GS1

The Global Language of Business

Standards Driving DPP Interoperability

Informative Webinar Session

GS1 Global Office
9 July 2025 (08:00-09:30 EDT / 14:00-15:30 CEST)

Agenda

- Introduction and General Information

- Meeting Etiquette and Format

- Future Events and Contacts

Meeting Format

- Non-GSMP Format – open to all for informative session

- Leave your questions in the chat and we will answer separately after the call

- Follow-up with any questions at gs1publicpolicy@gs1.org

- Materials | Recording will be available

NEW: GS1 Provisional Application Standard for DPP is available NOW!

Available at this link

- The GS1 Provisional Application Standard for Digital Product Passport (DPP) is now available to support GS1 users implementing the EU's DPP framework.

- Built on trusted GS1 standards for identification and data sharing, this standard offers a structured, web-enabled approach for encoding and sharing key product information.

- It enables manufacturers to make DPP data accessible through a simple smartphone scan, helping consumers instantly retrieve reliable, product-specific details.

Join GSMP DPP MSWG

GSMP GS1 Circularity - Digital Product Passport - WR 23-103

Global Standards Management Process

GS1 Circularity - Digital Product Passport

Mission-specific working group

This group will develop and update GS1 standards to support new regulatory requirements for the circular economy model. This evolving model raises questions about how to ensure globally interoperable, persistent product and component identification; how to track and trace needed information across entire circular product lifecycle from upstream raw materials through consumption and beyond; how to avoid a proliferation of single-purpose barcodes and tags; etc.

The overall aim of the new regulatory requirements is to reduce the lifecycle environmental impacts of products through efficient digitalisation. It also aims to enable the objectives of EU industrial policy, such as boosting the demand for sustainable goods and supporting sustainable production. It is estimated that the European Commission will introduce several new delegated acts between 2024-2030 to enable the potential of the DPP regulation across multiple sectors.

This group will focus on understanding and addressing these requirements in the near term and invites participation to gather requirements related to the broader scope of circularity from all sectors and regions.

Standards Development Leader: John Ryu
Call to Action: 12 April 2023
Scorecard: Available 30 days after groups official launch

To join the group: Click here

Reminder to join via this link:

https://www.gs1.org/standards/development-work-groups

DPP Informative Session Agenda
9 July (08:00-09:30 EDT / 14:00-15:30 CEST)

Time	Speaker	Topic	Desired outcome
5'	John Ryu (GS1 GO)	Welcome	Agenda
10'	Francesca Poggiali (GS1 GO) Nora Kaci (GS1 GO)	Introduction	Goal
10'	Francesca Chiovenda (GS1 GO)	Public Enquiry Summary	Process and participation
60'	Nadi Gray (GS1 GO)	ID and AIDC Standards Summary	Highlights
5'	Francesca Chiovenda (GS1 GO)	Close	Summarise and next steps

Introduction
10' (08:05-08:15 EDT / 14:05-14:15 CEST)

Francesca POGGIALI (GS1 GO)
VP Global Public Policy
Nora KACI (GS1 GO)
Public Policy Europe Senior Manager

Goal of today's meeting

A. GS1 reiterates its support to the initiatives developed by:

- the European Commission to make digitalisation and the DPP possible for companies of all sizes
- CEN/CENELEC process under JTC 24

B. Both the EU legislation in this area, such as ESPR: Ecodesign for sustainable products regulation, and the CEN/CENELEC standards have a global impact because:

- the legislation applies to all products positioned on the EU market and
- The European standards will be published on the EU Official Journal and provide presumption of conformity

C. Other countries around the world are developing requirements to introduce DPP in their legal frameworks and our goal is to avoid global fragmentation on identification, data capturing and data sharing standards

DPP upcoming product-specific rules

Textile (garments)
2027*

Furniture
2028*

Tyres
2027*

Mattresses
2029*

Iron and steel
2026*

Aluminum
2027*

Energy-related products
2027*

ICT products
2029*

DPP delegated acts

Batteries

Detergents

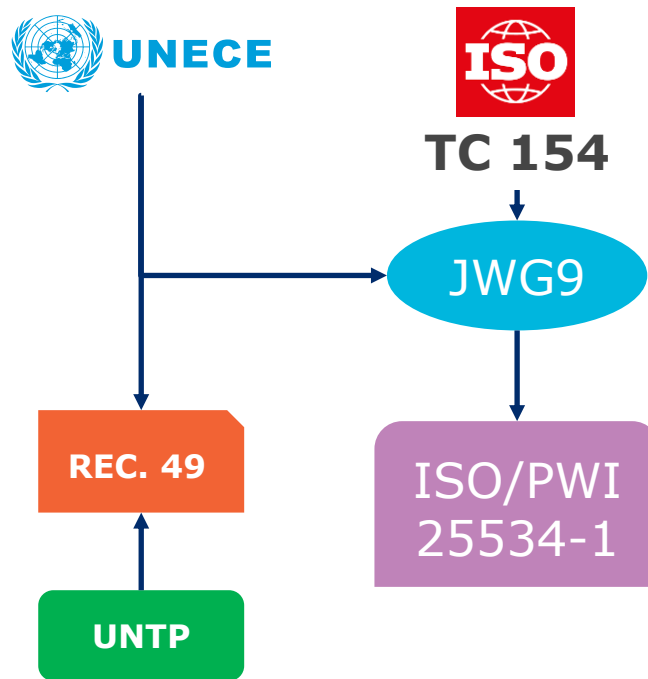**Construction products**

Toys

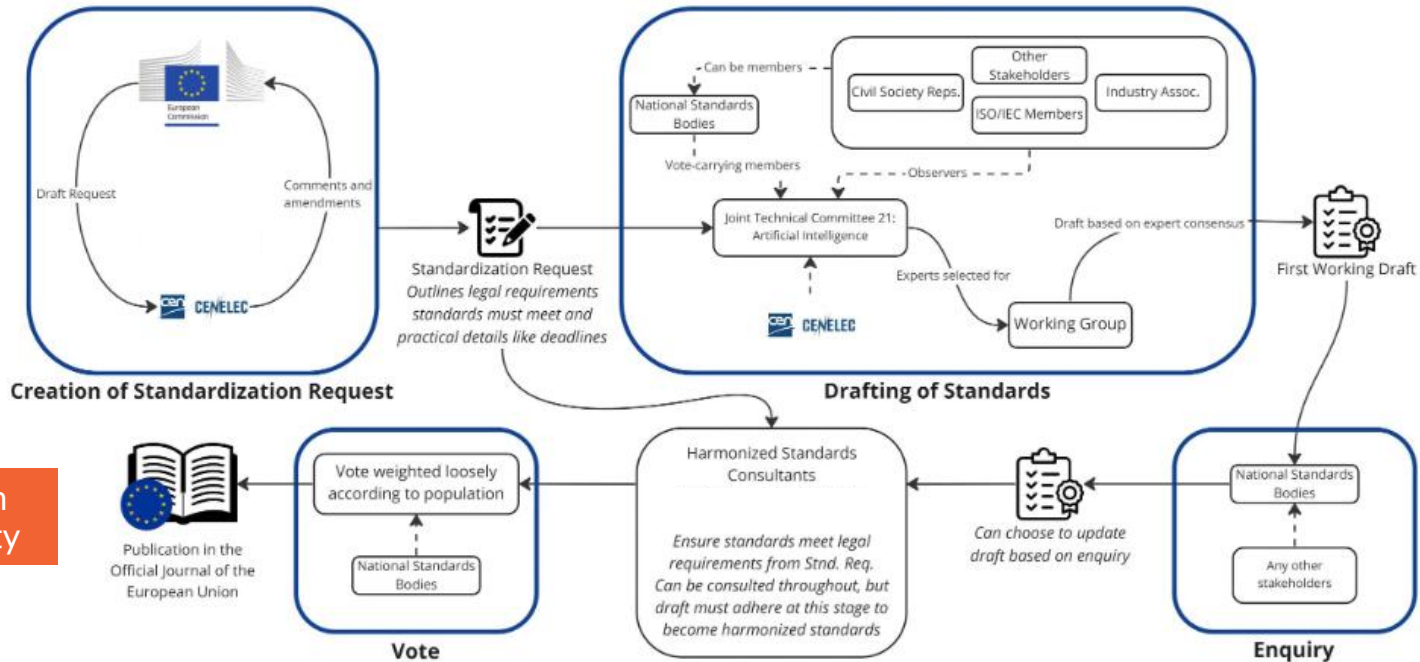*Indicative timeline for adoption

DPP chapter in vertical legislation

ISO UNECE TC/154 JW9 - ISO/PWI 25534-1

- The ISO/PWI 25534-1 is a project aiming to create a global approach to DPP

- Currently in the works: **Digital Product Passport - Part 1: Overview and Fundamental Principles**

- The declared scope of the project is: «*As the foundational part of the DPP standards series, this standard will provide a comprehensive overview and establish core principles for developing a global DPP standard system. It aims to foster a unified understanding of DPP architecture at the international level and support subsequent standardization efforts.*»

UNECE **ISO**

TC 154

JWG9

REC. 49

ISO/PWI 25534-1

UNTP

European standardisation process

Creation of Standardization Request

Draft Request

Comments and amendments

European Commission

CENELEC

Standardization Request
Outlines legal requirements standards must meet and practical details like deadlines

Drafting of Standards

- Can be members -

National Standards Bodies

Civil Society Reps.

Other Stakeholders

ISO/IEC Members

Industry Assoc.

Vote-carrying members

- Observers -

Joint Technical Committee 21: Artificial Intelligence

CENELEC

Experts selected for

Working Group

Draft based on expert consensus

First Working Draft

Enquiry

National Standards Bodies

Any other stakeholders

Can choose to update draft based on enquiry

Harmonized Standards Consultants

Ensure standards meet legal requirements from Stnd. Req. Can be consulted throughout, but draft must adhere at this stage to become harmonized standards

Vote

Vote weighted loosely according to population

National Standards Bodies

Publication in the Official Journal of the European Union

Presumption of conformity

GS1 in Europe's liaison to CEN/CENELEC JTC-24

GS1 in Europe is one of the liaison partners of JTC 24

This liaison partnership is an expression of

- long-standing commitment to standardization on European level,
- underlying the importance of the DPP for GS1 in Europe,
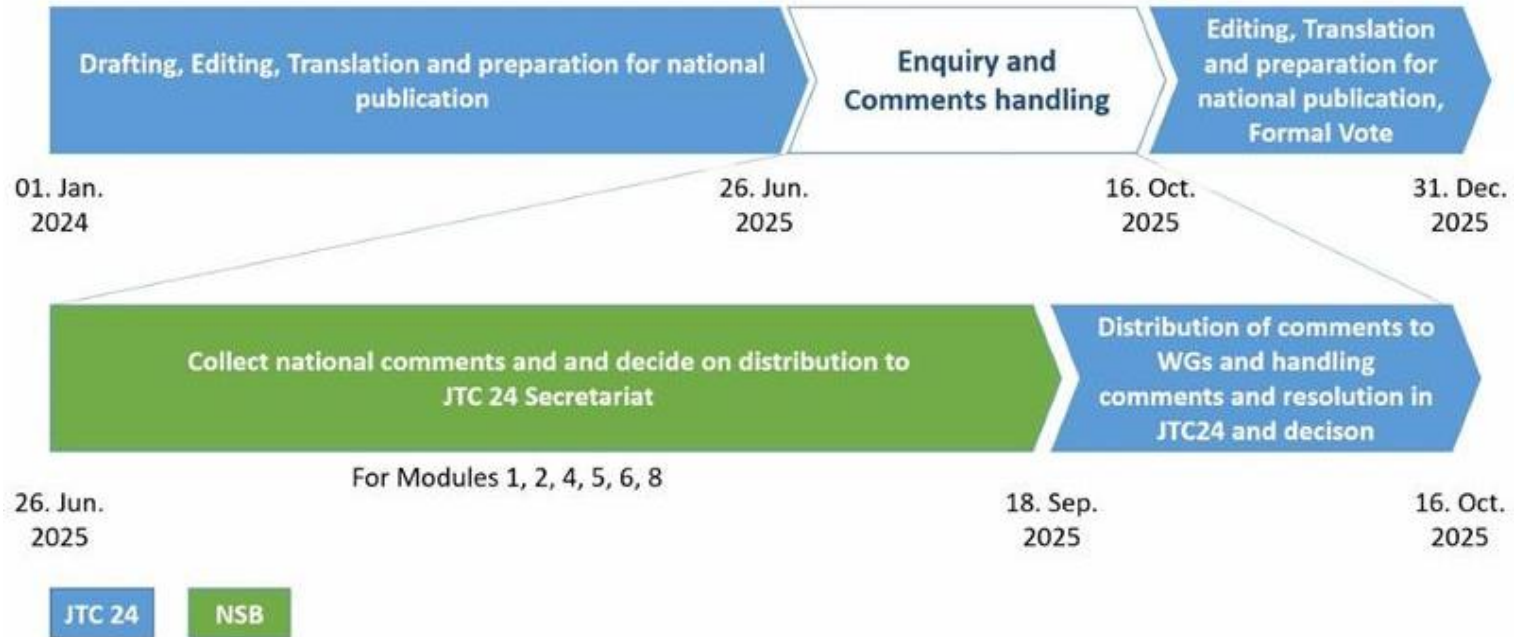- actively contribute to the EU standardisation environment

Please find here the contact details of
Dr Andreas Füßler - andreas.fuessler@gs1eu.org

Public Enquiry
10' (08:15-08:25 EDT / 14:15-14:25 CEST)

Francesca CHIOVENDA (GS1 GO)
Public Policy Manager

Public Enquiry timeline according to JTC-24

Drafting, Editing, Translation and preparation for national publication

Enquiry and Comments handling

Editing, Translation and preparation for national publication, Formal Vote

01. Jan. 2024 — 26. Jun. 2025 — 16. Oct. 2025 — 31. Dec. 2025

Collect national comments and and decide on distribution to JTC 24 Secretariat

Distribution of comments to WGs and handling comments and resolution in JTC24 and decison

For Modules 1, 2, 4, 5, 6, 8

26. Jun. 2025 — 18. Sep. 2025 — 16. Oct. 2025

JTC 24   NSB

© CEN-CENELEC 2025   Thomas Knothe und Martin Schreck / DPP4EU   26 June 2025   3

CEN/CLC JTC 24 on DPP – process phases

Until 16 October

Draft Standards development	Translation into French/German	Enquiry Phase + Voting	Resolving of Comments	Adjustment of Translations	Final Voting and Publication

31st March
2026

From 26 June to 18 September

- Timeline is slightly different for Modules 3 and 7, as dependant on the completion of their drafts and translations.

- For status of development see JTC24 on CEN/CLC Website.

CEN/CLC/JTC 24 Work programme

Project reference	Status	Initial Date	Current Stage	Next Stage	Forecasted voting date
prEN 18216 (WI=JT024003) Digital product passport - Data exchange protocols	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18219 (WI=JT024001) Digital product passport - Unique identifiers	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18220 (WI=JT024002) Digital product passport - Data carriers	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18221 (WI=JT024006) Digital product passport - data storage, archiving, and data persistence	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18222 (WI=JT024004) Digital Product Passport - Application Programming Interfaces (APIs) for the product passport lifecycle management and searchability	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18223 (WI=JT024005) Digital Product Passport - System interoperability	Under Enquiry	2025-01-29	2025-06-26	2025-09-18	2025-11-21
prEN 18239 (WI=JT024007) Digital Product Passport - access rights management, information system security, and business confidentiality	Under Approval	2025-04-02	2025-06-27	2025-07-31	2026-03-04
prEN 18246 (WI=JT024008) Digital Product Passport – Data authentication, reliability and integrity	Under Approval	2025-04-02	2025-07-01	2025-07-10	2026-03-04

34 countries and its NSBs as members of CEN and CENELEC

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

Türkiye

United Kingdom

What is an Enquiry in CEN CLC JTC 24 Objectives and Responsibilities

▶ For the Enquiry …

- ▶ the National Standardisation Bodies (NSB) of every Member State are asked <u>to publish the drafts</u> for standards to be harmoniszed and to <u>collect comments</u>
- ▶ Every National Mirror Committee is organizing the acquisition and evaluation of national comments on its own responsibility

▶ JTC 24 Secretary is managing the distribution of comments to WGs and respective convenors and project leaders

▶ In WGs all distributed comments will be discussed and decided (accepted, rejected (partly), postponed to next version)

How to send in comments

- Different timelines for different NSBs within the timeframe provided by JTC-24.
- Different processes for different NSBs on how to collect comments. Commenting template available here.

- Please note that once sent in, the National Committee will review the comments received and decide which ones to send in to JTC-24 to be resolved.

- If you are part of a National Committee you can submit your comments through the National Portal with a different timeline.
- Reach out to the NSBs if you have more questions and they will explain their process more in detail. A full list is available here, under **Nationals Portals for Public Consultations.**

ID and AIDC Standards Summary
60' (08:25-09:25 EDT / 14:25-15:25 CEST)

Nadi GRAY (GS1 GO)
GS1 System Architect, Senior Director

GS1 resource materials

- **GS1 Provisional Application Standard for ESPR DPP** and **GTIN Management Rules**
- GS1 in EU White Paper on ***GS1 Standards enabling the EU digital product passport*: Empowering industry's circular transformation and green product choices for consumers**
- **GS1 Interoperability & Implementation Considerations for DPP Product Identifiers**
- Industry's **Joint statement on the Draft standardisation mandate on Digital Product Passport**
- **GS1 in Europe – Graphical Symbols**
- **Deloitte Research Study** on the use of International Standards for the circular economy
- Upload for 17 July
- **GS1 comments on DRAFT prEN 18219 (CEN/CENELEC Unique Identifiers Standard)**
- **GS1 comments on DRAFT prEN 18220 (CEN/CENELEC Data Carriers Standard)**
- **GS1 summary of main comments to the CEN/CENELEC JTC-24 draft standards**
- **All comments documented in a comment table to assist NSB processing**

Background

- Standards covered today
  - DRAFT prEN 18219: Digital product passport – Unique Identifiers
    - 67 material comments
    - 51 editorial comments
  - DRAFT prEN 18220: Digital product passport - Data Carriers
    - 22 material comments
    - 33 editorial comments

- The GS1 Global Office comments will be made available:
  - Inline comments and edits in the actual standards (available this week)
  - Within a comment sheet that may aid NSBs in processing (available next week)

Presentation format for major topics today

Where you will find support for the GS1 DPP Application Standard within the CEN/CENELEC Standard

High-level implementation factors

Opportunities for greater clarity

Topics we will cover today

Unique Identification Standard

1. Web enabled, structured path ID
2. One, multi-purpose data carrier
3. Product identification granularity
4. Interoperability & implementation of novel ID schemes
5. Terminology

Data Carrier Standard

1. Minimum print quality
2. Offline data & hash in data carriers
3. Package marking
4. Graphical symbols

DRAFT prEN 18219: Digital product passport – Unique Identifiers

Web enabled, structured path ID

GS1 user companies support the use of a URL with ISO/IEC 15459 conformant GS1 identifiers (e.g., GTIN, GTIN with lot and/or serial numbers) encoded in the ISO/IEC 18975 conformant GS1 Digital Link URI syntax because this method:

1. Allows EU registration of structured, persistent product identifiers that ensure uniqueness and interoperability between ISO/IEC 15459 Issuing Agency identifiers.

2. Enables consumers to open a web site using their smartphone's native camera to scan a 2D barcode and then access regulatory or other information (e.g., instructions for use) from links on the landing page.

3. Does not utilise a domain address for product identification as a domain address is not always persistent and would duplicate identifiers used in today's supply chain.

4. Allows GS1 users to add additional structured data elements to the AIDC carrier, as needed, such as an expiration date, weight or measure without compromising the unique identifier that is comprised of other structured identification data elements.

5. Aligns with a seven-year, international retail program (2020-2027) to use one, multifunctional 2D to support supply chain transactions, consumer communication, and regulatory compliance.

Figure 2.2-1: Method 1: Web-enabled, structured path, GS1 identifiers


```
                     GTIN              lot      serial#    best before date
https://example.com/01/04012345999969/10/12345/21/192837?15=241031

  Domain    GS1       Reference              common URL
            Application  Data                Control Character
            Identifier
```
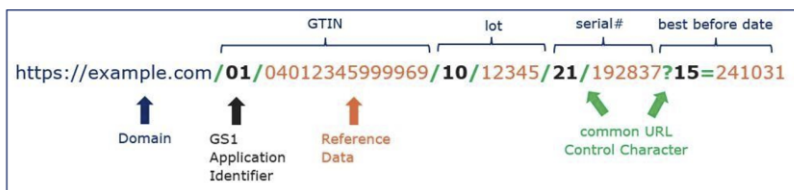
5.1.2.1   Web enabled, structured path ID for products

To ensure compliance with this ID scheme, the economic operator shall:

The ISO/IEC 18975 implementation of "web enabled, structured path ID" for GS1 identifiers is called **GS1 Digital Link URI**.

This syntax allows for one 2D barcode on products to meet B2B, B2C, and B2G requirements across the globe and will ease industry and consumer use.

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b) apply the GS1 Application Identifier (AI) format or the ASC MH10 Data Identifiers (DI) format in accordance with ISO/IEC 15418:2016,

c) follow the structured path approach specified in ISO/IEC 18975:2024 for encoding and resolving identifiers over HTTP, and

d) use a registered numerical issuing Issuing agency Agency Code according to ISO/IEC 15459-2:2015, and.

~~C~~conform to ISO/IEC 15459-3 Common Rules as per ISO/IEC 15459-3, Section 6.4 "Compliance with ISO/IEC 15459: An organization can claim that it is compliant with ISO/IEC 15459 (all parts or a specific part) if it can allocate and process identities according to the rules defined in ISO/IEC 15459-3, Common rules, ISO/IEC 15459-2, Registration procedures and all or any other part."

d)e) For users of GS1 Application Identifiers, conformance with GS1 Digital Link URI SHALL be required.

ISO/IEC 15459-3 and GS1 Digital Link URI references needed. +Data Identifiers?

One, multi-purpose data carrier

2D in Retail:
Next generation barcodes.
One scan. Infinite possibilities.

Next generation barcodes to meet new expectations

Consumers, brand owners, retailers and regulators: it seems everyone wants to know more about products—and as a result, everyone is looking for better ways to access information about a product by scanning a code on its packaging.

https://www.gs1.org/industries/retail/2D-barcodes

6.2.2 Data Matrix

Data Matrix shall be implemented as specified in [17] is a compact 2D barcode that uses black and white cells arranged in a square or rectangular pattern. It can store text, numeric, or binary data and is

6.2.3 QR Code

QR code (Quick Response Code) shall be implemented as specified in [18] is a 2D barcode that stores text, URLs, or data. It is easily scanned by smartphones or cameras, enabling quick access to

Supply chain scanning systems must be capable of scanning 2D barcodes **and parsing GS1 data elements (e.g., GTIN) from a GS1 Digital Link URI** to realise the one, multipurpose barcode on pack goal.

Smart device OS must be capable of decoding Data Matrix ubiquitously by 2027.

Barcode specifications missing in normative references (also NFC)

2D Barcode Symbols related

ISO/IEC 15415:2024, *Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols*

ISO/IEC 15424:2025, *Information technology — Automatic identification and data capture techniques — Data carrier identifiers (including symbology identifiers)*

ISO/IEC 15426-2:2023, *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 2: Two-dimensional symbols*

ISO/IEC 16022:2024, *Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification*

ISO/IEC 18004:2024, *Information technology — Automatic identification and data capture techniques — QR code bar code symbology specification*

Product identification granularity

182 **Attributes**

183 Delegated acts will specify which minimum granularity level (GTIN, GTIN with version, GTIN with batch/lot or
184 GTIN with serial number) will be mandatory. The minimum granularity level may differ by product type or by
185 various lifecycle stages for a product. For example, a GTIN may be used for selling online where a GTIN plus
186 serial number may be used to provide repair or refurbishment attestations.

187 **Note:** GTIN key qualifiers for finer granularity levels such as version number, batch/lot number or serial
188 number, may be encoded in the AIDC carrier for other processes, even if not required by regulation.

Annex A
(informative)

Guidance on selecting ~~item-level~~ identification granularity levels for products

Prior to the market release of a product, a determination should be made whether to assign identification at the model, batch or item level, balancing different consideration of regulatory, technical, ecological, and economic factors. Opting for the appropriate level of object identification can lead to significant cost and effort reductions throughout the product's life cycle.

For most retail consumer products that utilize GS1 identifiers, are qualified by GS1 Application Identifiers, and encoded per ISO/IEC 18975 web enabled, structured path identification using GS1 Digital Link URI syntax, finer granularity levels can be introduced or withdrawn at any time per the discretion of the product manufacturer as long as the minimum granularity level required by ESPR is maintained. Therefore default identification would be:

— at the model level (e.g., GTIN) is advisable. This level of identification is required for most online order and retail store fulfilment, used to manage inventory, and for alignment of data between trading partners.

— In cases where a Delegated Act requires the product's manufacturing facility be known, but no other requirement for finer granularity of identification is present, the use of a product model and facility identifier may be a suitable alternative to consider.

— Where item level granularity is required by some trading partner agreements on consumer products (e.g., those with EPC RFID tags) but is not required by the regulation, this should remain a commercial agreement.

GTIN Management Rules standards remain important to conformance.

To use GTIN's product version extension to denote a new DPP, it must be linked to the previous identifier.

Section 4.4.2, as is, must be clarified to avoid unnecessary GTIN change and value chain disruption.

4.4.2 **Requirements**

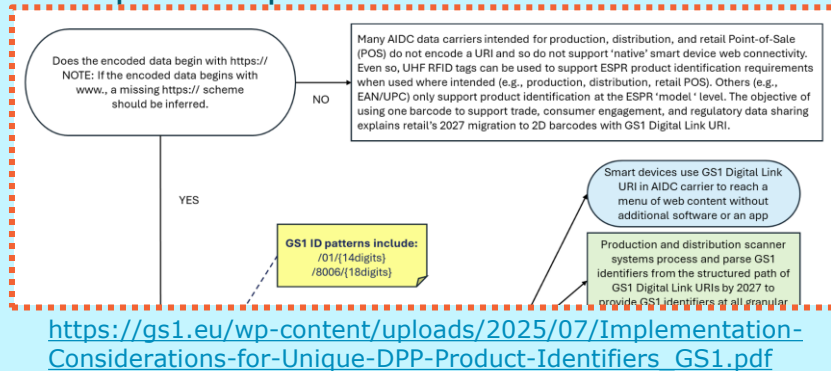The unique identifier shall maintain specified semantics, by ensuring:

1) *Granularity:* Each product identifier shall be unique at least at the smallest granularity level it serves, whether it is a model (3.10), batch (3.1), or item (3.8).

2) *Granularity consistency:* The minimum granularity level required by the regulation shall remain available once the product is placed on the market. The granularity level of a unique product identifier shall remain consistent once the product is placed on the market or put into service (3.15).

3) *Change in granularity:* For identifiers that do not utilize ISO/IEC 15418 or equivalent qualifiers with each identifier data element (e.g., model, batch, serial number). If a change in granularity becomes necessary that has not been foreseen, a new or extended unique product identifier shall be required. The new or extended identifier shall be linked to the old unique identifier to maintain traceability.

For identifiers qualified by ISO/IEC 15418 ANSI MH10 Data Identifiers or GS1 Application Identifiers, model and batch and/or item levels of granularity can be supported by application

For identifiers qualified by ISO/IEC 15418 ANSI MH10 Data Identifiers or GS1 Application Identifiers, model and batch and/or item levels of granularity can be supported by application specific requests for the granularity required by using the qualifiers. Granularity finer than model can be introduced or withdrawn without changing the model number (e.g., GTIN) and thereby avoid costly "hard-conversion" product introduction expenses for industry and consumers as well as avoiding potential stock-outs and obsoleted inventory. In the case where a change in the model level identifier is required, the new model number shall be linked to the previous model number to maintain traceability. It should be noted that in the GS1 system of identification, industry roles upon a version extension of the model number to isolate supply chain impacts where communication of minor variations occur and a change to this version extension may constitute a change to the model number for the purposes of DPP reporting and in this case, linkage to the previous model number, with or without the version extension is required.

If a change in granularity becomes necessary that has not been foreseen, a new or extended unique product identifier shall be assigned. The new or extended identifier shall be linked to the old unique identifier to maintain traceability.

Interoperability & implementation of ID schemes

With specifications that lead to unique patterns, AIDC service providers can build interoperable products.

Does the encoded data begin with https:// NOTE: If the encoded data begins with www., a missing https:// scheme should be inferred.

NO

Many AIDC data carriers intended for production, distribution, and retail Point-of-Sale (POS) do not encode a URI and so do not support 'native' smart device web connectivity. Even so, UHF RFID tags can be used to support ESPR product identification requirements when used where intended (e.g., production, distribution, retail POS). Others (e.g., EAN/UPC) only support product identification at the ESPR 'model' level. The objective of using one barcode to support trade, consumer engagement, and regulatory data sharing explains retail's 2027 migration to 2D barcodes with GS1 Digital Link URI.

YES

GS1 ID patterns include:
/01/{14digits}
/8006/{18digits}

Smart devices use GS1 Digital Link URI in AIDC carrier to reach a menu of web content without additional software or an app

Production and distribution scanner systems process and parse GS1 identifiers from the structured path of GS1 Digital Link URIs by 2027 to provide GS1 identifiers at all granular

https://gs1.eu/wp-content/uploads/2025/07/Implementation-Considerations-for-Unique-DPP-Product-Identifiers_GS1.pdf

5.5.2 Requirements

To ensure compliance with this ID scheme, the economic operator shall:

a) Determine the DOI name for product model, batch, or item identification, adhere to ISO 26324:2025 for model, batch or item identification,

b) use the ISO/IEC 15459-2:2015 Issuing Agency Code assigned code at the start of the DOI to ensure uniqueness vis-a-vie ISO/IEC 15459 product identifiers currently used in the open value chain. This does not represent an ISO/IEC 15459 compliant system as ISO/IEC 15459-3 Common Rules are not used.

The level of implementation for some identification schemes for use on product barcodes/tags in the open, value chain is low to non-existent, and some questions remain before implementation can begin. It should also be clarified that the retail sector will not be required to implement schemes they do not use.

As an example, a Digital Object Identifier (DOI) is specified as requiring an 'XID' Issuing Agency Code (IAC) before the DOI, but then it is no longer a DOI. If it is stored beginning with "10" as is specified by DOI, then it is a DOI but conflicts with GS1's IAC '1'. If it is stored beginning with doi:, then it would conflict with NATO's IAC 'd'.

Terminology

Regulatory definitions take precedence?

3.3
digital product passport
DPP
a set of data specific to a product that includes the information specified in the applicable delegated act adopted pursuant to Article 4 and that is accessible via electronic means through a data carrier in accordance with Chapter III~~digital record of product characteristics throughout its life cycle~~

Hierarchal issuance of identifiers for all identification schemes

3.7
issuing agency
~~centralized identification scheme~~
~~federated identification scheme~~
organization entrusted by the Registration Authority to assign company identifying numbers in line with the requirements of the Registration Authority (e.g., ISO/IEC 15459-2 for AIDC unique identification within AIDC technology in the value chain, ISO/IEC 6523 for identification of organisations) ~~that allocates company codes, defines rules and/or identification schemes~~

3.18
decentralized identification scheme
~~self-issuing system~~
~~decentralized identification scheme~~domains, specifications and rules (mechanisms) used by organisations to generate identifiers unique within that domain and interoperable within the scope of use as defined (e.g., value chain, finance, document exchange).

Company internal identification scheme
system or mechanism that an organization uses to generate and assign unique identifiers to its objects ~~without the intervention or oversight of an external authority and~~ without regard for uniqueness or interoperability of the identifiers outside their organization

As regulations expand beyond the European Union regulators should attempt to reuse or map ESPR terms and definitions to promote global harmonisation and speed results.

Global and regional standards should defer, wherever possible, to legislation.

The standard equates some identification schemes to 'self-issuing' which can be confused with internal identifiers.

All schemes require a mechanism external to product manufacturers for uniqueness (e.g., Issuing Agency Code, ICANN domain or prefix, then self-issuing occurs.

DRAFT prEN 18220: Digital product passport – Data Carriers

Minimum print quality

Symbol X-dimensions, minimum symbol height and minimum symbol quality

- For fixed measure trade items scanned at POS, see 5.12.3.1, GS1 symbol specification table 1, addendum 2.
- For fixed measure trade items scanned in general distribution and at retail POS, see 5.12.3.3, GS1 symbol specification table 3.
- For fixed measure trade items scanned in general distribution only, see 5.12.3.2, GS1 symbol specification table 2.
- For variable measure trade items scanned in general distribution only, see 5.12.3.2, GS1 symbol

The method for assessing print quality is the same utilised in GS1 standards.

[12] ISO/IEC 15415:2024, *Automatic identification and data capture techniques — Bar code symbol print quality test specification — Two-dimensional symbols*

[13] ISO/IEC 15426-2:2023, *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 2: Two-dimensional symbols*

5.6.2 Two-dimensional symbols

The applicable standard for 2D barcode symbols is [12], Bar code symbol print quality test specification — Two-dimensional symbols. This standard defines the methodology for grading the quality of printed 2D barcodes. The grade includes a grade level, measuring aperture and the wavelength of light used for the measurement.

Minimum print quality grades are established based upon the scanner operating environment (e.g., retail point-of-sale, transport and logistics, smart device) but these specifications, established within industry application standards follow a convention of ~~The minimum quality grade is typically~~ 1,5 / 80%/ 660, where:

— 1,5 is the overall symbol quality grade;

— 80% is the measuring aperture related to the measured X dimension;

— illumination 660 is the peak response wavelength in nanometres.

The balance between "easy to produce" and "easy to use" barcodes is the subject of rigorous testing at GS1's AIDC Lab.

The Lab is equipped with scanners that represent a critical mass of what it in the field and all minimums are set to find the balance.

Given print quality minimums depend on the scanner environment (e.g., retail point-of-sale, logistics, smart device only), print quality minimums should be established by GS1 Application Standards for GS1 users.

Offline data & hash in data carriers

From the Standards Request, not the CEN/CENELEC Standard, we find…

2.6.   The cross-sectoral basic data elements may include the following six pieces of information:

    (2)   the product passport owner (the economic operator who created the product passport);

    (3)   unique operator identifier (the main manufacturer, if different from the product passport owner);

    (4)   the facility identifier (the location where the main manufacturing stage took place);

    (5)   the unique product identifier (identifier of the product registered in the product passport registry);

    (6)   an additional product identifier (an optional additional identifier associated to the product);

    (7)   the product group (information about the type of product).

2.10.   The control data elements could be a link about how to identify counterfeiting and a hash of the product passport registered in the product passport registry.

Joint statement on the Draft standardisation mandate on Digital Product Passport

In the context of the European Commission Draft Standardisation Request on the Digital Product Passport (DPP), we, representatives of ten associations, are concerned about the provisions requiring the data carrier to include six cross-sectoral basic data elements that can be consulted offline: (I) DPP owner; (ii) unique operator identifier; (iii) facility identifier; (iv) unique product identifier; (v)

Read industry's Joint Statement.

The CEN/CENELEC standard does not include a provision for nor a prohibition against these requirements and support for this omission should be maintained throughout the Public Enquiry phase.

Package marking

320 **Symbol placement**
321 The data carrier shall be placed on the product itself or, if not possible, on its packaging or documentation
322 accompanying it.

323 If multiple barcodes are needed on one product for different applications, see section 4.15.1 non-adjacent
324 placement rule.

325 If the data carriers defined in this application standard can be used simultaneously to cover another existing
326 application standards (e.g. fixed measure trade items scanned at retail POS), then symbol placement rules of
327 the existing application standards take precedence, see section 6.

prEN 18228 (E)

5.4.1 General

There shall be at least one data carrier containing the product identifier of the DPP provided either on the product (preferred), embedded in the product (preferred), on the packaging or in the documentation. The method will depend on the product type as detailed in this document.

The method for producing and placing an AIDC data carrier on a product, its packaging, or documentation should be considered by then left to the product manufacturer based on the product types(e.g., consumer goods, durable goods) and other factors.

The word "*preferred*" in the CEN/CENELEC standard should be removed as the decision about where the AIDC data carrier is placed must be left to industry application standards and product manufacturer discretion.

Graphical symbol

From the Standards Request…

2.8. In case of a visual data carrier, the possibility of setting a product passport visual identity (i.e., by specifying the colours of the data carrier, including specific text, logo or image into the data carrier, or accompanying the data carrier by a specific text, logo or image, etc.) shall be duly considered.

5.7.3 Signage

A 2D data carrier that links to a DPP may have a graphical marking to distinguish it from other data carriers.

When an optional graphical marking is used for equipment, it should comply with [15][16], symbol 6452 or 6452-1.

[15]   ISO 7000:2019, *Graphical symbols for use on equipment — Registered symbols*

[16]   IEC 60417:2024 DB ED1:2024, *Graphical symbols for use on equipment - 12-month subscription to regularly updated online database comprising all graphical symbols published in IEC 60417*

The retail consumer goods industry has not established one, consumer tested symbol to denote "their" barcode and may need to begin discussing this.

Read GS1 in Europe's position here.

The symbols used on equipment are the only symbols in the CEN/CENELEC Standard and are not mandatory, but they appear to mimic "tear-off" labels/coupons and have not been tested with consumers to see if they associate them with DPP. Extensive testing with consumers is recommended.

Summary

- This assessment and presentation were produced and provided by GS1 Global Office (GO) subject matter experts based on comparing the GS1 DPP Application Standard and the CEN/CENELEC Standard drafts

- The purpose of the assessment is to provide an open and transparent perspective for GS1 standards users to enable efficient and timely implementation.

- The CEN/CENELEC standard when properly referenced by Delegated Acts can:
  - Support GS1 identifier use/encoding in 2D barcodes and NFC via the GS1 Digital Link URI syntax
  - Support GS1 identifier use/encoding in RFID per the EPC Tag Data Standard (clarifications are required but have been provided in the GS1 GO comments)
  - Support all four AIDC data carriers GS1's standard contemplates
  - Supports and depends upon the retail 2027 Ambition for 2D

Closing
5' (09:25-09:30 EDT / 14:25-14:30 CEST)

Francesca CHIOVENDA (GS1 GO)
Public Policy Manager

Thank you!

- Documents, presentation and recording will be shared

- All questions in the chat will be answered, and in case of other questions or comments please reach out to gs1publicpolicy@gs1.org

- To the GS1 users, if you share our comments, you are invited to contact your NSB directly (see following slide for contacts). In case of questions on this regard please write to francesca.chiovenda@gs1.org

How to send in comments

- Different timelines for different NSBs within the timeframe provided by JTC-24.
- Different processes for different NSBs on how to collect comments. Commenting template [available here](#).

- Please note that once sent in, the National Committee will review the comments received and decide which ones to send in to JTC-24 to be resolved.

- If you are part of a National Committee you can submit your comments through the National Portal with a different timeline.
- Reach out to the NSBs if you have more questions and they will explain their process more in detail. A full list is [available here](#), under **Nationals Portals for Public Consultations.**

GS1 resource materials

- **GS1 Provisional Application Standard for ESPR DPP** and **GTIN Management Rules**
- GS1 in EU White Paper on ***GS1 Standards enabling the EU digital product passport***: **Empowering industry's circular transformation and green product choices for consumers**
- **GS1 Interoperability & Implementation Considerations for DPP Product Identifiers**
- Industry's **Joint statement on the Draft standardisation mandate on Digital Product Passport**
- **GS1 in Europe – Graphical Symbols**
- **Deloitte Research Study** on the use of International Standards for the circular economy
- Upload for 17 July
- **GS1 comments on DRAFT prEN 18219 (CEN/CENELEC Unique Identifiers Standard)**
- **GS1 comments on DRAFT prEN 18220 (CEN/CENELEC Data Carriers Standard)**
- **GS1 summary of main comments to the CEN/CENELEC JTC-24 draft standards**
- **All comments documented in a comment table to assist NSB processing**

GS1 Global Webinars: Driving DPP Interoperability with Standards

Join us for a high-impact global sessions!

GS1 is hosting **2 global webinars** to provide an update on **standardisation efforts in support of the Digital Product Passport (DPP)** initiative.

Date: July 9 2025: focus Identification and AIDC
July 16 2025: Focus on data sharing
Time: 1400-1530 CEST
Duration: 90 minutes

Registration link:
https://gs1go.zoom.us/meeting/register/vpZVTv_PQgqu23jqSCnkDQ#/registration

More info: https://gs1.eu/events/gs1-standards-driving-dpp-interoperability/