



BIS webinar on 'IT and IT enabled Services - Opportunities and Standardization '

Presentation on “Global Perspective of Standardization in IT and IT Enabled Services”

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How Standards Help

Standards are the distilled wisdom of people with expertise in their subject matter and who know the needs of the organizations they represent such as manufacturers, sellers, buyers, customers, trade associations, users or regulators.

- **Quality management standards** help to deliver repeatable quality outcomes, supporting productivity gains and reducing failures.
- **Environmental management standards** help to reduce environmental impacts, reduce waste and enhance sustainability.
- **Energy management standards** help to reduce energy consumption.
- **IT/ITeS Standards** such as security standards help keep sensitive information secure.
- **Data standards** help to support interoperability.

Creation and use of harmonized global standards can contribute to fostering trade, enhance safety and performance to ensure the protection of consumers and the environment.

Introduction

- In EU, Service standards have been identified as tools that promote transparent communication and build trust between customers and suppliers, thereby allowing for a better assessment of the customer's requirements and enabling the supplier to provide a more appropriate response.
- Increasing importance and share of services in the world economy
 - Services account for over 70% of the economic activity of the European Union
- Number of EN standards in the area of services remains small
 - around 2% of total
- Three key characteristics of services Standards needs:
 - **Intangibility:** Comparability and indicator of service provider capabilities & quality of service provided
 - **Variability:** Specification of knowledge, competence and skills of personnel and how to assess them definition of the different steps and processes within the service
 - **Inseparability:** Improve the effectiveness of interaction b/w service provider and clients Facilitate mutual understanding of service to be delivered and its effective utilization

Standardization work in Europe



European Legislation and mandates

Directive on Services (2006/123)

- Recognizes the role of standardization in the creation of an Internal Market for services and
- encourages the development of European standards to facilitate compatibility between services, information to the recipient and quality of service provision.

Mandates

- **M/516 on facilities and equipment for interpretation services:**
 - Work programme consisting of four items and is currently under development: ISO/TC 37/SC 5 'Translation, interpreting and related technology' has the lead.
- **M/517 on Horizontal Service Standards: two phases:**
 - Phase 1 on the identification of a preliminary work programme including six or seven proposals for horizontal service standards in support of the Single Market for services, and their prioritization.
 - Phase 2 on the development of European horizontal service standards on the identified priority areas.
- **M/548 - Postal services and the improvement of quality of service in support of Directive 97/67/EC**

CEN Guide 15

- A guidance document for the development of service standards and it helps identifying in a systematic way potential topics for service standards and the contents
- Suggest taking activity in two phases:
 - ✓ **Pre-normative phase:** guidance to evaluate a proposal, feasibility, reasons to undertake standardization, type of deliverable...
 - ✓ **Standard drafting phase:** potential contents of the standards
- Also provides guidance on:
 - ✓ How to Interface with legal requirements and management systems and How to address other horizontal issues (e.g., environment, occupational health and safety...)
- What the standards shall cover?
 - ✓ **Terminology:** common language within the sector
 - ✓ **Performance measurements:** KPIs to compare, measure quality, performance or other aspects relevant to service
 - ✓ **Qualification of personnel:** knowledge, skills and competences and/or how to assess them
 - ✓ **Good Practices or code of conduct:** many times, part of service activity would need it
 - ✓ **Requirements for service provision:** information to the client, safety requirements, complaints, dispute resolution and redressal, service termination etc.

CEN strategy for services

- In August 2017, 'CEN Strategic Advisory Board on Services (CEN/SAGS)' published a '[Strategic Plan](#)' providing a strong and clear framework to further engage with service stakeholders in view of better understanding of their needs.
- 'Strategic Plan' considered the specific challenges for services businesses (mostly SMEs), main trends, new business models and changes in buyers' patterns that are affecting how services are being delivered and consumed.
- An action plan, consisting of 10 actions, was drawn up by CEN and its members in order to implement this strategic plan.
- This initiative is also in line with CEN-CENELEC Ambitions and in recognition of the untapped potential for economic growth of the services market in Europe.

CEN Technical Committees (TC)

- CEN/TC 319 - Maintenance
- CEN/TC 320 - Transport – Logistics and services
- CEN/TC 329 - Tourism services
- CEN/TC 331 - Postal services
- CEN/TC 348 - Facility management
- CEN/TC 381 - Management Consult. Services
- CEN/TC 403 - Aesthetic Surgery and aesthetic non-surgical medical Services
- CEN/TC 409 - Beauty salon services
- CEN/TC 419 - Forensic science services
- CEN/TC 427 - Services of Medical Doctors with ad. qualification in Homeopathy
- CEN/TC 431 - Service chain for Social Care Alarms
- CEN/TC 432 - Competency for Customs representatives
- CEN/TC 434 - Electronic Invoicing
- CEN/TC 435 - Tattooing services
- CEN/TC 439 - Private security services
- CEN/TC 445 - Data information interchange in the Insurance Industry
- CEN/TC 447 - Horizontal standards for the provision of services
- CEN/TC 448 - Funeral services
- CEN/TC 449 - Quality of care for elderly people in ordinary or residential care facilities
- CEN/TC 450 - Patient involvement in person-centred care
- CEN/TC 452 - Assistance Dog & Guide Dog Teams Standards & Instructors Competences
- CEN/CENELEC TC 4 - Services for fire safety and security systems

ETSI TC ESI - Electronic Signature Infrastructure & **BSI** Cyber Security & Data Protection Standards

CEN/TC 331 - Postal services

- responsible for standardization of various aspects of the measurement of quality of service around hybrid mails, identification and tracking of mail items, apertures in letter boxes, receptacles etc. in order to increase interoperability of postal networks and to improve the quality of service.
- Subcommittees/WGs
 - ✓ [CEN/TC 331/WG 1](#): Customers, products and Services
 - ✓ [CEN/TC 331/WG 2](#): New digital postal services
 - ✓ [CEN/TC 331/WG 3](#): Physical processing chain and data
 - ✓ [CEN/TC 331/WG 5](#): Equipment of end receivers
- CLC/TC 331 has published over 40 standards.
- List of all published standards are available [here](#)

Published standards
CEN/TS 14826:2004 (WI=00331016)
Postal services - Automatic identification of items - Two-dimensional bar code symbol print quality specification for machine readable Digital Postage Marks
CEN/TS 15121-1:2011 (WI=00331086)
Postal Services - Hybrid Mail - Part 1: Secured electronic postal services (SePS) interface specification - Concepts, schemas and operations
CEN/TS 15121-2:2011 (WI=00331087)
Postal Services - Hybrid Mail - Part 2: Secured electronic postal services (SePS) interface specification - EPCM Service
CEN/TS 15448:2014 (WI=00331096)
Postal services - Open standard interface between image controller and enrichment devices (OCRs, video coding systems, voting systems)
CEN/TS 15511:2008 (WI=00331060)
Postal services - Quality of service - Information available on postal services
CEN/TS 15844-4:2010 (WI=00331070)
Postal services - ID-tagging of letter mail items - Part 4: State encoding specification for flats
CEN/TS 15844-5:2010 (WI=00331071)
Postal services - ID-tagging of letter mail items - Part 5: 4-state encoding specification for small letters
CEN/TS 15873:2009 (WI=00331079)
Postal Services - Open Standard Interface - Address Data File Format for OCR/VCS Dictionary Generation
CEN/TS 17457:2020 (WI=00331114)
Postal services - Digital, optional online connected, opening and closing systems for parcel receptacles for home use with free access for the delivery and collection operators and consumers
EN 14534:2016/AC:2017 (WI=00331C03)
Postal services - Quality of service - Measurement of the transit time of end-to-end services for bulk mail
EN 14615:2017 (WI=00331110)
Postal services - Digital postage marks - Applications, security and design

CEN/TC 434 - Electronic Invoicing

- responsible for developing standards in the field of e-Invoicing
- Subcommittees/WGs:**
 - ✓ **CEN/TC 434/WG 1**: Core semantic data model
 - ✓ **CEN/TC 434/WG 3**: Syntax bindings
 - ✓ **CEN/TC 434/WG 4**: Guidelines at transmission level
 - ✓ **CEN/TC 434/WG 5**: Extension methodology
 - ✓ **CEN/TC 434/WG 6**: Test methodology and test results
 - ✓ **CEN/TC 434/WG 7**: Registry Services
- Published around 11 standards

Published standards
CEN/TR 16931-4:2017 (WI=00434004)
Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission level
CEN/TR 16931-5:2017 (WI=00434005)
Electronic invoicing - Part 5: Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment
CEN/TR 16931-6:2017 (WI=00434006)
Electronic invoicing - Part 6: Result of the test of EN 16931-1 with respect to its practical application for an end user
CEN/TS 16931-2:2017 (WI=00434002)
Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
CEN/TS 16931-3-1:2017 (WI=00434007)
Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
CEN/TS 16931-3-2:2020 (WI=00434013)
Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note
CEN/TS 16931-3-3:2020 (WI=00434014)
Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Industry Invoice D16B
CEN/TS 16931-3-4:2020 (WI=00434017)
Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOICE D16B
CEN/TS 16931-7:2020 (WI=00434015)
Electronic invoicing - Part 7: Methodology for the development and use of EN 16931-1 compliant structured Core Invoice Usage Specifications
EN 16931-1:2017+A1:2019 (WI=00434019)
Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
EN 16931-1:2017+A1:2019/AC:2020 (WI=00434C02)
Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

CEN/TC 445 - Digital information Interchange in the Insurance Industry

- Responsible for the development of Standards in the field of digital information interchange in the insurance industry.
- Activities focuses on the digital information interchange among insurance companies, intermediaries, sales organizations, portals, service providers and customers.
- Applies the aspects of policy administration (quotation, offer, application, transfer of contract and premium data, premium and commission statement, party and contract changes, search and information services for party and contract) and of claims handling (notification, verification, assessment, authorization, settlement and reimbursement, recovery, status information).

Published standards

[CEN/TR 17419-2:2021 \(WI=00445002\)](#)

Digital information interchange in the insurance industry - Transfer of electronic documents - Part 2: Implementation of EN 17419-1 in Open API 3.0 specification

[EN 17419-1:2020 \(WI=00445001\)](#)

Digital Information Interchange in the Insurance Industry - Transfer of electronic documents - Part 1: Process and Data Model

For more information, please [click here](#)



CEN/TC 447- Horizontal standards for the provision of services

- Horizontal standardization for the provision of services, within their lifecycle.
- Subcommittees:
 - ✓ [CEN/TC 447/WG 1 - Contracts](#)
 - ✓ [CEN/TC 447/WG 2 - Performance assessment](#)
 - ✓ [CEN/TC 447/WG 3 - Communications and Engagement](#)
 - ✓ [CEN/TC 447/WG 4 - Service Procurement](#)
 - ✓ [CEN/TC 447/WG 5 - Establishment of WG 5 Study group - future projects](#)

Published standards

[EN 17371-1:2021 \(WI=00447003\)](#)

Provision of services - Part 1: Service procurement - Guidance for the assessment of the capacity of service providers and evaluation of service proposals

[EN 17371-3:2020 \(WI=00447002\)](#)

Provision of services - Part 3: Management of Performance Measurement - Guidance on the mechanism to measure performance as part of service contracts

ETSI TC on Digital Signature

- ETSI activity on digital signatures is coordinated by technical committee [Electronic Signatures and Infrastructures \(ESI\)](#).
 - ✓ It deals with digital signatures (signature format, certificates), trust service providers and ancillary trust services (Remote signature creation and validation, Registered email, Registered e-delivery, Timestamping, Long-term data preservation).
 - ✓ Their activity covers signature creation and verification based on CAdES (CMS digital signatures), XAdES (XML digital Signatures), PAdES (PDF digital Signatures), and ASiC (Associated Signature Container).
 - ✓ Standard for JAdES (JSON Web Signatures) is also under development.

[Published standards](#)

[ETSI EN 319 411-2 V2.3.3 \(2021-08\)](#)

Electronic Signatures and Infrastructures (ESI); Policy and security requirements for Trust Service Providers issuing certificates; Part 2: Requirements for trust service providers issuing EU qualified certificates

[ETSI TS 119 461 V 1.1.1 \(2021-07\)](#)

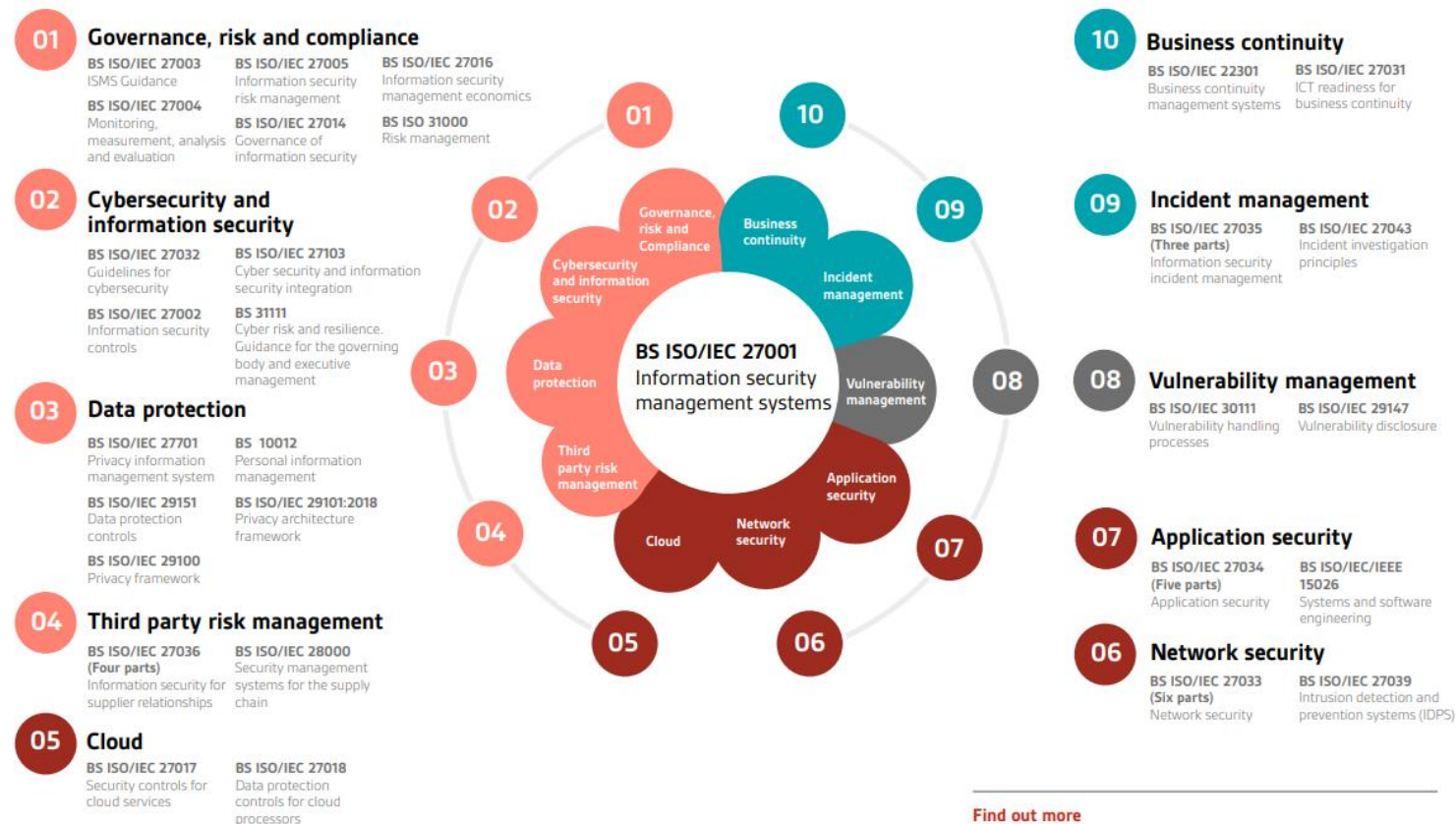
Electronic Signatures and Infrastructures (ESI); Policy and security requirements for trust service components providing identity proofing of trust service subjects

Cybersecurity & Data Protection

Cybersecurity and data protection standards ecosystem

The International Standards for Management Systems family of standards provides a model to follow in setting up and operating a management system. This model incorporates state of the art features of which experts in the field have reached consensus as representing the international best practice.

Through the use of the Information security management systems family of standards organizations can develop and implement a framework for managing information security, cybersecurity and data protection controls.



Find out more

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Standardization work at ISO/IEC



ISO/IEC JTC 1/SC 40: IT service mgmt. & IT governance

- Responsible for developing standards, tools, frameworks, best practices and related documents for IT Service Management and IT Governance, including areas of IT activity such as audit, digital forensics, governance, risk management, outsourcing, service operations and service maintenance,
 - ✓ but excluding subject matter covered under the scope and work programs of JTC 1/SC 27 (Information security, cybersecurity and privacy protection) and JTC 1/SC 38 (Cloud computing and distributed platforms).
- The work covers:
 - ✓ Governance of IT, including the development of the ISO/IEC 38500 (Information technology — Governance of IT for the organization) series standards and related documents.
 - ✓ Operational aspects of Governance of IT, including ISO/IEC 30121 (Information Technology — Governance of digital forensic risk framework), and interfaces with the management of IT as well as the role of governance in the area of business innovation.
 - ✓ All aspects relating to IT service management, including the development of the ISO/IEC 20000 (Information technology — Service management) series standards and related documents.
 - ✓ All aspects relating to IT-Enabled Services — Business Process Outsourcing, including the development of the ISO/IEC 30105 (Information technology — IT Enabled Services-Business Process Outsourcing (ITES-BPO)) series standards and related documents. For more information, please [click here](#)

ISO/IEC JTC 1/SC 38: Cloud computing & distributed platforms

- Responsible for Standardization in the areas of Cloud Computing and Distributed Platforms including:
 - ✓ Foundational concepts and technologies,
 - ✓ Operational issues, and
 - ✓ Interactions among Cloud Computing systems and with other distributed systems
- Published standards:
 - ✓ [ISO/IEC 17963:2013: WEB SERVICES FOR MANAGEMENT \(WS-MANAGEMENT\) SPECIFICATION](#)
 - ✓ [ISO/IEC 22624:2020: INFORMATION TECHNOLOGY — CLOUD COMPUTING — TAXONOMY BASED DATA HANDLING FOR CLOUD SERVICES](#)
 - ✓ [ISO/IEC TR 30102:2012: INFORMATION TECHNOLOGY — DISTRIBUTED APPLICATION PLATFORMS AND SERVICES \(DAPS\) — GENERAL TECHNICAL PRINCIPLES OF SERVICE ORIENTED ARCHITECTURE](#)

For more information, please [click here](#)

ISO/TC 154: Processes, data elements and docs in commerce, industry and administration

- International standardization and registration of business, and administration processes and supporting data used for information interchange between and within individual organizations and support for standardization activities in the field of industrial data.
- Development and maintenance of application specific meta standards for:
 - ✓ process specification & identification
 - ✓ data specification with content & identification;
 - ✓ forms-layout (paper / electronic).
- Published standards:
 - ✓ [ISO 14533-1:2014](#): PROCESSES, DATA ELEMENTS AND DOCUMENTS IN COMMERCE, INDUSTRY AND ADMINISTRATION — LONG TERM SIGNATURE PROFILES — PART 1: LONG TERM SIGNATURE PROFILES FOR CMS ADVANCED ELECTRONIC SIGNATURES (CADES)
 - ✓ [ISO 14533-2:2021](#): PROCESSES, DATA ELEMENTS AND DOCUMENTS IN COMMERCE, INDUSTRY AND ADMINISTRATION — LONG TERM SIGNATURE — PART 2: PROFILES FOR XML ADVANCED ELECTRONIC SIGNATURES (XADES)
 - ✓ [ISO 14533-3:2017](#): PROCESSES, DATA ELEMENTS AND DOCUMENTS IN COMMERCE, INDUSTRY AND ADMINISTRATION — LONG TERM SIGNATURE PROFILES — PART 3: LONG TERM SIGNATURE PROFILES FOR PDF ADVANCED ELECTRONIC SIGNATURES (PADES)
- For more information, please [click here](#)

Conclusion

- Main benefits of service standards are improved quality and relationship with customers
- Number of service standards are increasing very fast but still niche/small
- CEN guide 15 provides useful information on possible content, interface with legal requirements & relation b/w service standards and management systems
- Service standards brings many benefits:
 - ✓ Improve ability to demonstrate service quality to customer hence Improved service quality
 - ✓ Improve common definition/terminology & ability to meet health and safety requirements
 - ✓ Improve contractual relationships & ability to meet legislative/regulatory requirements
 - ✓ Increase transparency of the services provided
 - ✓ Improve use of performance indicators & ability to compare different service offers/providers
 - ✓ Increase confidence in service providers & the customer satisfaction

Thank you!

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