TSF,