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Objective of this document

**This document** is an accompanying explanatory text to the DPP-related Standards Dataset. It explains the origin of the dataset as well as a number of observations and disclaimers. The data collection in this spreadsheet dataset is protected by database rights. Permission is given to use the data for research and standardisation purposes.

Citation

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DPP-Related Standards Dataset

The ESPR specifies essential requirements for the DPP system in its Articles 9 and 10, and Annex III. Based on these high-level requirements, the EU Commission is mandating the European Standardisation Organisations (ESO’s) to propose harmonized standards for the DPP system based on appropriate existing and new standards corresponding to a number of areas of standardisation. It is requested by the Commission that these standards should be available by the end of 2025. To be in compliance with the data system requirements of the DPP, upcoming DPP solutions will need to comply with the identified standards.

One of the objectives of CIRPASS is to contribute to this effort by sharing useful results with standardisation organisations to support their work. To this end, CIRPASS identified an initial list of existing standards relevant for the establishment and operation of a cross-sectoral DPP system. The following sources were exploited:

* In 2023 a landscaping report of digital product passport standards was released by the [StandICT](https://standict.eu/) Technical Working Group on the Digital Product Passport (DPP) initiative. The [landscaping report](https://standict.eu/landscape-analysis-report/landscape-digital-product-passport-standards) provided by the StandICT is a general overview of a large number of DPP related standards to which a relevance grading is assigned for each area of standardisation in need for harmonization. The gradings are “No relevance”, “Some relevance”, “Significant relevance” and “High relevance”. The [full report](https://standict.eu/landscape-analysis-report/landscape-digital-product-passport-standards) can be found at the StandICT Website: [standICT.eu](https://standict.eu/landscape-analysis-report/landscape-digital-product-passport-standards).
* The expert knowledge of CIRPASS consortium members.
* The expert knowledge of a selected team of experts external to the consortium.

A list of more than 300 standards, organized according to area of standardisation, was elaborated and their relevance for the areas of standardization was graded. Note that the CIRPASS proposal for the DPP System is embedded in the existing infrastructure of our networked society. This means that the architecture itself makes the assumption of the existence of the Internet and the Web with its underlying Common Technical Specifications. Many of the standards listed in this dataset make the same assumption.

The StandICT Technical Working Group DPP (TWG DPP) presented their understanding of the different areas of standardisation in the table reproduced below. The CIRPASS standards group share an identical understanding of these areas of standardisation.

Table : Examples of contents of standards for different areas of standardisation (Source: StandICT).

|  |  |
| --- | --- |
| **Area of Standardisation** | **Examples of Standard’s Content** |
| Data carriers | Standards that consider state of the art technologies, e.g. RFID and 2D-Codes, such as QR-Codes and Data Matrix  The consideration of print quality  The recognition and detection when using graphical symbols  Standards that are based on principles and process for the adoption of new data carriers |
| Unique identifiers for people, companies, products, packaging, raw material, etc. and their verification. | Standards that include aspects such as using methods to achieve global uniqueness, syntax and semantics.  Consideration of hierarchical and decentralised identifiers. |
| Physical digital link, look-up mechanism | Standards that describe look-up mechanisms and technologies that describe the link between data carriers and the DPP can be established. |
| Access right management | Standards that consider access control measures need to be implemented to regulate the access to product passport information, i.e. who may access what information for which purpose and in which role. Areas to be considered:   * Role based access control * Rights expression languages * Dataspace connectors * Frameworks for access management |
| Interoperability (technical, semantic, organisation), including data exchange protocols and formats and Data processing (introduction, modification, update) | Semantic standards  Usage of standardised data exchange protocols including rules to exchange data between two or more parties.  Usage of standardised processes to introduce and update product information.  Usage of standardised data models and formats that are used in data exchange and representation.  Usage of standardised calculation methods for DPP data elements, e. g. for CO2 footprint. |
| Data storage | Usage of decentralised data storage.  Data persistence is required to make sure that product data will be available for a long time period (the data included in the product passport shall be stored by the economic operator responsible for its creation or by operators authorised to act on their behalf, even when the economic actor who sold the product is no longer active or exists). |
| Data authentication, reliability, and integrity and data security and privacy | Basic targets of IT-security and data protection targets should address various aspects:   * Authentication * IT-certificates and signatures * Reliability * Integrity * Trustworthiness * Privacy * Encryption |