

The DIN logo is displayed in white text on a dark blue rectangular background. The letters 'DIN' are bold and sans-serif, with a thin white horizontal line above and below the text.A large, modern office building with a glass and metal facade is the central focus. The building has multiple stories and a grid-like window pattern. A blue 'DIN' sign is visible on the upper part of the building. To the right, another modern building is partially visible. In the foreground, there is a paved area and some greenery. The sky is overcast.

Blockchain standards for Identity Management in Public Services

René Lindner, DIN

03.05.2024

Overview

- I. Standardization in R&I projects
- II. Standardization approach in the IMPULSE project
- III. Liaison with standardization committees

Standardization in R&I projects

Standards and R&I



STANDARDS: CATALYST FOR INNOVATION

€ 40 BILLION

is the approximate contribution of standardization to the economic growth in Germany, France and the United Kingdom each year.

(Source: "The Economic Benefits of Standardization" (DIN study, 2006))

BENEFITS OF STANDARDIZATION FOR RESEARCH AND INNOVATION

- ▶ Build on existing standards in your field of research and innovations
- ▶ Identify the standardization potential of your research results and your innovative solutions
- ▶ Develop new standards, e.g. for services, product quality or interoperability



As partners of industry, research and society, the European Standardization Organizations CEN, CENELEC and ETSI as well as the national standards bodies contribute significantly to bringing innovations to market maturity and to opening up new areas including smart cities and sustainability.

WE ALL BENEFIT FROM STANDARDS

- They support innovations, efficiency and quality.
- They facilitate competitiveness and simplify trade.
- They boost confidence and make products safe and sustainable.

THE FUTURE ONLY WORKS WITH STANDARDS

- IT Security
- Smart Mobility
- Smart Cities
- Sustainability

STANDARDS FOR THE FUTURE SMART CHIP CARDS

The SIM card is the most prominent example of the identification cards in ISO/IEC 7810.

CONTACT US, NETWORK WITH THE WORLD AND SHAPE FUTURE STANDARDS!

STANDARDS FOR RESEARCH AND INNOVATION – WORKSHOP AGREEMENTS (CWA)*

PROPOSAL FOR WORKSHOP

Anyone can propose and join the workshop.

DRAFTING PHASE

Development of a draft document in a collaborative environment.

VOLUNTARY COMMENTING

Anyone can comment on a draft CWA.

PUBLICATION

Standards such as CWAs are available worldwide.



*One standardisation is a CEN/CENELEC Workshop Agreement (CWA) that can be developed in an expedited process and mainly supports the standardisation of research and innovation results. It can be used as a basis for e.g. a European (EN) Standard.

With the financial support of



An initiative by European standards organisations

Standards + Innovation
www.standardsplusinnovation.eu

Standardization in R&I projects



What

Analysing existing standards and ongoing standardization activities

Identification of standardization potentials

Standardization strategy

Conduction of standardization activities

Dissemination and exploitation of standardization activities



Why

Use for project terminology, development of tools

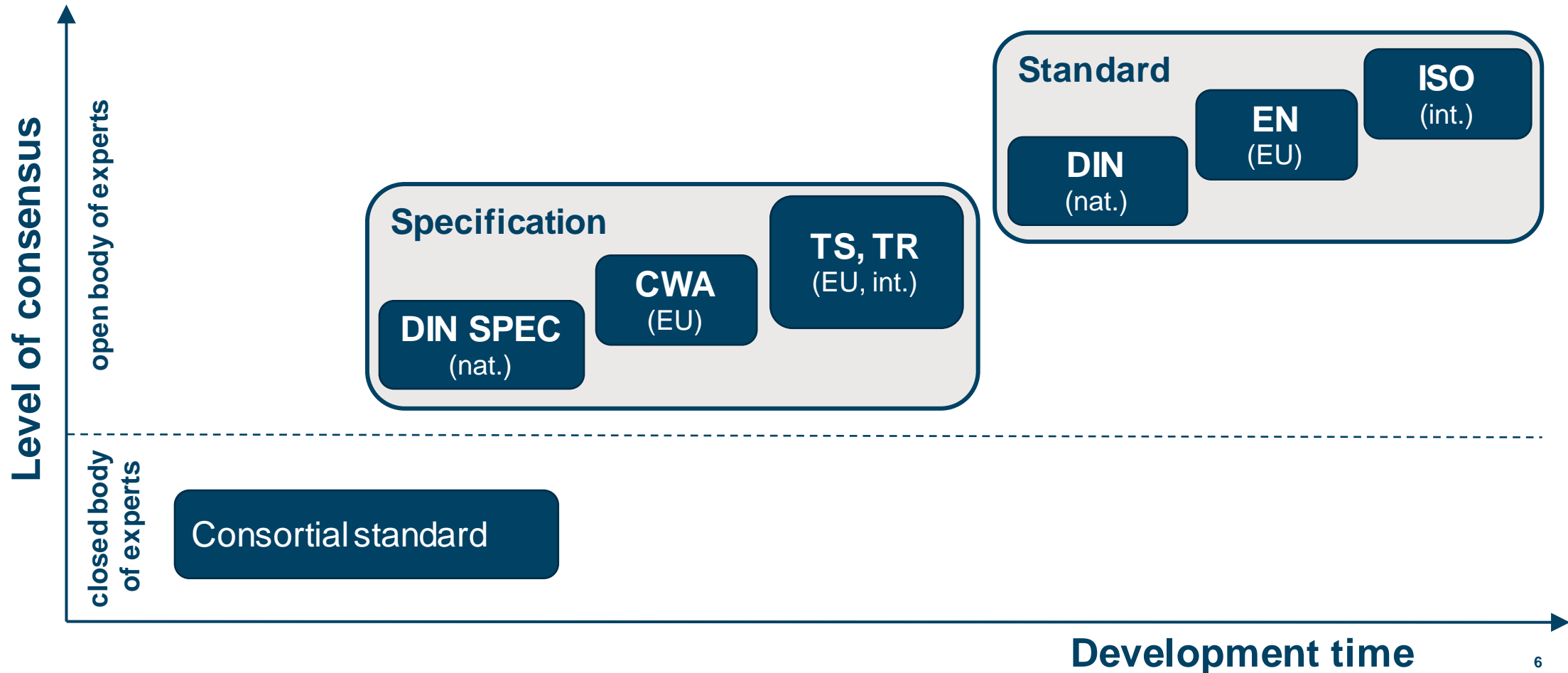
Review end-user needs and envisaged project results

Decide the standardization path (CWA, input to standard, etc.)

Transfer project results into standardization, involve externals

Promote results to end-users, uplift standards to EN/ISO

Types of standardization documents

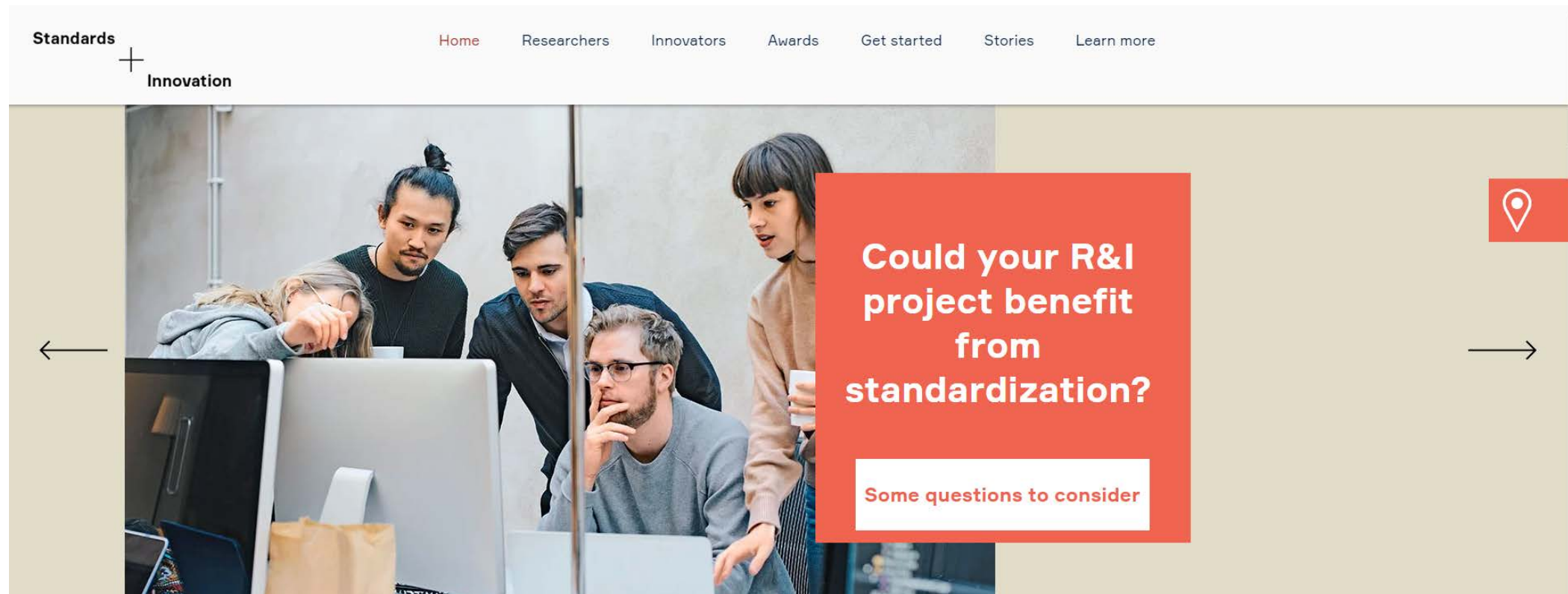


Standards + Innovation initiative



eLearning: <https://www.standardspluselearning.eu/>

S+I website: <https://www.standardsplusinnovation.eu/>



Standardization approach in the IMPULSE project



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About IMPULSE project



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➤ IMPULSE “Identity Management in PUBlic Services”

- Impact of Blockchain and Artificial Intelligence to Improve Electronic Identities
- Focus on the multidimensional and user-centric analysis of the transformative impact of these two disruptive technologies on electronic identities (eID) for the improvement of digital public services
- Partner:

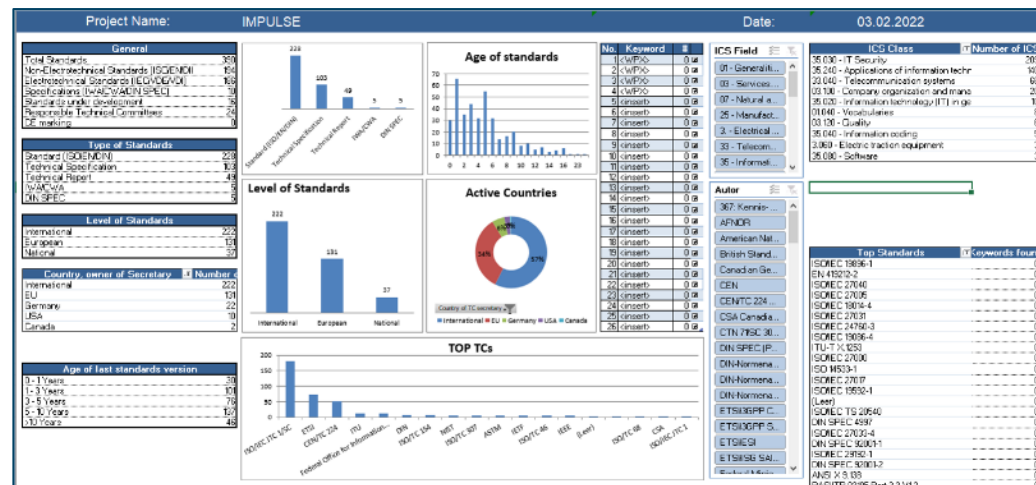
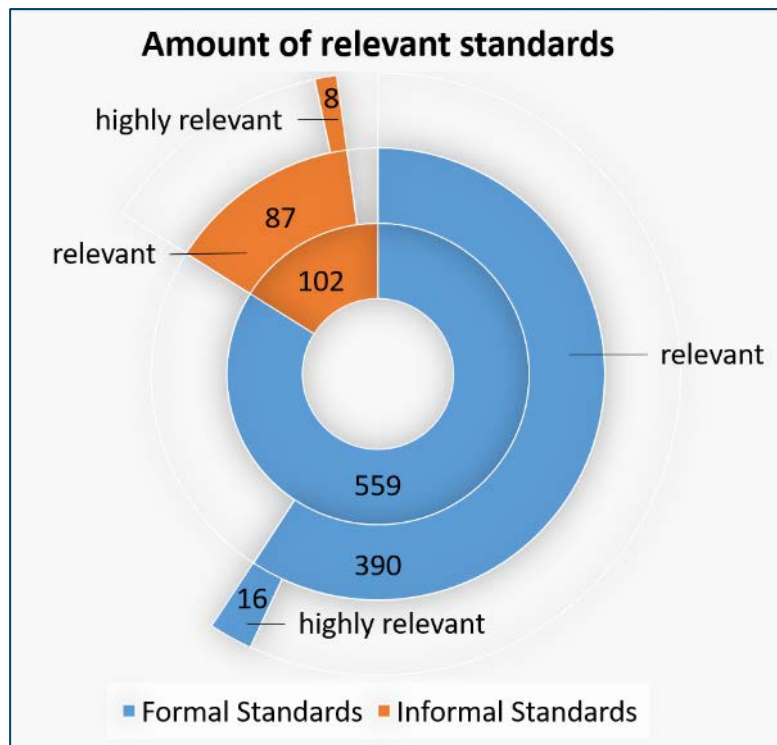


- Case studies:

Reykjavik (Island) - Better Reykjavik participatory democracy portal; Aarhus (Denmark) - NemID card retrieval from lockers; Ertzaintza (Spain) - Online complaints filing service; UnionCamere & InfoCamere (Italy) - Enterprise digital drawer; Gijón (Spain) - public services app; Peshtera (Bulgaria) - Civil registration & certification

Analysis of relevant standards

Task 3.4 “Analysis of existing relevant standards, and related impacts and implications”



Dashboard

See article at Journal of ICT Standardization:
Analyzing the Standardization Landscape for Identity Management in Public Services – A Standards Review for the IMPULSE Project



Paper

Relevant standards on Blockchain and Identity Management (extract)



Document No.	Title
CEN/TS 16921	Personal identification – Borders and law enforcement application profiles for mobile biometric identification systems
DIN SPEC 4997	Privacy by Blockchain Design: A standardised model for processing personal data using blockchain technology
ETSI GR SAI 001/002	Securing Artificial Intelligence – AI Threat Ontology/ Data Supply Chain Security
ETSI TS 119 182-1	Electronic Signatures and Infrastructures - JAdES digital signatures. Part 1: Building blocks and JAdES baseline signatures
ISO/IEC 20889	Privacy enhancing data de-identification terminology and classification of techniques
ISO/IEC 27001	Information technology – Security techniques – Information security management systems – Requirements
ISO/IEC 30107 series	Information technology — Biometric presentation attack detection
UNE 71307-1	Digital Enabling Technologies – Distributed Identities Management Model on Blockchain and other Distributed Ledger Technologies. Part 1: Reference Framework

Relevant standards on Blockchain and Identity Management (extract)



*UNE 71307-1: Digital Enabling Technologies –
Distributed Identities Management Model on Blockchain and other Distributed Ledger Technologies.
‘Part 1: Reference Framework*

“This standard defines a reference framework for the management of decentralized identities oriented to people, physical and legal, which includes the description of an approach based on life cycles and the relationship of the main actors that participate in them, as well as the interrelationships among them.”

Contribution to standardization



Task 7.6 “Initiation of standardization activities”

Survey

Identity Management in Public Services
Standardization Potential: Consent Management
DIN – Madlen Schumde
28th October 2022

Identity Management in Public Services
Standardization Potential: Application of AI and Blockchain in Used Cases
DIN – Madlen Schumde
28th October 2022

Identification of Standardization potentials

Contribution to ongoing standards development
VS.
Initiate development of “own” standards (e.g. CWA)

Standardization strategy

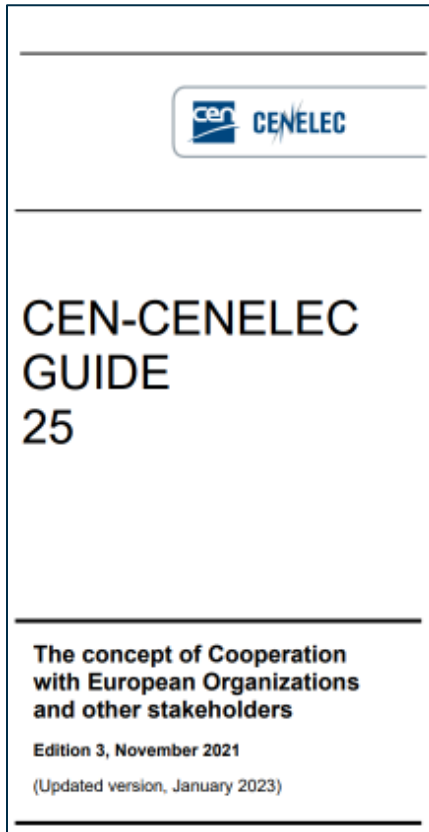
ES:

EU:

Liaison with standardization committees

Partnership with standardization committees

– Liaison with TCs



Benefits:

- Access to the working documents
- Participation in meetings of standardization committees (no voting rights, possible to propose new standards or contributions to ongoing work)

Obligations:

- Follow the common rules for standardization work (e.g. copyright policy, responsibilities, meeting structure, etc.)
- Follow provisions regarding the CEN and CENELEC Intellectual Property Rights (IPR) – e.g. use of publications or logos

Practical implementation:

- Project representative provides input to the TC

Standardization committees on Blockchain



<i>Level</i>	<i>Standardization committee</i>
International	ISO/TC 307 - Blockchain and distributed ledger technologies
European	CEN-CLC/JTC 19/WG 01 - Decentralised identity management CEN/TC 224 WG18/20 - Biometrics/European Digital Identity Wallets
National (ES)	UNE CTN 71/SC 307 - Blockchain and distributed ledger technologies

- Liaison with CEN/TC 224 to provide input to ongoing standardization work
- Participation to UNE CTN 71/307 to further work on the development of the UNE 71307 standards series and their further use on European and international level

Lessons learned from the Liaison

- "Our participation in the UNE CTN 71 / SC 307 committee has allowed us to closely **follow the standardization tasks both at the national and international levels** related to identity management through the use of decentralized ledger technologies."
- "It has also given us **first-hand insight into UNE 71307-1, the world's first standard for decentralized blockchain digital identity**. This standard defines the reference framework for managing the identification of individuals or organizations, enabling them to create and control their own digital identity in a self-managed *manner without the need for centralized authorities*".

Jaime Loureiro Acuña, GRADIANT



Plenary meeting of the UNE CTN 71 / SC 307

Source: UNE (Amanda Suo)

For more information on IMPULSE project,
please visit: <https://www.impulse-h2020.eu/>

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The DIN logo, featuring the letters 'DIN' in a bold, blue, sans-serif font, centered between two horizontal blue bars.