DPP workshop

Madrid, 2025-03-11

Feasibility study for the CPR-DPP

Digital DoPC for construction products

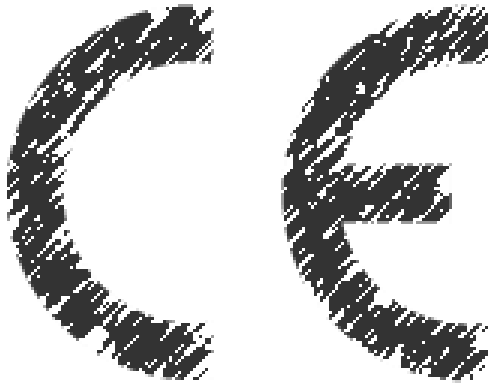
Aitor Aragón Basabe

Responsible for BIM and sustainability in construction (UNE)

Regulation (EU) 305/2011 on construction products

The Construction products Regulation (CPR) defines the **harmonised conditions for the marketing construction products**:

- **Single Market**: free movement of goods in the EU
- **Harmonised standards** provide a common *technical language* to **communicate the performance characteristics** of construction products, and enable manufacturers to draw up the **Declaration of Performance** and affix the **CE marking**
- **Supporting standards** describe how to assess (testing, calculations, etc.) the performance characteristics (e.g. compressive strength, resistance and reaction to fire or the release of dangerous substances)



Regulation (EU) 2024/3110… a new beginning…

Environmental information

Digital product passport

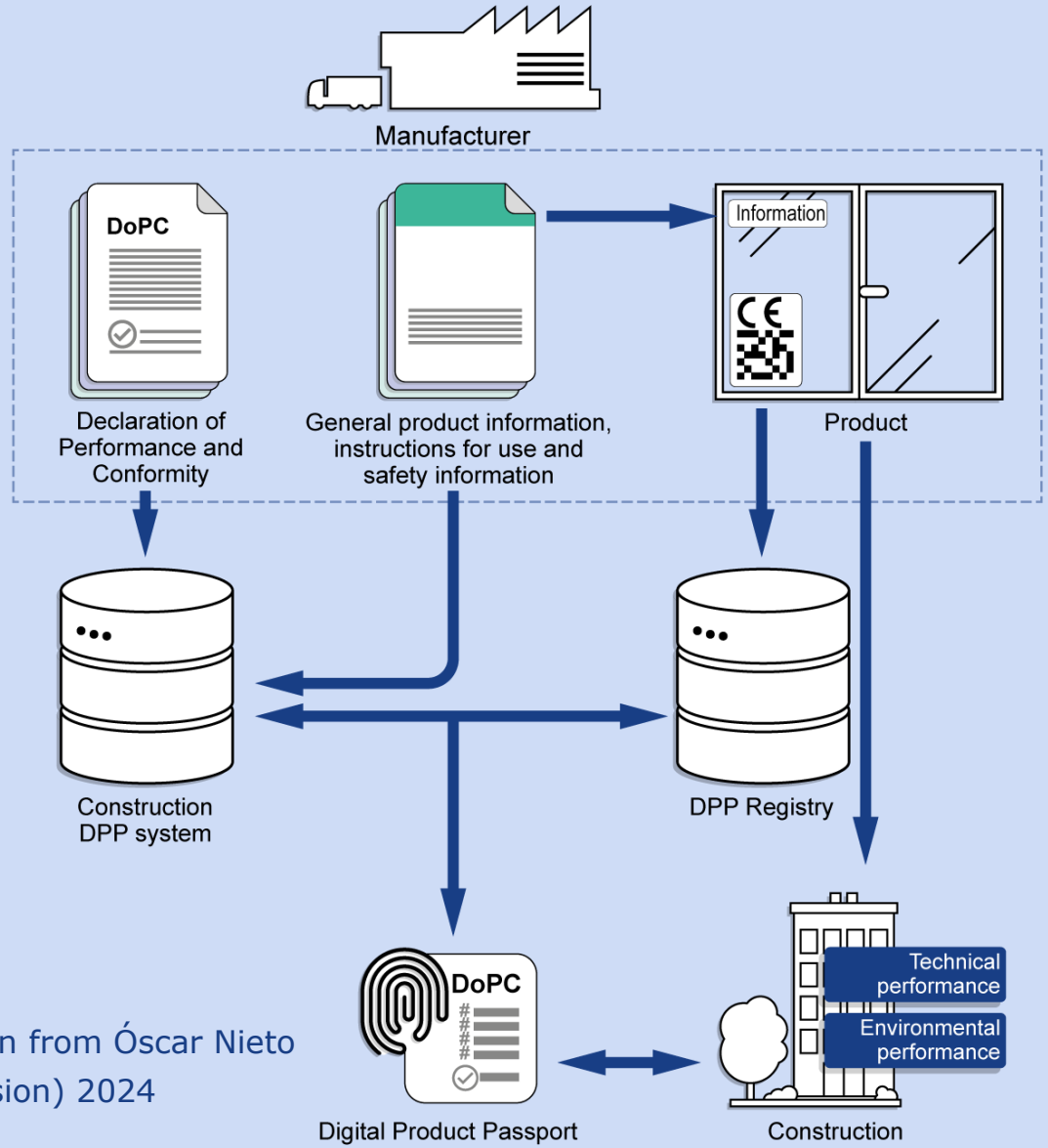
Feasibility study for the CPR-DPP

Construction digital product passport system (Article 75)

1. *The Commission shall adopt **delegated acts** (…) to supplement this Regulation by setting up a **construction digital product passport system*** (new CPR. Article 75.1)
2. *The **construction digital product passport system** shall: (a) be **compatible** with, **interoperable** with and based upon the product passport established by **Regulation (EU) 2024/1781*** [ESPR]*, without compromising **interoperability with BIM*** (new CPR. Article 75.2a)

The CPR-DPP shall be

- Based on open **standards**
- Structured and machine-readable
- Searchable
- Interoperable and without *proprietary lock-in*



Source: Presentation from Óscar Nieto (European Commission) 2024

Feasibility study for the CPR-DPP

OBJECTIVE: Assessment of different options for a future database or system for the DPP included in the new Construction Products Regulation


Ref. Ares(2023)2267218 - 29/03/2023

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR INTERNAL MARKET, INDUSTRY, ENTREPRENEURSHIP AND SMES

GROW - Internal Market, Industry, Entrepreneurship and SMEs
Construction

European Commission

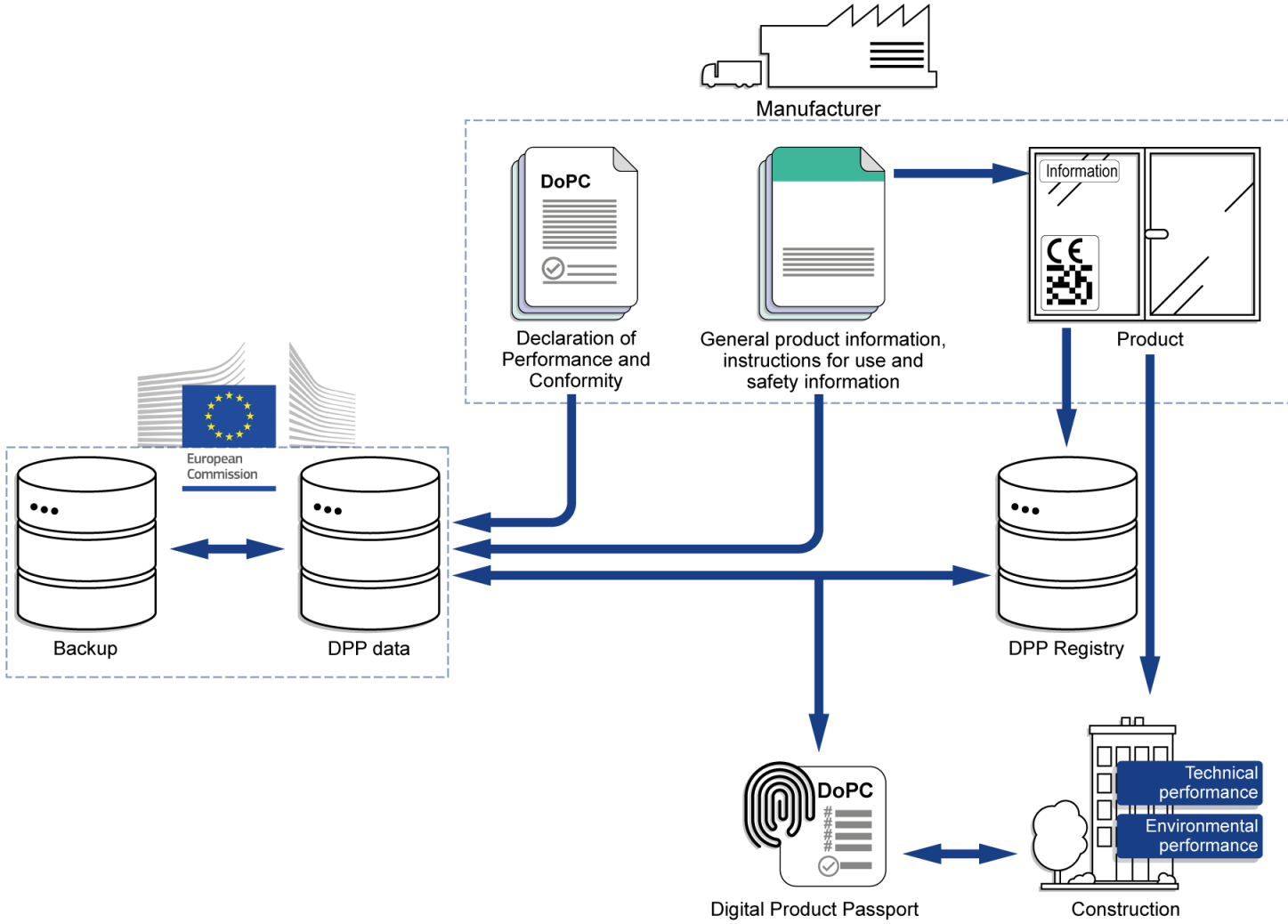
Call for tenders GROW/2023/OP/0004 - Feasibility study on an EU database for construction products

TENDER SPECIFICATIONS

CONSORTIUM: cobuilder UNE Normalización Española tecnalia MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

Option 1 – Centralized system managed by the EC

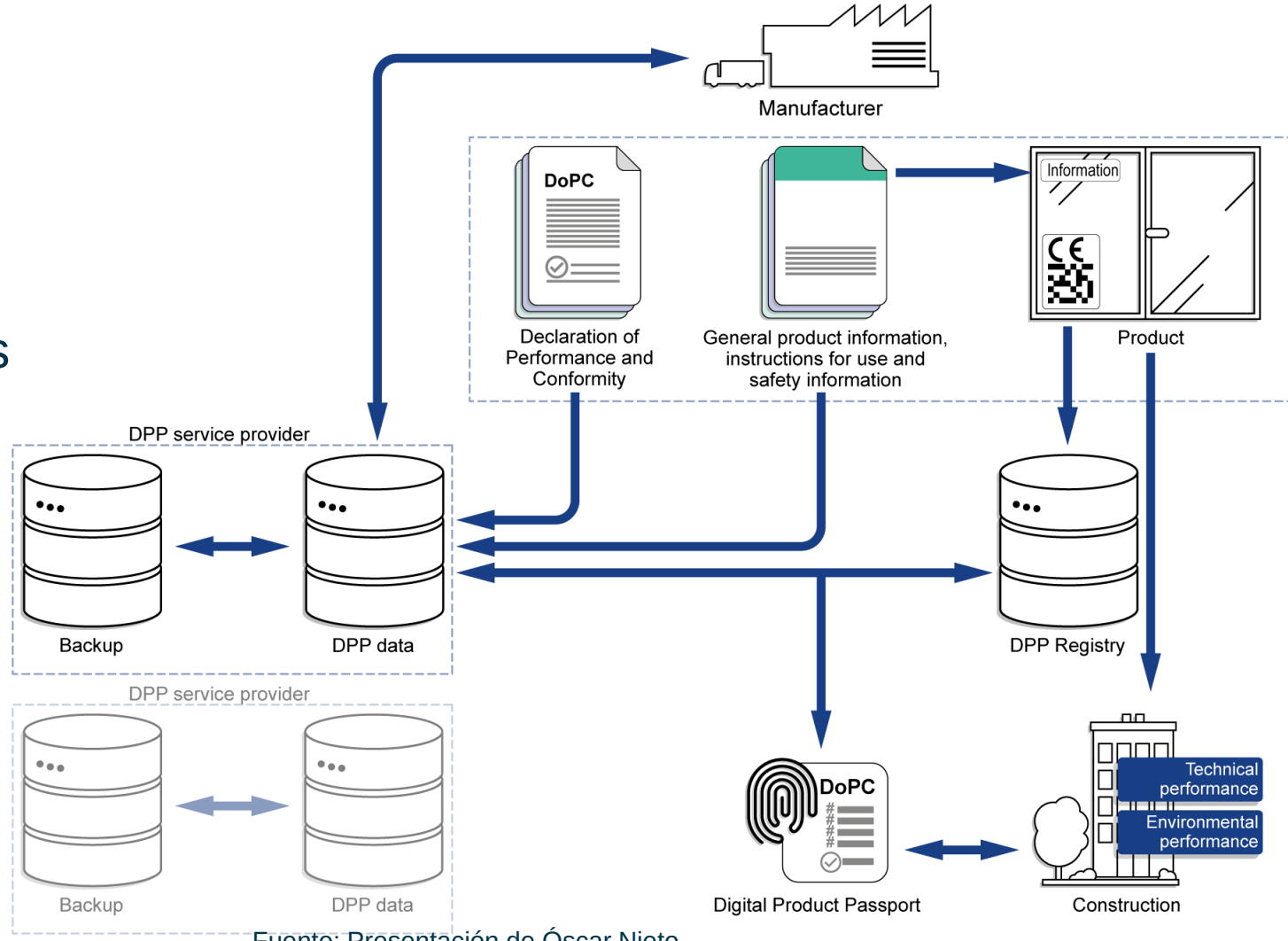
- The EC develops centralized platform for manufacturers to host DPP data
- The Commission manages the backup
- Manufacturers should be able to enter data through a portal and also to access via an API



Fuente: Presentación de Óscar Nieto
DG Growth. Comisión Europea. 2024

Option 2 – Authorized service provider

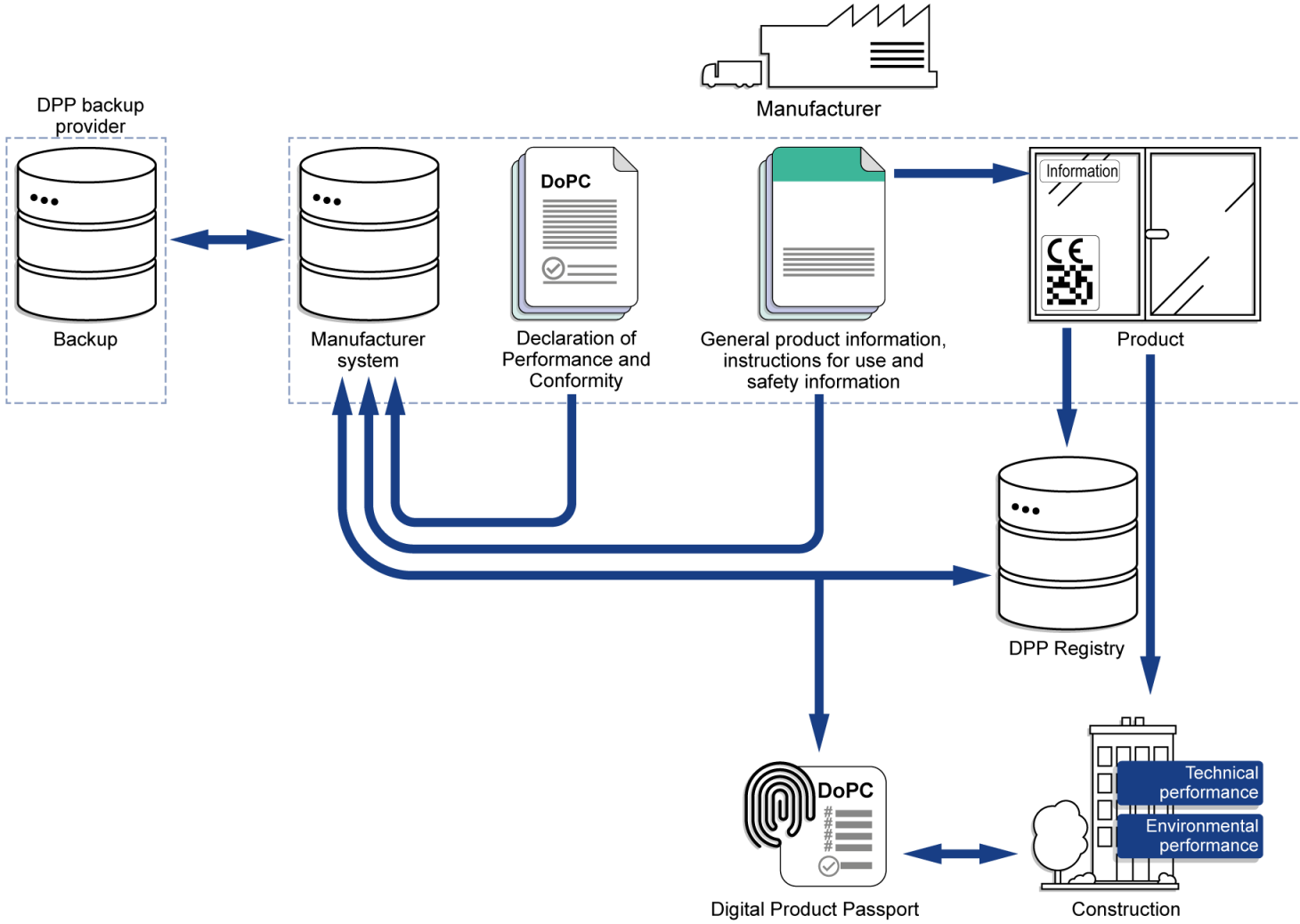
- **Distributed system** in service providers (federated system)
- The Commission authorizes these service providers with requirements yet to be established
- Service providers are responsible for **backup** (requirements could be established to ensure availability, accessibility and redundancy)



Fuente: Presentación de Óscar Nieto
DG Growth. Comisión Europea. 2024

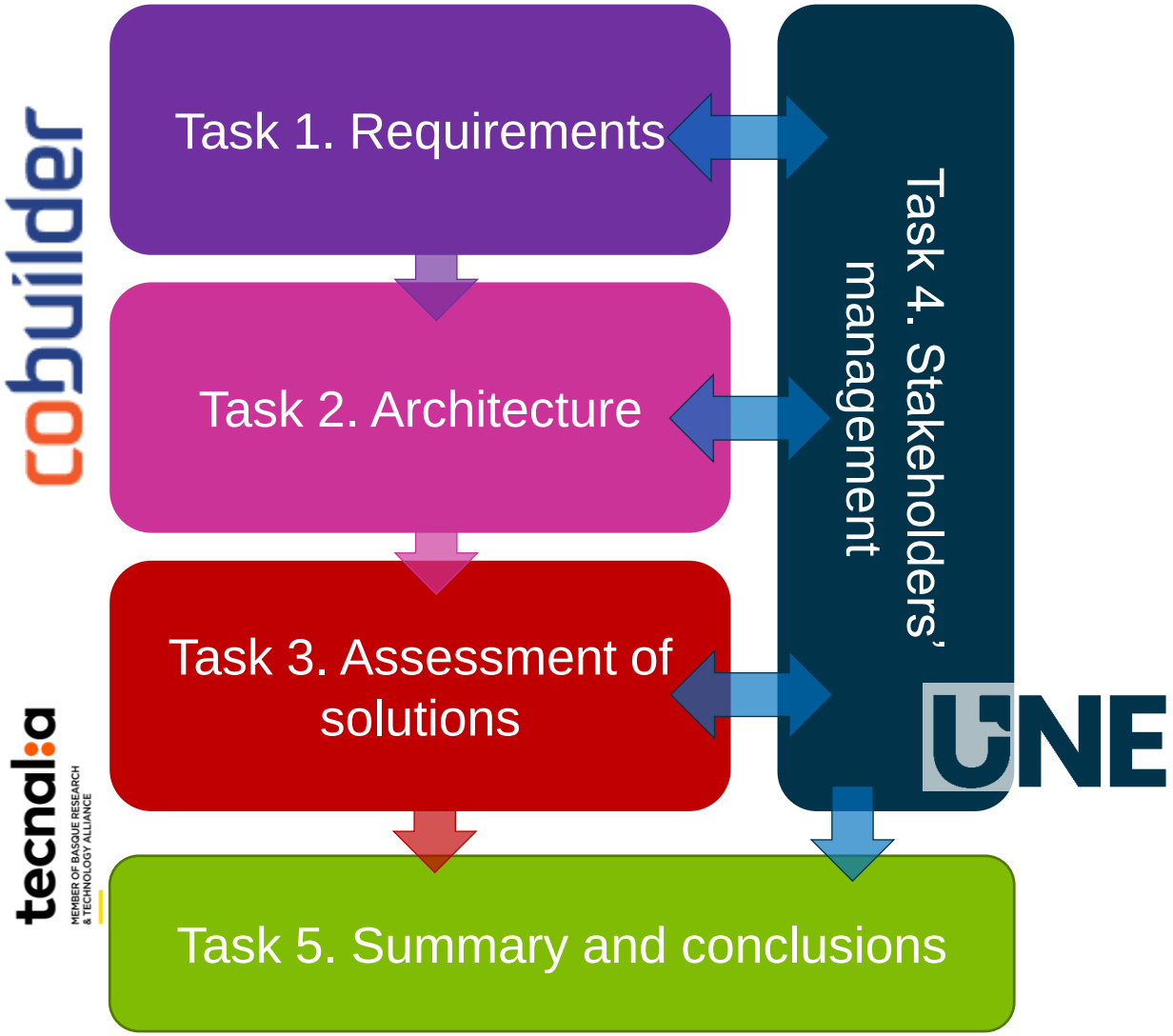
Option 3 – Hosted on the manufacturer's website (decentralized)

- Decentralized system: DPP data is hosted on the manufacturers' website
- **Backup** service providers are necessary to ensure data persistence and accessibility, and to facilitate searches
- Manufacturers could **outsource** the implementation, but these organizations may not be audited or recognized by the EC



Fuente: Presentación de Óscar Nieto
DG Growth. Comisión Europea. 2024

Structure of the work and advisory board



Advisory board with representatives from industry

CONSTRUCTION PRODUCTS EUROPE
LET'S BUILD AN EFFICIENT EUROPE

FIEC
EUROPEAN CONSTRUCTION INDUSTRY FEDERATION

Small Business Standards

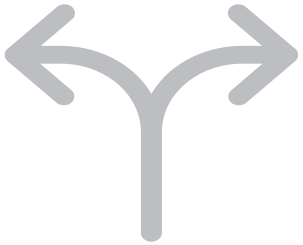
CONSTRUCTION SMEs EUROPE

Methodology

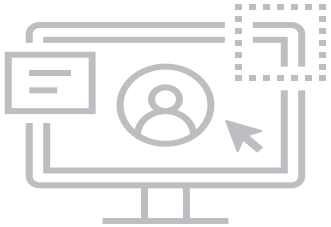
- Support from a reduced **group of experts** appointed by the advisory board
- Feedback from regular meetings and an open consultaition to stakeholders

Analysis

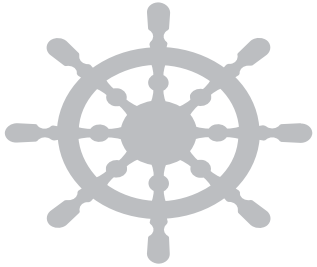
Scalability



Flexibility / adaptability



Usability (for EOs)



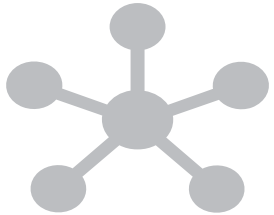
Management and complexity

Security

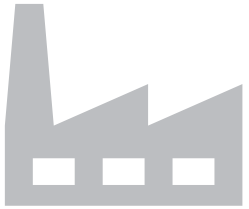
Data integrity & consistency

Reliability (fault tolerance)

Requirements to place a product on the market



Interoperability



Industry trust

Public consultation on *EU Survey*

- An opean consultation was launched on October 30
- Hybrid presentation at DG Growth on October 28
- More than 400 replies!
- Follow-up meetings

The report will be finalized in the following weeks!

Data structure for the digital DoPC

Supply of the declaration of performance and conformity

The manufacturer shall supply <u>by electronic means</u> a copy of the declaration of performance and conformity *of each product which is made available on the market, unless the declaration is included in a product passport (…)*

[Regulation EU 2024/3110, new CPR. Article 16.1]

Guidelines for machine-readability

The Commission may request CEN to issue **guidelines to ensure interoperability of the human and machine-readable formats**

- Whereas (38): *An important prerequisite for machine-readable declarations is a* ***standardised IT format****, which is required* ***for each harmonised technical specification***
- Whereas (92): *To improve machine readability, it is necessary to establish a* ***common data dictionary based on European standards***

[Regulation EU 2024/3110, new CPR]

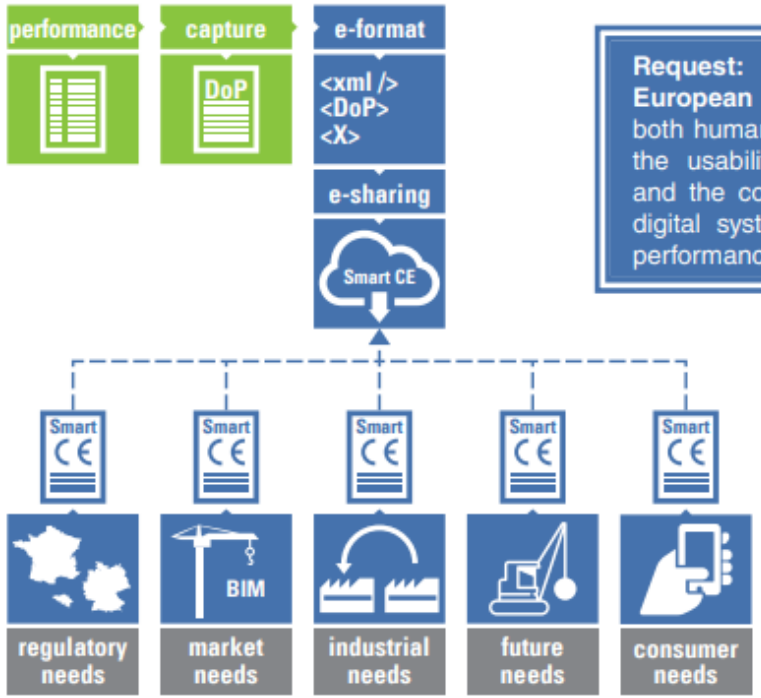
CONSTRUCTION PRODUCTS EUROPE

Towards smart CE marking 02.05.2016

One of the greatest achievements of the Construction Products Regulation (CPR) is the European common language and formats for the exchange of information of construction products. The regulation guarantees transparency, availability and credibility of the information adding value to the products and services provided to users.

Construction Products Europe believes it is now the time to capitalise this success by making it accessible using digital means, maximising the benefits for a broader spectrum of users. Smart CE marking and electronic tools will enable the users to exploit the data manufacturers provide to the fullest potential and will allow them to develop new uses for this information in B2B and B2C communication in accordance with their needs.

Obeying to the principle of the CPR that information on essential characteristics shall not be expressed in other formats unless it is contained in the declaration of performance[1], the European Commission has the key role in ensuring that the achievements of the common language are translated into digital communication formats.



Request: Launch the development of a **European harmonised electronic format**, both human and machine readable, to boost the usability of the regulatory information and the compatibility with existing or future digital systems. In particular declaration of performance of construction products

smart CE marking concept
information flow from the manufacturer declaration (DoP) to its recipients

1

CEN

WORKSHOP

AGREEMENT

CWA 17316

July 2018

ICS 03.120.20; 35.240.67; 91.010.01

English version

Smart CE marking for construction products

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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

Ref. No.:CWA 17316:2018 E

Spanish standard

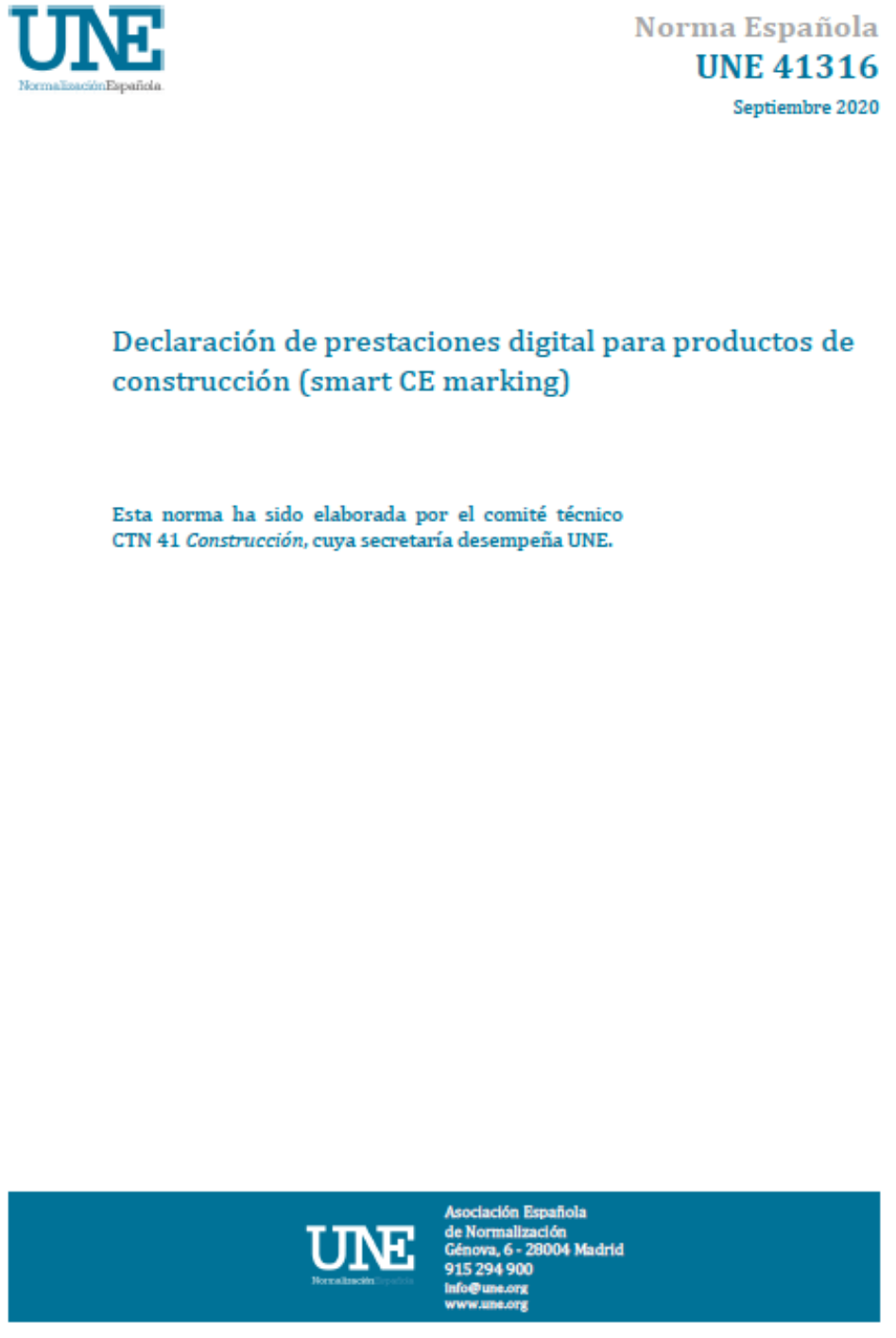
Start of the project — March 2020

Approval of the draft by the Committee — May 2020

Public consultation in the Spanish Official Journal — June 2020

Publication — September 2020

Aitor Aragón (UNE)



UNE Normalización Española

Norma Española
UNE 41316
Septiembre 2020

Declaración de prestaciones digital para productos de construcción (smart CE marking)

Esta norma ha sido elaborada por el comité técnico CTN 41 *Construcción*, cuya secretaría desempeña UNE.

UNE Normalización Española
Asociación Española de Normalización
Génova, 6 - 28004 Madrid
915 294 900
info@une.org
www.une.org

Structure

<Declarations>

>

<!--Additional perf<DeclarationOfPerformance>

<!--DoP Information (Smart CE)-->

</DeclarationOfPerformance>

<AdditionalInformationormance characteristics->

<EPD>

<!--Basic EPD data, with a link to the data structured according to ISO 22057->

</EPD>

<Files>

<!--Link to drawing, technical instructions, etc.-->

</Files>

</AdditionalInformation>

</Declarations>

Smart CE product standards

UNE 80000:2021

Declaración de prestaciones digital para cementos conforme a la Norma EN 197-1.

Digital Declaration of Performance for cement according to EN 197-1

Déclaration des performances numériques pour cement d'accord EN 197-1

UNE 36916-1:2023

Declaración de prestaciones digital para productos de acero utilizados en estructuras. Parte 1: Aceros laminados en caliente conforme a la Norma UNE-EN 10025-1:2006.

Digital declaration of performances for hot rolled structural steel products. Part 1: Hot rolled products according to UNE-EN 10025-1:2006.

Déclaration numérique de performance pour les produits de construction en acier laminés à chaud. Partie 1: Produits laminés á chaud selon la norme UNE-EN 10025-1:2006.

A standard for precast concrete is under development

UNE 22988:2022

Declaración de prestaciones digital para productos de piedra natural conforme a la norma EN 12058:2004.

Digital declaration of performance for natural stone products according to the Standard EN 12058:2004

Déclaration numérique des performances des produits en pierre naturelle selon la norme EN 12058:2004

UNE 146316-1:2023

Declaración de prestaciones digital para áridos. Parte 1: Áridos para hormigón, morteros, superficies sometidas al tráfico y capas estructurales conforme a las Normas EN 12620, EN 13139, EN 13043 y EN 13242.

Digital Declaration of Performance for aggregates. Part 1: Aggregates for concrete, mortars, traffic surfaces and structural layers according to EN 12620, EN 13139, EN 13043 and EN 13242.

Déclaration des performances numériques pour agrégats. Partie 1: Granulats pour béton, mortiers, surfaces exposées au trafic et couches structurelles d'accord EN 12620, EN 13139, EN 13043 et EN 13242.

Decision 244 taken on 2024-08-08
Subject: CEN/TC 442– Creation of WG 12 Digitalization of construction products performance characteristics

The CEN/TC *442 Building Information Modelling (BIM)*,

- considering the CEN/CENELEC Internal Regulations - Part 2, clause 3.4.2 and BT Decision C24/2012, which lay down the rules for the appointment and responsibilities of a Working Group Convenor;

- agrees on the creation of **Working Group 12 Digitalization of construction products performance characteristics**;

- agrees on the following scope of WG 12:

  - Develop and propose to TC442 common European standards for digitalization of construction products performance characteristics.

- agrees that the Secretariat of the WG is to be held by Spain (UNE);

- agrees to appoint Espen Schulze as Convenor.

The Working Group will be open to all members and liaisons.

The decision was taken by:

- Creation of WG 12: *13 positive votes/ 1 negative votes/ 9 abstain*
- Appointing Convenor Espen Schulze: *13 positive votes/ 0 negative votes/ 10 abstain*

PWI on the Digital DoPC of construction products

A preliminary WI was approved by CEN/TC 442 last August 2024

8. Scope of the proposed work item (max 4000 characters)

This document provides a digital data template structure for the Declaration of Performance and Conformity (DoPC) of construction products, as defined in the future Construction Products Regulation (CPR). It is aligned with the digital product passport concept defined in the CPR and in the Ecodesign for Sustainable Products Regulation (ESPR).

This document introduces the data template structure from EN ISO 23387 to be used for DoPC of construction products, together with a methodology for experts to develop domain specific data templates, following EN ISO 23386

This proposal will be based on the methodology and technical framework as defined in EN ISO 23386, EN ISO 12006-3, and EN ISO 23387. The draft will use the guidelines under development in WG 7 (WI 442051) and will consider CWA 17316:2018 s, as the Smart CE concept was led by the industry, in particular by Construction Products Europe (CPE). See Towards smart CE marking. CPE. 2016 (https://www.construction-products.eu/application/files/4515/2473/4512/20160602090551-Smart_CE_marking_2016_05_02_Final.pdf).

CEN/TC 442/WG 9 *kick-off* meeting

The KoM took place on 28 October at the CCMC headquarters in Brussels

Summary of the KoM

- **42 attendants** (20 *face-to-face* and 22 online)
- First half dedicated to **presentations**:
  - Introduction to CEN/TC 442 standards (Øivind Rooth, Chair of CEN/TC 442)
  - The DoPC in the new CPR and the DPP (Óscar Nieto, European Commission)
  - The perspective from industry (Christophe Sykes, Construction Products Europe)
  - Data templates in EN ISO standards (Espen Schulze, Convenor of WG 12)
  - CWA 17316 and Spanish standards for Smart CE (Aitor Aragón, Secretariat of WG 12, and Arturo Alarcón, Secretariat of Spanish BIM standardization committee)
  - Coordination with DPP standards (Martin Shreck, Convenor of CEN/CLC/JTC 24/WG 1)
- Second halt for the **Work Item proposal**

Ballot for the activation of the WI

Introduction

Regulation (EU) No 305/2011 [1], known as the Construction Products Regulation (CPR), obliges manufacturers of construction products covered by a harmonised technical specification (harmonised standards of European assessment document) cited in the OJEU to issue a declaration of performance (DoP) in accordance with that specification. By issuing the DoP, the manufacturer assumes responsibility for the conformity of the construction product with the declared performance. Member States must give a presumption of conformity to the content of the DoP, unless they have evidence that it is not correct or reliable.

The Delegated Regulation (EU) 157/2014 [2] allowed manufacturers to make the declaration of performance available on their website, under certain conditions. Manufacturers were required to deliver different digital formats, e.g. pdf or structured files such as IFC. The disparity in formats was a challenge for manufacturers and, to propose a solution, the association Construction Products Europe published the document *Towards smart CE marking* [3], which introduced for the first time the concept of Smart CE.

In December 2017, the kick-off meeting of CEN/WS *Smart CE marking* took place. Experts from several countries, representing manufacturers, BIM practitioners, software developers or certification bodies, agreed to publish in July 2018 the CWA 17316:2018 [4]. The CWA defined an XML format for the declaration of performance based on the data templates concept described in:

- EN ISO 12006-3 [5]: framework for object-oriented information related to construction assets.
- EN ISO 23386 [6] : explains how to establish, maintain and distribute data templates.
- EN ISO 23387 [7]: explains how to create, manage and use data templates.

Based on the CWA, the Spanish standard UNE 41316:2020 [8] developed a similar structure for additional information not included in the DoP, e.g. additional performance characteristics, other characteristics (color, etc.) and LCA-based environmental information [9]. This structure can be used to declare information for construction products not covered by a harmonised standard (i.e. products without CE marking), leaving the elements for the DoPC empty and declaring all the performance characteristics as additional information. Sector specific formats were developed based on the relevant standard for cement [10], natural stone [11], aggregates [12] or structural steel [13].

- A commenting period was established and, once the editorial issues were solved, a WI proposal was sent to CEN/TC 442
- Title: *Digital declaration of performance and conformity (DoPC) of construction products. Methodology, general requirements and criteria to develop data templates*
- A ballot to actívate the project was launched until **March 15**

Latest news

- The most recent meeting was held at AFNOR (France) on the 4th of March
- There are several open issues, like the *hierarchy* of requirements (which ones take precedence), the inclusión enviromental information, how definition of formats can be included in annexes, coordination with JTC 24 standards or the development of *pilots*

	Mon 3 March	Tue 4 March		Wed 5 March		Thur 6 March	
WG Virtual/f-t-f/Hybrid	AM+PM 9-17	AM 9-12.30	PM 13.30-17	AM 9-12.30	PM 13.30-18	AM 9-12.30	PM 13.30-17
WG 1 Face-to-face				**WG 1**			
WG 2 Face-to-face				PG 7817-2 (6-7p)		**WG 2** (15 p)	
WG 3 Face-to-face				**WG 3** (15 p)			
WG 4 Face-to-face		**WG 4** (9-10.30) (15 p)					
WG 6 Face-to-face			**WG 6** **(15-17)** (10p)				
WG 7 Face-to-face		**WG 7** (11-12.30 (15 p)					
WG 8 Face-to-face		**WG 8** (15 p)					
WG 9 Face-to-face				**WG 9** tbd (15 p)			
WG 10 Face-to-face						**WG 10** (15 p)	
WG 11 Face-to-face						**WG 11** (15 p)	**WG 11** (15 p)
WG 12 Face-to-face			**WG 12** tbd (15 p)				
Joint WG meeting Hybrid meeting					**Joint all WGs** 13.30-18 (30 p)		

EPD-data in the DPP

ISO 22057

Sustainability in buildings and civil engineering works – Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM)

- EN ISO 22057 defines the data templates to transfer environmental LCA-based information from EPDs (according to EN 15804) to BIM
- **Some improvements have been identified**, including aspects related with machine-interpretability

Approach: the standard will NOT define a *format*

Approach: the standard will define data templates and the decisión of the format will be taken by the Regulator or the user

The tables are *similar* to those defined in CWA 17316 and UNE 41316

Característica esencial <Name>	Propiedad nivel 1 <Name>	Propiedad nivel 2 <Name>	Documento de referencia <ReferenceDocument>	Declaración <Name>	Valor <Value>	Unidad <Unit>	Relación <Relation>	Valores válidos	Comentarios
common cements (subfamilies) constituents and composition	constituents and composition	cement constituents and composition according to EN 197-1:2011	EN_197-1:2011	nominal	input[1]	unitless	class	CEM I CEM II CEM III CEM IV CEM V	
		AVCP common cements (subfamilies) constituents and composition		nominal	1+	unitless	category	1+	
compressive strength (early and standard)	compressive strength classes and limits	standard compressive strength requirements expressed in terms of strength classes and limits according to EN 196-1:2018	EN_196-1:2018	pressure	input[1]	megapascal	greater than or equal to	32.5 42.5 52.5	No se permiten otros valores
		compressive strength requirements expressed in terms of early strength classes according to EN 196-1:2018	EN_196-1:2018	nominal	input[1]	unitless	class	R N	

1. The feasibility study for the CPR-DPP will be presented in the following weeks

2. CEN/TC 442/WG 12 is working on a digital data structure for the information required in the CPR

3. Coordination between the ESPR-DPP and the CPR-DPP is a requirement for its success

THANKS

for your attention

UNE

Normalización Española

Aitor Aragón Basabe

aaragonb@une.org

/aitor