Welcome to the World of Standards

ETSI

World Class Standards

NIST-Workshop 10 & 11 April 2013

EUROPEAN APPROACH TO OVERSIGHT OF "TRUST SERVICE PROVIDERS"

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Electronic Signatures and Infrastructures, Specialist Task Force 458

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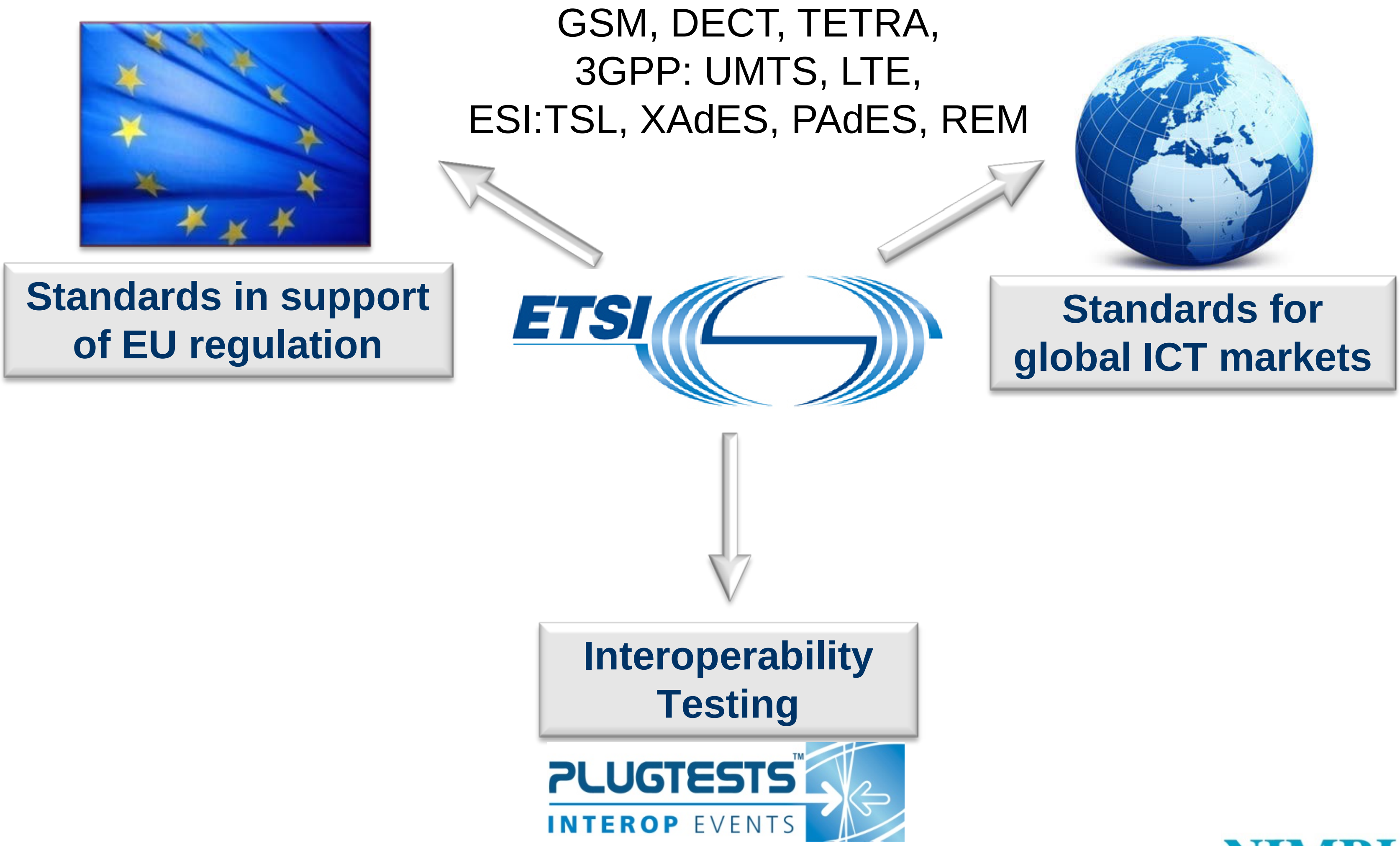
Topics

- 1. ETSI at a glance
- 2. Current voluntary Audit Scheme for TSP issuing SSL-Certificates based on ETSI Standards and Specs
- 3.1. **Legal** Framework: EU **Draft** regulation on EIDAS
- 3.2. Shaped **Standards** Framework: EU Mandate 460
- 3.3. Proactive **Trust** Framework
- 4. Next Steps
- 5. Summary

1. ETSI activities



GSM, DECT, TETRA,
3GPP: UMTS, LTE,
ESI:TSL, XAdES, PAdES, REM

Standards in support of EU regulation

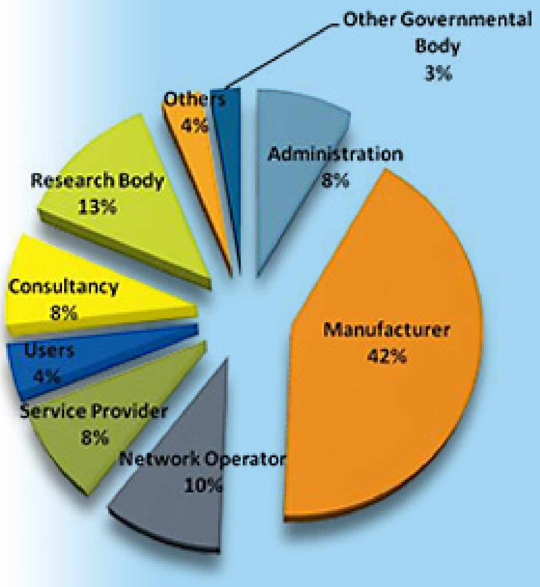
Standards for global ICT markets

Interoperability Testing

1. Membership

- Over **700 companies**, big and small, from **62 countries** on **5 continents**

- Manufacturers, network operators, service and content providers, national administrations, ministries, universities, research bodies, consultancies, user organizations



A powerful and dynamic mix of **skills, resources and ambitions**

2. ETSI Recommended Practices for CAs issuing Web Certificates

- Year 2008 ETSI Published TS 102 042 “Policy Requirements for Certification Authorities issuing Public Key Certificates” that Generalizes requirements specified in TS 101 456 for **Qualified Certificates.**
- Year 2010 Versions TS 102 042 references CAB guidelines for specific requirements for **Extended Validation** Web Certificates
- Year 2012 CAB Forum **“Baseline”** guidelines to be adopted by all Certification Authorities issuing web certificates - Only compliant CAs to be included in browsers
- End of Year 2012: ETSI issued actual policy and audit guides for **Baseline and Extended Validation**.

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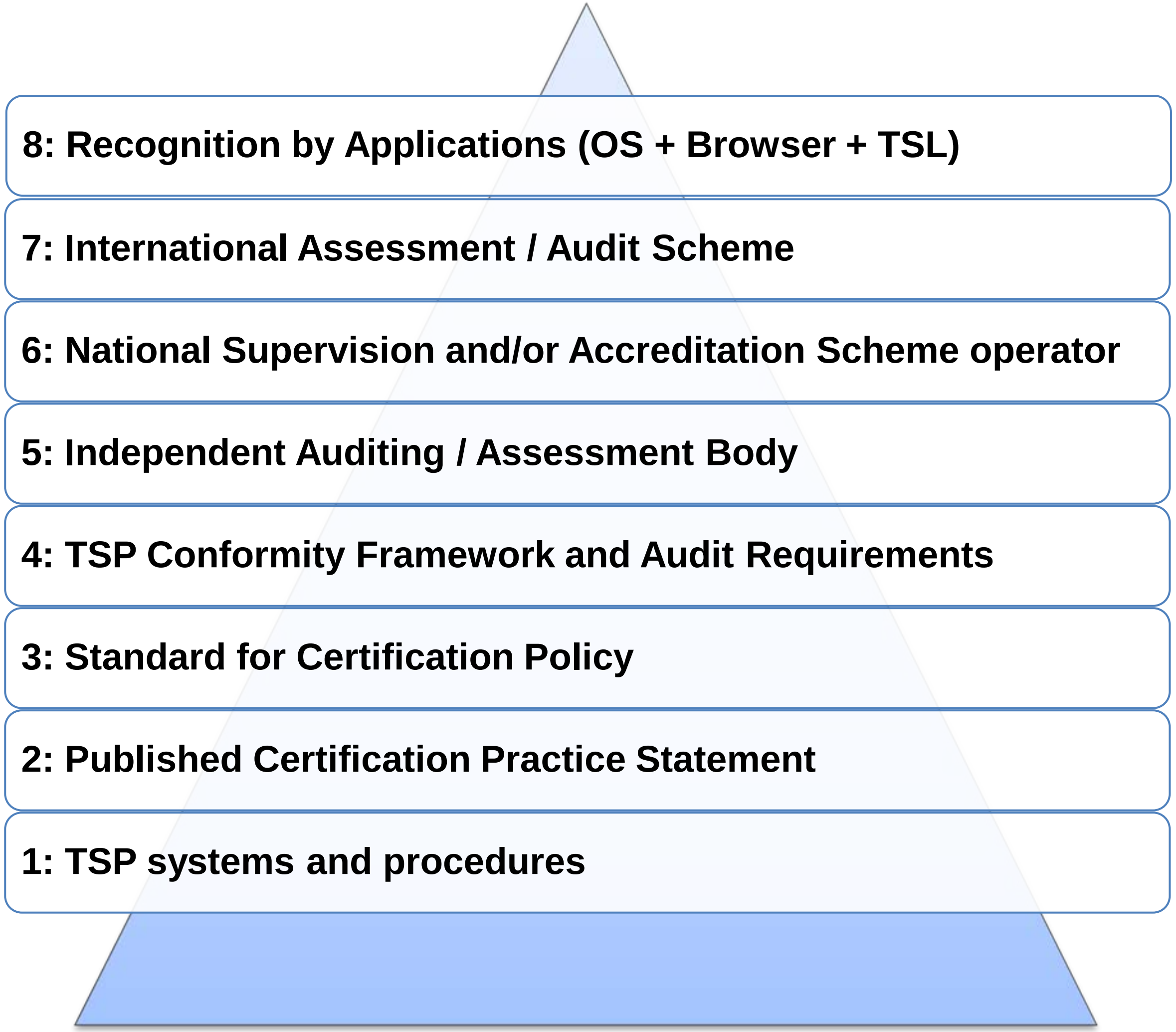
2. Assessment & Certification – Actual (Best) Practise for SSL



8: Recognition by Applications (OS + Browser + TSL)

7: International Assessment / Audit Scheme

6: National Supervision and/or Accreditation Scheme operator

5: Independent Auditing / Assessment Body

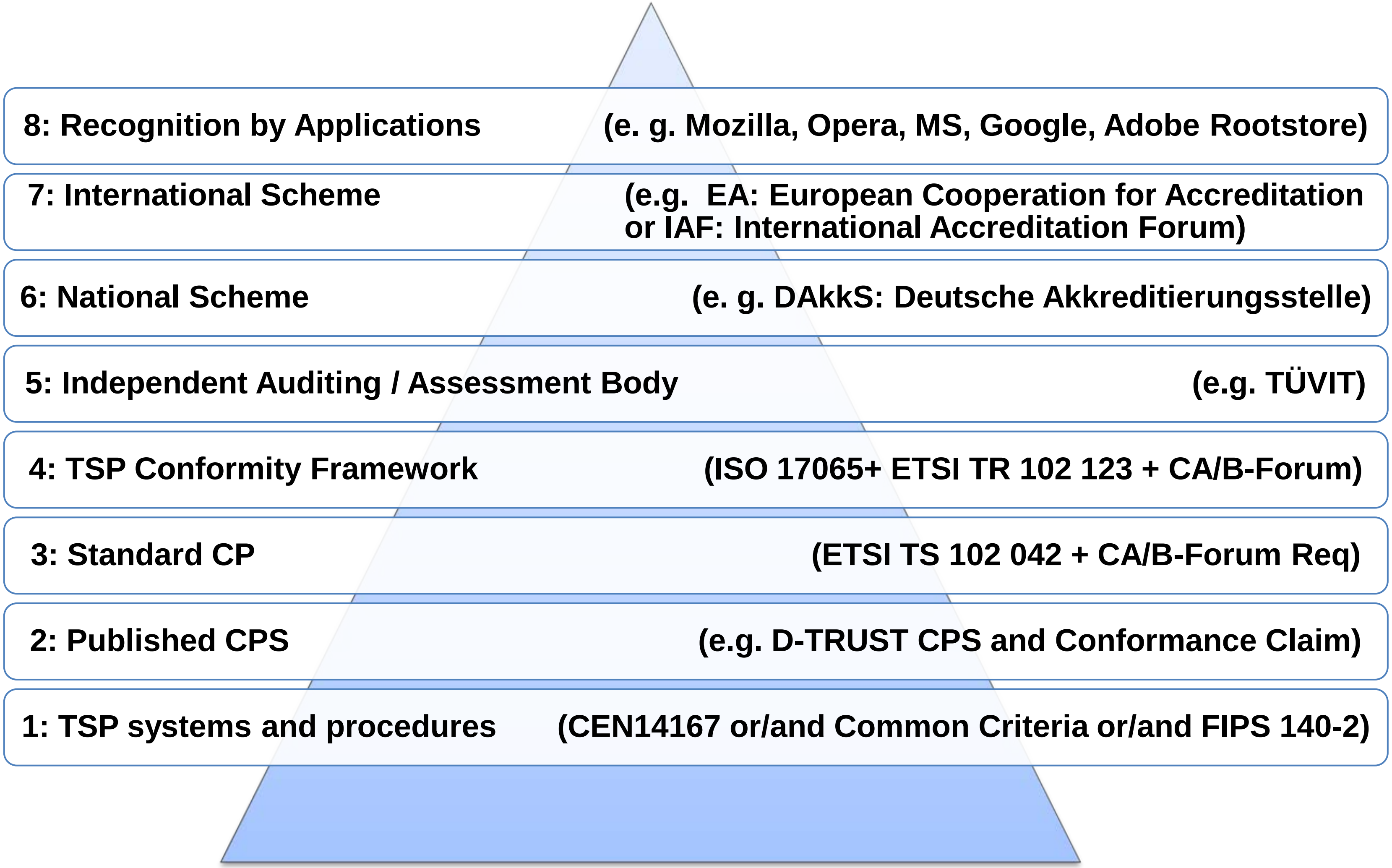
4: TSP Conformity Framework and Audit Requirements

3: Standard for Certification Policy

2: Published Certification Practice Statement

1: TSP systems and procedures

2. Assessment & Certification – actual TSP Perspective (german example)



8: Recognition by Applications (e. g. Mozilla, Opera, MS, Google, Adobe Rootstore)

7: International Scheme (e.g. EA: European Cooperation for Accreditation or IAF: International Accreditation Forum)

6: National Scheme (e. g. DAkkS: Deutsche Akkreditierungsstelle)

5: Independent Auditing / Assessment Body (e.g. TÜVIT)

4: TSP Conformity Framework (ISO 17065+ ETSI TR 102 123 + CA/B-Forum)

3: Standard CP (ETSI TS 102 042 + CA/B-Forum Req)

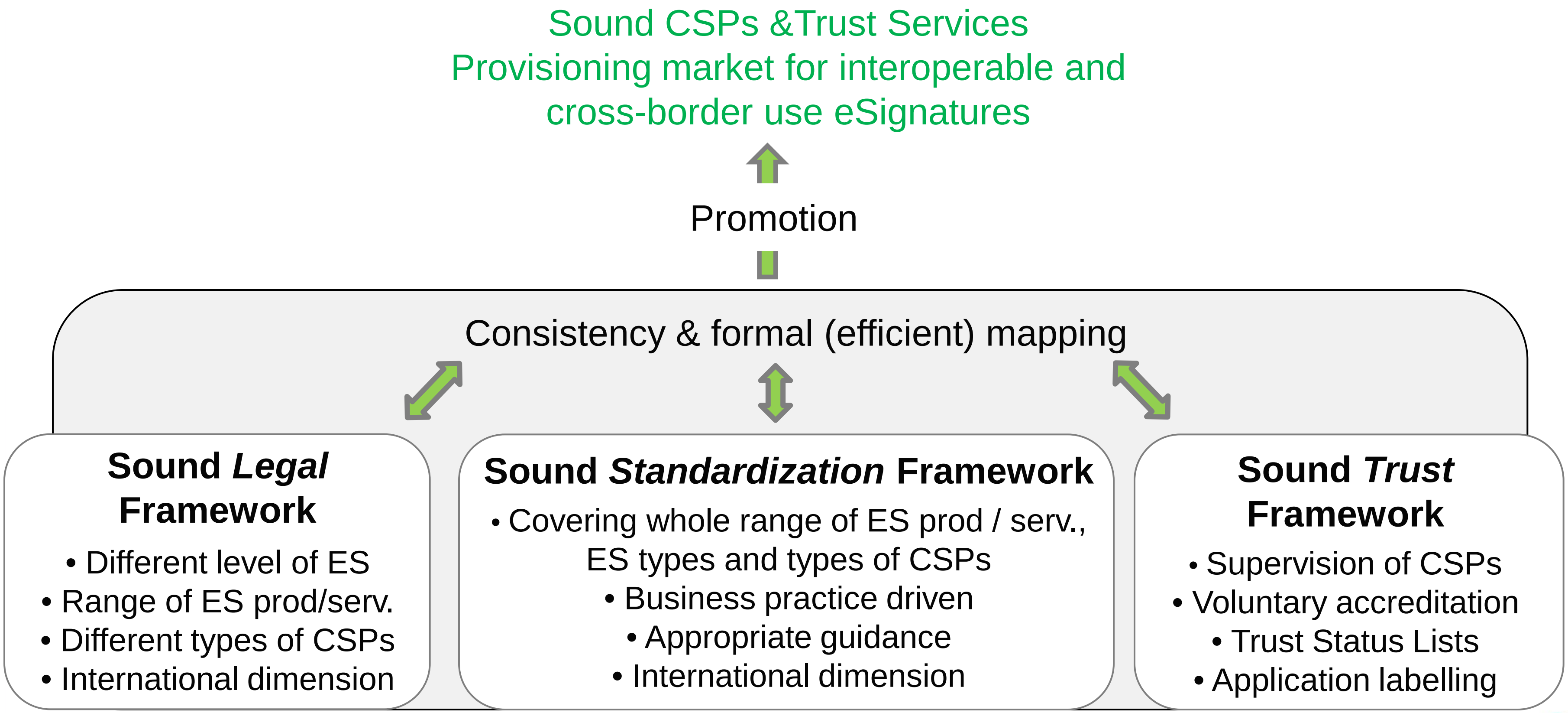
2: Published CPS (e.g. D-TRUST CPS and Conformance Claim)

1: TSP systems and procedures (CEN14167 or/and Common Criteria or/and FIPS 140-2)

New approach to I-A-S in Europe

3. Crobies Study in 2010:
Key success factors for eSignatures

Realizations, consistency and mapping of efficient Legal, Technical, Trust and Promotional frameworks are key success factors to convince market & business stakeholders of the possible ROI of eSignatures securing their eProcesses.



Sound CSPs &Trust Services
Provisioning market for interoperable and
cross-border use eSignatures

Promotion

Consistency & formal (efficient) mapping

Sound *Legal* Framework

- Different level of ES
- Range of ES prod/serv.
- Different types of CSPs
- International dimension

Sound *Standardization* Framework

- Covering whole range of ES prod / serv., ES types and types of CSPs
- Business practice driven
- Appropriate guidance
- International dimension

Sound *Trust* Framework

- Supervision of CSPs
- Voluntary accreditation
- Trust Status Lists
- Application labelling

3. Crobies Study in 2010:
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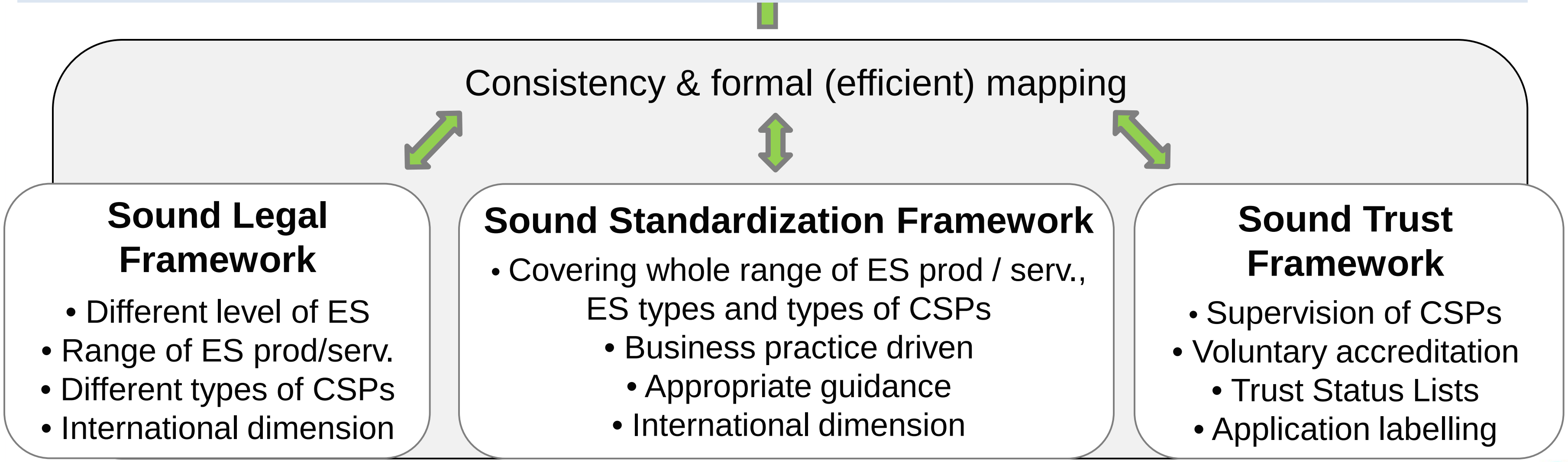
Also applicable for SSL-Certs!



Consistency & formal (efficient) mapping

Sound Legal Framework

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Sound Trust Framework

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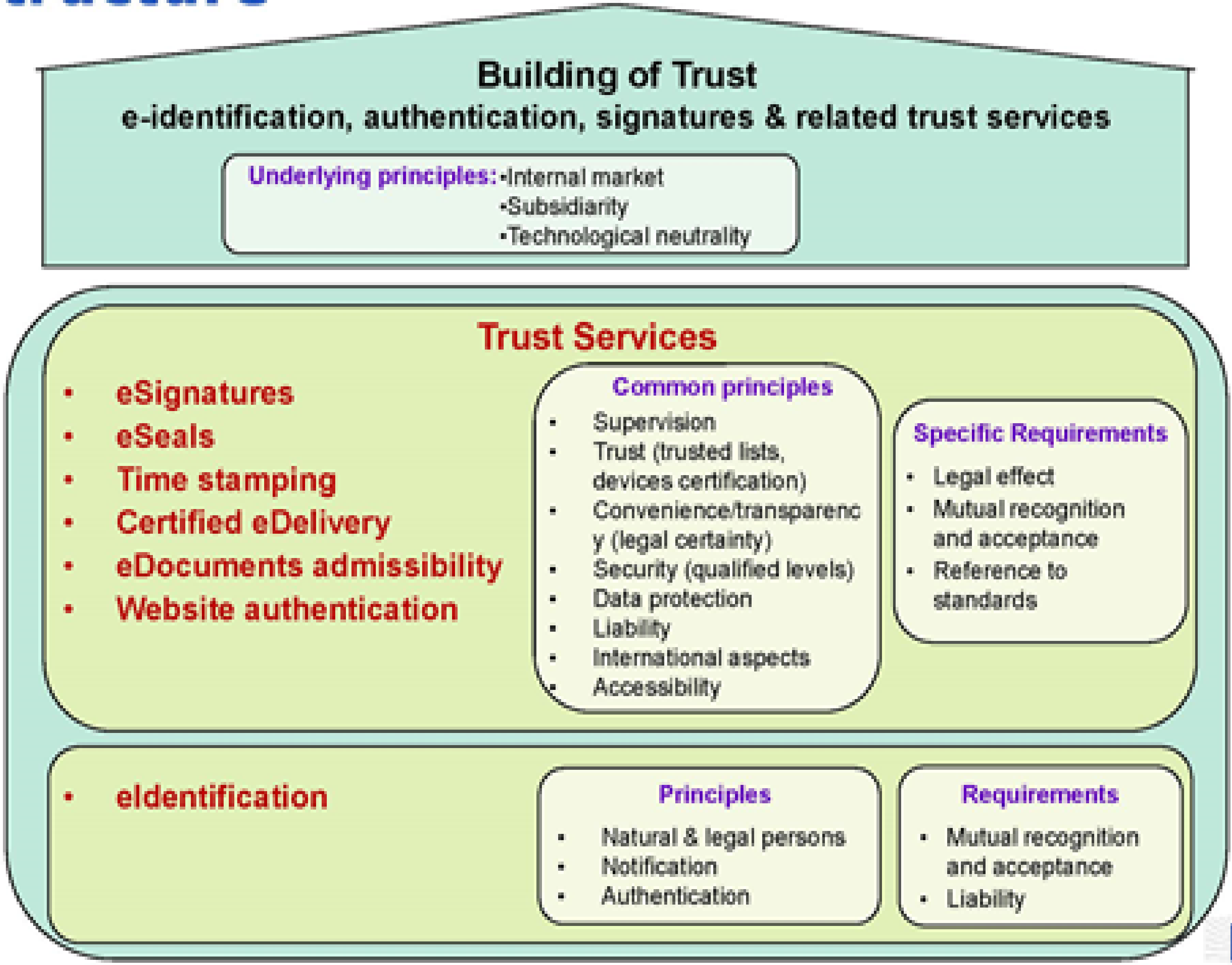
3.1 New approach for legal framework: Draft EU EIDAS- Regulation

June 2012 – EU Commission publish first draft regulation **"on electronic identification and trust services for electronic transactions in the internal market".**

- Added Mutual recognition of electronic identification [E-ID]
- Extended Supervision of "Certification Service Providers" to "Trust Service Providers", includes "proactive supervision"
- Qualified Electronic trust services:
  - Electronic signatures interoperability and usability,
  - Electronic seals interoperability and usability,
  - Time stamping,
  - Electronic delivery service,
  - Electronic documents admissibility,
  - Website authentication.

Structure



Building of Trust

e-identification, authentication, signatures & related trust services

Underlying principles:
- Internal market
- Subsidiarity
- Technological neutrality

Trust Services

- **eSignatures**
- **eSeals**
- **Time stamping**
- **Certified eDelivery**
- **eDocuments admissibility**
- **Website authentication**

Common principles

- Supervision
- Trust (trusted lists, devices certification)
- Convenience/transparency (legal certainty)
- Security (qualified levels)
- Data protection
- Liability
- International aspects
- Accessibility

Specific Requirements

- Legal effect
- Mutual recognition and acceptance
- Reference to standards

- **eIdentification**

Principles

- Natural & legal persons
- Notification
- Authentication

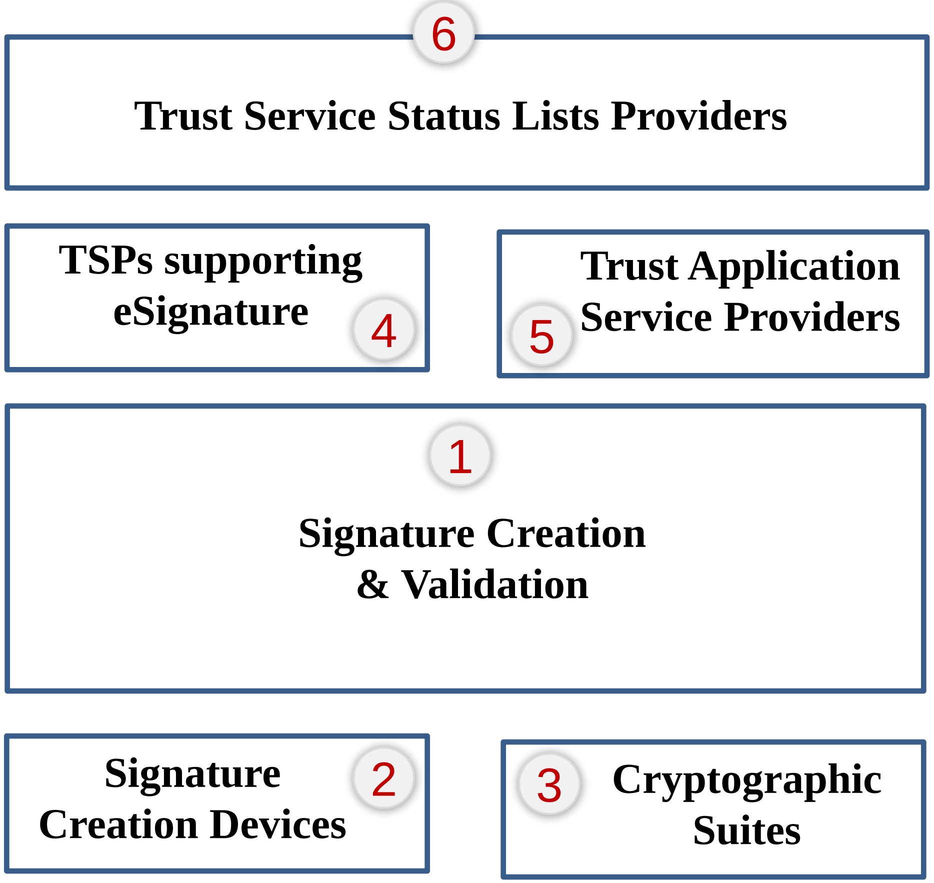
Requirements

- Mutual recognition and acceptance
- Liability

3.2 Standards Framework I:
M460 European Commission mandate

- EC founded eSignatures standardization activities
- 4 years: 2011-2015
- 1st phase (executed)
  - definition of a rationalized standardization framework, in collaboration with CEN
  - several specifications upgrades primarily aimed at providing quick technical fixes to existing electronic signatures standards, and definition of test specifications
- 2nd phase (starting now)
  - implement the rationalized standardization framework
  - support the new EU Regulation on electronic identification and trust services for electronic transactions in the internal market (exp. approval in 2014)

3.2 Standards Framework II Mandate/460



- List of TSP services approved (supervised) by National Bodies (e.g. Trusted Lists)

6 Trust Service Status Lists Providers

- Issuing certificates
- Time-stamping
- Signing Servers
- Validation Services

4 TSPs supporting eSignature

5 Trust Application Service Providers

- Registered eMail
- Long term preservation

- Rules & procedures
- Formats
- Signature Creation / Validation Protection Profiles

1 Signature Creation & Validation

- XAdES (XML)
- CAdES (CMS)
- PAdES (PDF)
- AdES in Mobile envmts
- ASiC (containers)

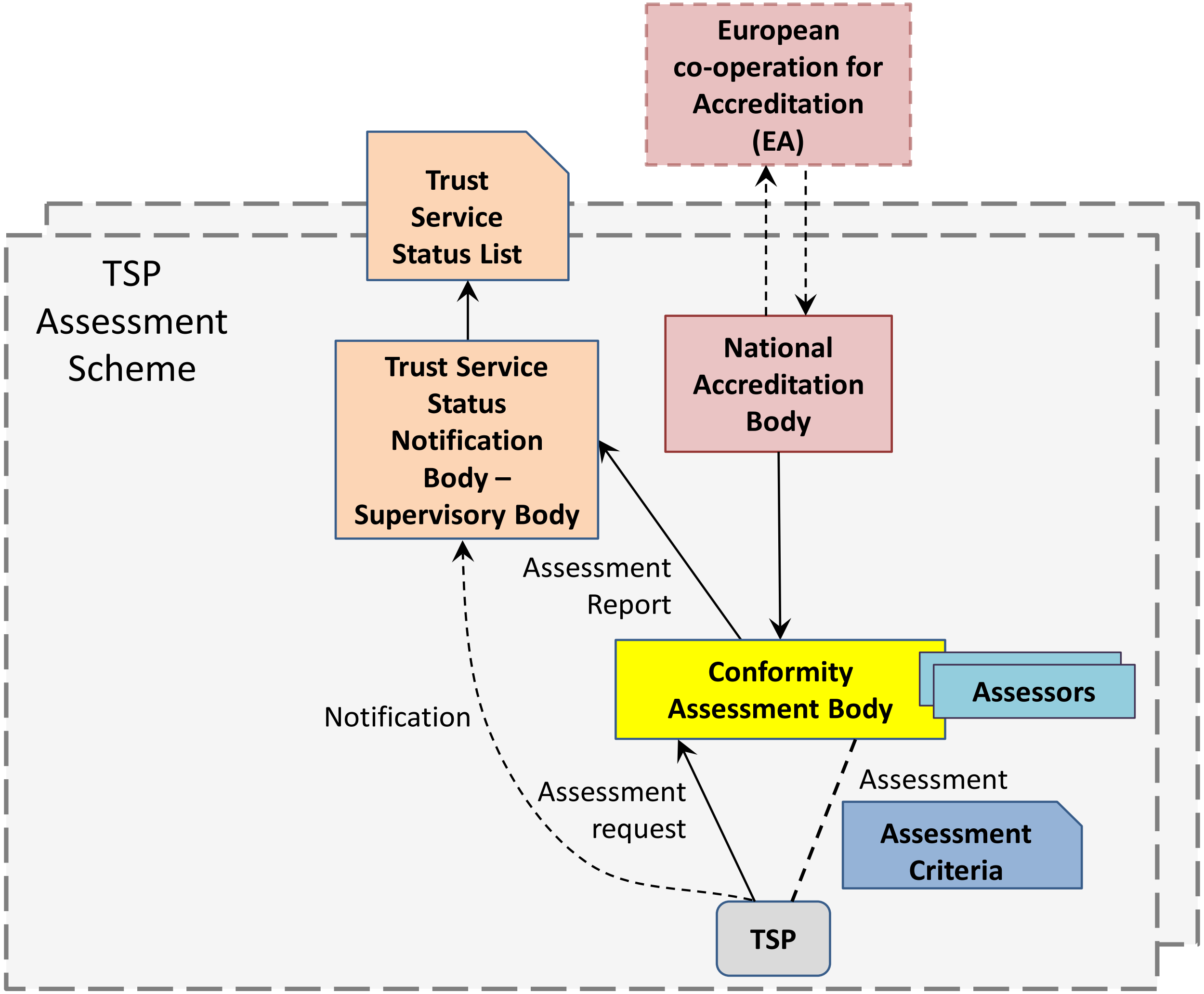
- •Made by CEN:
- •SSCDs (e.g. SC)
- HSMs & other SCDs

2 Signature Creation Devices

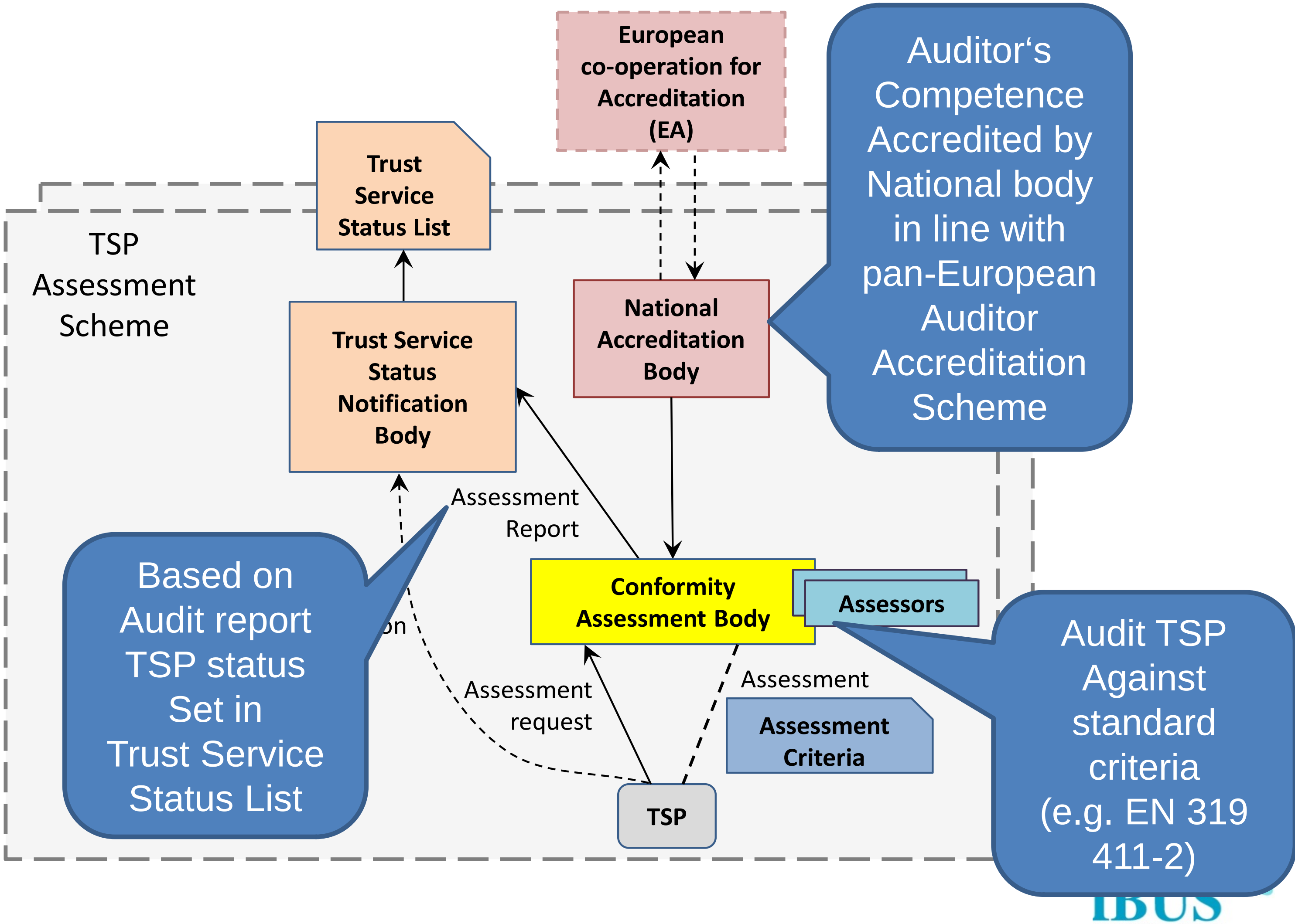
3 Cryptographic Suites

- Key generation
- Hash functions
- Signature algorithms
- Key lengths
- …

3.3 Trust Framework: Model for TSP Conformity Assessment


European co-operation for Accreditation (EA)
Trust Service Status List
TSP Assessment Scheme
Trust Service Status Notification Body – Supervisory Body
National Accreditation Body
Assessment Report
Conformity Assessment Body
Assessors
Notification
Assessment request
Assessment
Assessment Criteria
TSP

3.3 Trust Framework: TSP Conformity Assessment Model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Assessment request
Assessment
Assessment Criteria
TSP

Auditor's Competence Accredited by National body in line with pan-European Auditor Accreditation Scheme

Based on Audit report TSP status Set in Trust Service Status List

Audit TSP Against standard criteria (e.g. EN 319 411-2)

4. Next Steps

- In Spring 2013 EU Commission publish new 2nd draft regulation "on electronic identification and trust services for electronic transactions in the internal market".
- Under EU Mandate 460 (2013 to 2015) ETSI commissioned to produce
  - European Norm for TSP Conformity Assessment
  - European Norms for Best Practices (Policy Requirements)
    - Qualified Certificates for Personal Signing
    - Qualified Certificates for organisational "seals"
    - Qualified Time-stamping Services
    - Qualified Website Certificates (should be EN 319 411-4)
    - ………….
  - Option to operate as "Sector Specific" implementation of ISO 27001

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5. Summary

- Existing national conformity assessment schemes (ISO/IEC 17021/17065) are a suitable and powerful framework for voluntary security assessments of TSPs (**Reactive Supervision**)
- ETSI criteria provide CP's and valuable requirements for the different types of conformity assessment activities
- Additional mandatory network security requirements and certified products will enhance the overall security level of TSPs significantly
- The new draft EU-Regulation will deliver a complete legal and trust framework for **Proactive Supervision** on "qualified level"
- ETSI standards will be a fundamental part in future EU legislation (delegating acts).
- but: "relying parties have to consume Trust"

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Thank you !

- ETSI Download :

  http://pda.etsi.org/pda/queryform.asp

  Enter keyword / title / document number

- Draft EU Regulation:

  http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0238:FIN:EN:PDF

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