



NSAI
Standards

Irish Standard Recommendation
S.R. CWA 17525:2020

Elements of fair and functioning data economy: identity, consent and logging

S.R. CWA 17525:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

CWA 17525:2020

Published:

2020-03-11

*This document was published
under the authority of the NSAI
and comes into effect on:*

2020-03-29

ICS number:

35.030

35.240.01

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

S.R. CWA 17525:2020 is the adopted Irish version of the European Document CWA 17525:2020, Elements of fair and functioning data economy: identity, consent and logging

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

CEN

CWA 17525

WORKSHOP

March 2020

AGREEMENT

ICS 35.030; 35.240.01

English version

Elements of fair and functioning data economy: identity, consent and logging

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2020 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No.:CWA 17525:2020 E

CWA 17525:2020 (E)

Contents

Foreword	4
0 Introduction.....	6
0.1 General background.....	6
0.2 IHAN Logical view.....	6
1 Identity	7
1.1 About identity.....	7
1.2 In scope.....	7
1.3 Current identity markets and the use of digital identities.....	8
1.4 Need for standardization.....	9
1.5 Stakeholders.....	12
1.6 Identifiers	13
1.6.1 Biometrics	13
1.6.2 Non-biometric	14
1.7 Classification of properties.....	15
1.8 Identity management	16
1.9 Trust.....	17
1.10 Identity proofing	17
1.11 Authentication	18
1.12 Federation	19
1.13 Creating identities.....	20
1.13.1 Enrollment.....	20
1.13.2 Registration.....	21
1.14 Changing identities.....	21
1.15 Deleting identities.....	21
1.16 Managing multiple identities	22
1.17 Merging digital identities.....	22
1.18 Linking identities	22
1.19 Storing identities	23
1.20 Delegation/Guardianship.....	23
1.21 Interoperability.....	24
2 Consent	25
2.1 In scope.....	25
2.1.1 Consent lifecycle management.....	25
2.1.2 Structure of Consent.....	25
2.2 Out of scope	25
2.3 The facets of Consent.....	25
2.4 Legal view of Consent.....	26
2.5 Technical view of Consent.....	26
2.6 Business view of Consent	27
2.7 Summarizing Consent	27
2.8 Structure of Consent	28
2.8.1 Human readable part of Consent	28
2.8.2 Data specification part of Consent.....	29
2.8.3 Authorization part of Consent.....	29
2.9 Requirements.....	30
2.10 Functionality achieved for actors	31
2.11 Reference implementation (centralized approach): Tilaa javastuu MyData Platform Consent Management.....	31
2.12 Reference implementation (decentralized approach): Datafund Kantara compliant Consent Receipt Suite	32
2.13 Reference implementation: Dynamic API authorization and data access using Verifiable Credentials (Case HUS Child's Diabetes consenting).....	33
3 Logging.....	35

3.1	Logging in IHAN	35
3.2	In Scope	35
3.3	Standardization Needs.....	35
3.4	Out of scope	36
3.5	Background information.....	36
3.6	Architectural models.....	36
3.7	Use cases	37
3.8	Data Operator	37
3.9	Distributed Identity Agent	38
3.10	Data Provider	38
3.11	End User	38
3.11.1	End User Consents to Contracts and Agreements.....	39
3.11.2	End User Consent Wallet	39
3.12	Service Provider	40
3.12.1	Service Invocations.....	40
3.12.2	Inspect the Flow of Data	40
3.12.3	Contract-based Events.....	40
3.13	Requirements.....	40
3.13.1	Data Operator.....	40
3.13.2	Agent.....	40
3.13.3	Data Provider	41
3.13.4	End User.....	41
3.13.5	Derived from End User Consents to Contracts and Agreements	41
3.14	Service Provider	41
3.14.1	Derived from GDPR.....	41
3.14.2	Derived from Service Invocations.....	41
3.14.3	Derived from Inspect the Flow of Data.....	41
3.14.4	Derived from Contract-based Events	41
3.15	Data Model	42
3.15.1	Derived from Consent Wallet	42
3.16	Reference implementations	42
3.16.1	Distributed consenting for API access	42
3.16.2	Kela Kanta Services	43
4	References	44

CWA 17525:2020 (E)**Foreword**

This CEN Workshop Agreement has been developed in accordance with the CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – The way to rapid consensus” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was approved by a Workshop of representatives of interested parties on 2020-01-17, the constitution of which was supported by CEN following the public call for participation made on 2018-10-12. However, this CEN Workshop Agreement does not necessarily include all relevant stakeholders.

The final text of this CEN Workshop Agreement was provided to CEN for publication on 2020-02-14.

The following organizations and individuals developed and approved this CEN Workshop Agreement:

- Markus Kalliola, Sitra
- Katri Korhonen, Sitra
- Juhani Luoma-Kyyny, Sitra
- Črt Ahlin, DataFund
- Pirkka Frosti, DigitalLiving
- Mika Huhtamäki, Vastuu Group
- Antti Kettunen, TietoEvy
- Paul Knowles, Dativa
- Teemu Kääriäinen, Nixu
- Ville Lavonius, Vastuu Group
- Robert Mitwicki, Lab10Coop
- Perttu Prusi, Fujitsu
- Mikael Rinnetmäki, SensoTrend
- Henna Suomi, DigitalLiving
- Gregor Žavcer, DataFund
- Annika Wolff, LUT University

Attention is drawn to the possibility that some elements of this document may be subject to patent rights. CEN-CENELEC policy on patent rights is described in CEN-CENELEC Guide 8 “Guidelines for Implementation of the Common IPR Policy on Patent”. CEN shall not be held responsible for identifying any or all such patent rights.

Although the Workshop parties have made every effort to ensure the reliability and accuracy of technical and non-technical descriptions, the Workshop is not able to guarantee, explicitly or implicitly, the correctness of this document. Anyone who applies this CEN Workshop Agreement shall be aware that neither the Workshop, nor CEN, can be held liable for damages or losses of any kind whatsoever. The use of this CEN Workshop Agreement does not relieve users of their responsibility for their own actions, and they apply this document at their own risk.

CEN Workshop Agreement

This CEN Workshop Agreement, CWA, contains the requirement specifications for three important building blocks of any internet service that uses personal data and in which the agency for that data is within the individual whose data is being utilized. The building blocks are: identity, consent and logging.

Before you take a deep dive into the requirements specifications, we want to give you the background of why this work was done and why agency for personal data matters. The Finnish Innovation Fund Sitra, which initiated this workshop, started a project called IHAN in 2018 to build the foundation for a fair data economy. In a fair data economy, people are in control of how their data is used and shared, while businesses need to earn the trust of people to get access to diverse sources of data. This change of data agency enables the widest circulation of data because data can be exchanged also between ecosystems which are currently data silos and only serve the businesses within the ecosystem.

The IHAN project covers a wide range of topics, including citizen engagement, business models, technical requirements and governance. Many of the outputs are tested in real life in technical and business pilots in Finland and elsewhere in Europe.

This CWA is a part of the technical work package of the IHAN project and builds on the work that was previously published under IHAN Technical Blueprint document. While the CWA takes a deep dive into three of the most important parts of the Blueprint, we continue to work also on the other fronts of technical requirements and acknowledge other European initiatives working on the same topics. Therefore, this is not the end of the technical requirements work, but hopefully a good start to something that finally will make a meaningful impact towards the free flow of data in Europe. We hope that many other European projects will be inspired by this work and that it can be utilized in research and development by research institutions, universities and private enterprises. It is also our goal that this CWA will be further developed by CEN either as a technical committee document or as a European Standard (EN).

This CWA was approved by consensus with the experts listed in the document. The work was done during 2019 in three work streams which were open and free of participation costs. The pre-release version was in public consultation during November 2019.

We would like to express our appreciation to all stream leads as well as other contributors of the final CWA. Many thanks to the secretariat SFS Finland for the practical arrangements with CEN, and final thanks to CEN for allowing the workshop to take place.

We hope you enjoy reading this!

Markus Kalliola

Senior Lead

Sitra

Juhani Luoma-Kyyny

Senior Lead

Sitra

Katri Korhonen

Specialist

Sitra

0 Introduction

0.1 General background

The data economy is about creating services by using new or re-using existing information, and especially by combining the information in previously untested ways. The basic principle behind a fair data economy is value creation according to “data principles”:

- human centric (from organization- or technology-centric to human centric)
- thriving (unlocking the use of data to scale services)
- balanced (data sharing benefits all)

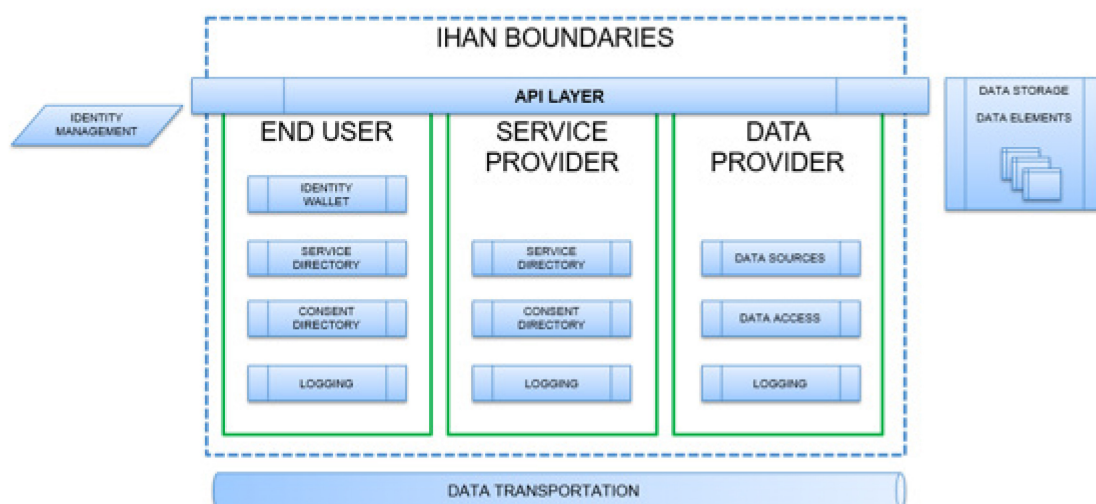
(“A roadmap for a fair data economy” <https://www.sitra.fi/en/publications/roadmap-fair-data-economy/>)

A fair data economy needs a well-functioning architecture and infrastructure. The basic components for that are:

- identity
- consent
- logging

0.2 IHAN Logical view

The diagram below describes the logical components of a possible service implementation according to IHAN requirements. It also draws the boundaries of IHAN – data transportation technologies, data storages and identity management are outside IHAN boundaries. For example, identity is an essential element of a personal data-based service, but IHAN requirements do not define how and where identity should be managed. Also, data transportation and storing are required to implement services, but they are decisions made by companies providing services.



In the diagram, logging and consent are clear layers across the logical “roles” (end user, service provider and data provider). Identity is the “starting point” of the structure.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-