

The Future of the Digital Product Passport

Summary Position

Future Proof, Flexible, Open & International Standards. Digital Product Passport (DPP) standards should be future-proof and flexible to adapt to changing market conditions and innovations. They must accommodate the needs of diverse stakeholders, products, and sectors, ensuring interoperability (including across sectors) through open, international standards and decentralized data systems. They should be based on existing business practices.

Harmonious DPP Provisions. With the DPP introduced across multiple EU legislations in parallel to ESPR, it is crucial to prevent fragmented, incoherent approaches, including across Member States.

Clear Roles & Responsibilities. The obligations of economic operators should be clearly delineated, and definitions should be clear and harmonious. Retailers and wholesalers should not be liable for manufacturer-provided data beyond factual verification.

Sufficiently Long Transition Periods. Economic operators need adequate time – 24 months minimum for new products placed on the market – to set up DPP infrastructures, collect new and process existing data. The introduction of information requirements should be gradual, consider the maturity (traceability capabilities and transparency) of the global supply chains, and consider the timeline of adoption of the DPP standards and horizontal measures under the ESPR.

Digital Labelling. Digital labels should have an increased role in communicating consumer information. A careful assessment should be conducted per product to determine what is essential/mandatory consumer information that should be kept in paper format, and what information can be communicated only digitally. Flexibility in the display of product information online should be ensured.

Proportionality. Considering the costs associated with the creation and managing of DPPs, its introduction should follow a proportionate approach in terms of the products covered, the width of information requirements and level of serialisation. Not all products require a DPP, information requirements should be introduced based on a stepwise approach, and item level serialisation should be limited to specific cases where it offers real added value.

Affordability & User Friendliness. The costs of developing in-house DPP solutions or outsourcing them to service providers should be assessed against the real progress of digitisation in the single market and its measurable potential to reduce administrative burdens—particularly for SMEs. Storing DPP

copies externally with service providers will likely raise costs for both businesses and consumers; therefore, this approach should be applied proportionately. Finally, the DPP must be a user-friendly solution—not only for consumers, but also for SMEs without large IT departments—ensuring they can easily access, use, and manage operations related to the DPP.

Simplification. The DPP should be considered when working towards streamlining reporting requirements for products under different EU legislations, so that information is centralised and entered once. Different platforms (e.g. DPP registry, Safety Gate, EU Customs Data Hub, ICSMS, Safety Gate) should be linked where appropriate, to increase the automation of compliance and enforcement. It is essential to avoid redundant statements around data carriers or have multiple data carriers in one product.

Level Playing Field. The DPP should assist in strengthening compliance of products imported from third countries, contribute to border controls and risk-based customs enforcement without complicating trade flows.

SME Test: All measures related to the DPP and its implementation should always consider the burdens and costs SMEs.

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1. Standards & Technical Requirements

International Open Standards, Harmonisation and Interoperability

The DPP framework should be built on existing open and international standards and data systems already widely implemented by industry, such as GS1, to ensure interoperability and alignment with global practices, and avoid vendor lock-in. DPP information must be machine-readable, structured, and searchable. DPP systems should support product identification and data exchange among all stakeholders in a balanced, cross-sectoral, and technologically neutral way.

Decentralised Data Sharing & Information Security

DPP requirements should encourage a decentralised data-sharing system to respect data ownership, security, and scalability across complex global supply chains. Standards must be set to safeguard data security, confidentiality and proportionate access rights.

Technological Neutrality & Semantics

The DPP framework must remain technologically neutral, ensuring compatibility across existing and future systems without mandating specific technologies or vendors. Standardised

semantics/ontologies (data formats & definitions) are needed to ensure interoperability across sectors while respecting the unique characteristics of each product type and value chain.

2. Obligations of Economic Operators

Creating & Updating DPPs

The roles and obligations of economic operators should be clearly defined and applied consistently across all legislation introducing a DPP. While manufacturers are primarily responsible for creating the initial DPP and affixing it to the product, other actors may need to update existing DPPs or link a new DPP to an old one. This is particularly relevant for circular business models—such as repairers, refurbishers, and resellers—as well as retailers, wholesalers, and private-label owners. However, updating a DPP (which requires item-level serialization) or creating a copy can pose significant challenges and may not always be economically or practically viable. Rules on updating DPPs should therefore allow flexibility, enabling decisions to be made based on specific circumstances rather than a one-size-fits-all approach.

Liability & Data Accuracy

Economic operators who create or update data in a DPP should be responsible for ensuring the accuracy of the information they provide. Retailers and wholesalers should not be burdened with obligations which are disproportionate to their position in the supply chain and should not be expected to verify the accuracy or completeness of information which are beyond their control. At the same time, legislation should also consider that a DPP is the outcome of a collective data-gathering process across long and often international value chains. The deeper the information requirements get, the more complex and challenging the verification process becomes (see Chapter 4: stepwise approach on the DPP).

Access Rights & Confidentiality

Access to DPP data should be proportionate, ensuring authorities, businesses and consumers have access rights tailored to their needs while protecting IP rights and confidential business data. Differentiated access must be defined on a case-by-case basis. Simultaneously, the DPP framework must ensure strong protection for commercial confidentiality and consumer data privacy.

Data Sharing & Traceability

The obligation to provide and make DPP information accessible should be explicitly assigned to actors at the beginning of the supply chain. Even if suppliers (e.g., of components or parts) are not directly responsible for creating the DPP, it should be clear that they must supply the necessary information to be incorporated into the final product's DPP, in a format digitally compatible with the DPP. For this data sharing process to mature, it is important to introduce information requirements gradually and in tiers.

3. DPP Service Providers & Backup Copy

Backup Copy

The storage obligation with external service providers will likely cause companies to incur additional costs. What information is stored in the backup copy, as well as of which DPP (e.g. the initial, the new DPP linked to the old one, or the DPP that has been updated, the model level or item level) should be considered carefully. Only a minimum set of data points necessary for legal compliance should be stored in the backup. For example, video instructions of assembly will take up significant amount of storage and without added value. Equally, commercial information is not essential to be stored. Backup copies in cases of item serialisation can raise both operational costs and environmental impact associated with storage of large amounts of data.

Costs

Measures are needed to prevent excessive pricing or unexpected price hikes associated to storage requirements with DPP service providers. Certification systems for DPP service providers could increase costs which might be reflected in consumer prices, whereas most challenges stem from data quality issues rather than system architecture. A more targeted solution would be audits by notified bodies, focusing on the accuracy and reliability of product data within the DPP.

Data Ownership, Transferability & Security

Companies must be able to switch DPP service providers without losing access to existing DPPs or stored data. Secure, timely and seamless data transfer should be guaranteed upon request. Importantly, companies' data must be protected from breaches or misuse, including by other clients of the same provider. Lastly, there should be safeguards on the utilisation and privacy of data generated during the hosting of the DPP for other purposes (e.g. gathering information on customers visiting DPPs).

Additional Functionalities

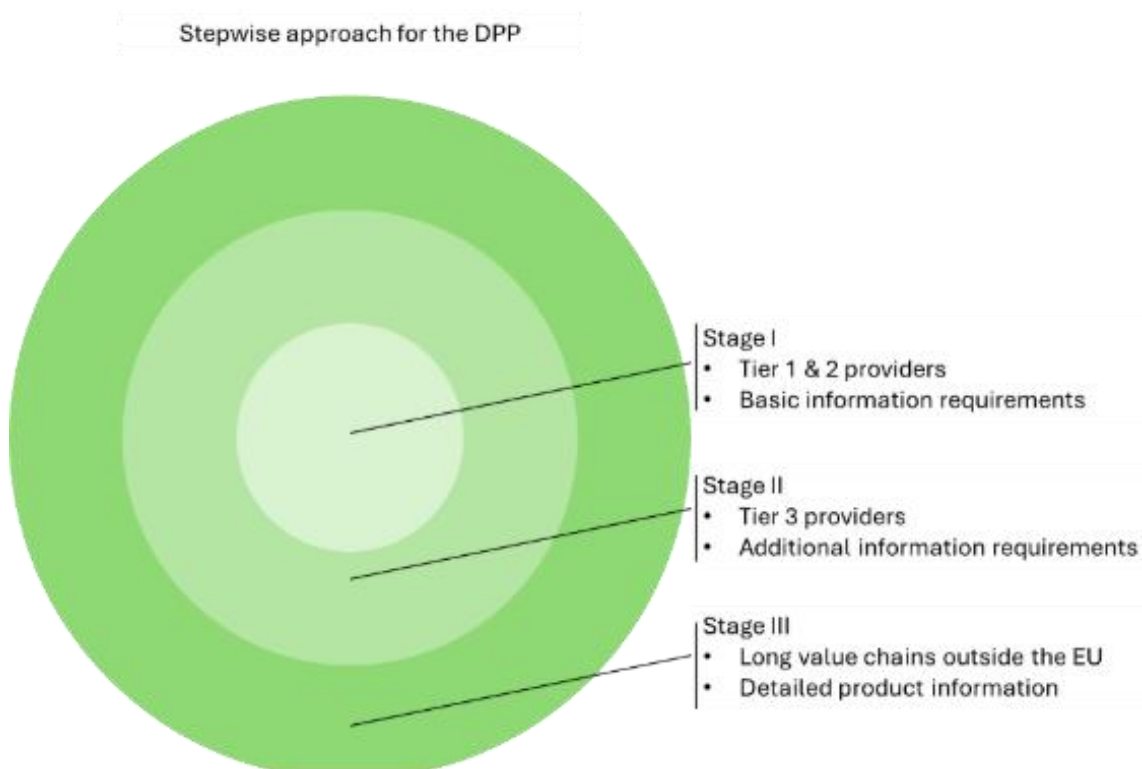
When considering additional functionalities offered by DPP service providers—such as access rights, update verification, incident response, multilingual support, consumer feedback mechanisms, loading speed, or logging of access history—it is essential to balance the added value against the costs of making these features mandatory. Mandatory requirements should be limited to functionalities that are fundamental for correct operation, security, and confidentiality. For other aspects, it would be more proportionate to provide guidance or recommendations rather than impose binding obligations. The framework should therefore ensure that these functionalities remain available as options, without becoming universal requirements for all products.

4. Proportionality, Information Requirements, Serialisation

Stepwise Approach & Centralisation

Information requirements in the DPP should be developed gradually, considering simultaneously the preparedness of supply chains to provide the correct information in the compatible format. Creating

DPPs is a challenge for businesses, especially those with long value chains. Therefore, although the final aim should be to have all meaningful information inside the DPP, it is worth taking a stepwise approach and considering the inclusion of the information obtained from direct or close providers as a first step, with the ambition to widen the scope into lower Tiers in the value chain in subsequent stages. Having said that, legislation should request the minimum and allow operators to populate the DPP with additional information. At the same time, the DPP framework should focus on centralising different information requirements prescribed across different EU legislation (e.g. ESPR information requirements, RED charging cable information), but also across member states (e.g. rules around the display of the SAR value for smartphones in Belgium).



Scope of Products Covered & Granularity

First, not all products should require a DPP—especially low-value or simple items with limited environmental impact or circular potential. For such products (or those considered for future DPP implementation), it should be explored how information requirements can be satisfied by alternative digital means (simplified in terms of digital infrastructure, legal obligations and types of information requirements). These options should be restricted to the minimum necessary to support basic consumer information and product compliance, while considering third-country imports. For all products, the introduction of a DPP or any digital solution must deliver clear added value, ensure that benefits outweigh costs, and take into account the feasibility for SMEs.

Second, even when a DPP is justified, a serialised (item-level) DPP is not always appropriate, especially in the case for Fast Moving Consumer Goods (FMCG). For many product types, model-level information is sufficient to support end-of-life handling and circular activities (e.g. repair or resale). Unlike complex products, FMCG do not undergo functional updates/changes during their use phase,

making individual tracking largely unnecessary. Item level serialisation would drive up operational costs and require immense data storage, all to manage minor variations that are irrelevant for resale or recycling. Moreover, updating DPPs for individual products would include costly infrastructure, secure data access, and ensuring trust in data reliability, which many SMEs lack, and which cannot be expected by consumers to facilitate (i.e. updating DPPs with accurate and reliable information. Equally, situations where it is not practical or expected to update the DPP should be considered (e.g. exchanging parts of a toy in flea markets). Below a list of operational challenges related to item level serialisation:

- a. One would have to scan every serialized item at all handover points and add data on what action was completed on the item.
- b. Serialization along the supply chain depends on the data carrier remaining intact over the life cycle of an item. It can safely be assumed that is not the case for FMCG and many other items.
- c. It is completely open how new data created along the supply chain is added to the DPP. The original data carrier points to the original DPP. Data created downstream would have to be added to this DPP in order to be accessible via the original identifier. It is unclear how this would be done (and regulated) from an economic and technical perspective. The alternative is attaching a new identifier – which in many cases is hardly a good solution.
- d. Serialization requires individually printed codes. This requires all relevant packing processes and machines to be accordingly adapted.
- e. It should be assessed whether serialization might impact free competition, if manufacturers use the generated data (from the movements/access/use of DPPs) to modify their sales channels.

Third, legislation should generally demand minimum granularity (model level) especially while implementation of DPPs is at its initial state, while allowing actors to adopt a more granular level (batch instead of model or item instead of batch)..

Granularity: Definitions & Online Sales or In-Store Display

The way a DPP model is defined is important. Not all changes in a product's exact composition (e.g. in the case of mixtures) merit a different DPP. A similar challenge is posed with products of the same model, but whose material is sourced from a different country of origin or which was assembled in a different country. Another challenge could be found in the case of industrially fabricated clothes which are then tailored to the consumer (service common in certain member states); would a new DPP be created in each tailoring exercise?

For online sales, a model-level DPP at the point of sale should suffice, even if the product that will be delivered is serialised on a batch or item level. The reason is that a product listed online may be stored in multiple warehouses, each holding different production batches, making it technically impractical to display the DPP of the exact product that will be delivered to the consumer. This is especially relevant in cases where otherwise identical products (of the same model) are differentiated by factors such as, the country where the raw material was sourced or where it got assembled/manufactured as mentioned above.

Similarly, in the case of in-store display in physical stores, products shown are different to the products that will be bought by or delivered to the customer. Therefore, neither in the case of in-store display can the DPP of the purchased product be identical to the DPP of the product in display.

5. Display

Data Carriers

The choice of the data carrier should be at the discretion of the DPP owner. However, access to the DPP online should be possible via other means (e.g. weblink, clickable pictogram). Additionally, access to DPPs may be compromised if consumers remove or damage physical data carriers, particularly at the end-of-life stage. Such actions, which lie beyond business control, should not be considered as non-compliance. Legislation introducing DPPs should be clear as to where the data carrier should be affixed when a product consists of different items/components (e.g. on each part? On the biggest part? On the packaging?). Legislation should also explicitly mention that the economic operator responsible for generating a DPP should also ensure that the data carrier is present on the product. Clarity is especially needed when a DPP is requested for different parts of a product under different legislation. It is also important to stress that there should be **one data carrier** per product to avoid confusion and complexity (e.g. potential different DPP for product and different for packaging, separate data carrier for a product's DPP and other data carriers for other labels).

Online Display

Retailers and wholesalers should have the flexibility to present product information online in a way that aligns with their own digital environments and business models, beyond simply providing direct access to the Digital Product Passport (DPP). This can include creating a local copy of the manufacturer's DPP. Aside presenting the essential consumer information, retailers and wholesalers should be able to include the display of their own product data or the DPP data in the product page. This can avoid bounce rate, additional clicks, limited accessibility and dependence on third parties. Online display of information should be clear and legible, but also flexible. Prescriptive requirements would risk hindering innovation, disregarding/limiting new technologies and ways of displaying information, unduly burdening companies and ignoring local specific consumer attitudes that sellers are in the best position to know.

6. Supply Chain Relations

Updates & Product Recalls

Retailers (especially smaller retailers) and wholesalers often face challenges in relabelling or removing products from stock, following regulatory updates. This has previously forced retailers and wholesalers to conduct manual inventory checks, a process that is labour-intensive and sometimes unfeasible. The role of DPPs should thus be considered in automated product recalls and updates from upstream operators following regulatory changes which might help downstream operators with compliance (e.g. changing the labelling of a product, removing product offering).

Fair Business Practices

Allowing the utilisation of data generated during hosting the DPP for other purposes should be carefully considered vis-à-vis the existing commercial practices, data protection, and the competitive environment. In particular, it should be ensured that DPP creators cannot access commercially sensitive information from downstream actors through the DPPs — such as geolocation of sales, sales volumes per region, or seasonal sales patterns. Allowing such data flows could distort competition and undermine trust in the DPP framework.

7. Digital Labelling

Mandatory/Essential/Safety Consumer Information

There is a lack of clarity on what constitutes “essential”, “mandatory” or “safety” information under different product-specific legislations. Certain information that constitutes “essential”, “mandatory” or “safety” information should always stay on the physical product, whereas other information can be provided digitally instead. At the same time, what constitutes “essential”, “mandatory” or “safety” information should be defined per product, including impact assessments where necessary, and be subject to revision as digitisation preparedness evolves. This will allow for an efficient and responsible transition to digitalisation.

A very good example is the Batteries Regulation, where there is a clear opportunity for simplification and digitalisation, by moving non-essential information from the physical product to the digital label (e.g. critical raw materials, weight, chemistry). You can find our concrete recommendations [here](#) and [here](#). If this approach is not followed consistently, Member States and companies may diverge in their interpretation of what information is essential, resulting in fragmentation of the internal market. **This exercise is essential in determining what information stays on the physical product or moves to the digital label (and in the DPP).**

Ensuring Digital Labelling Does Not Shift Obligations to Different Actors

Whereas we welcome digital transition, it is imperative that it does not increase the administrative burden for other operators. It is imperative that distributors are not requested to print or store instructions or other information that is provided only digitally, in the place of manufacturers. Where instructions are provided only digitally, it should be solely the manufacturer’s responsibility to provide a direct, reliable mechanism for consumers to obtain paper instructions free of charge. The same goes for other information that will start populating digital labels.

More Information on Digital Label

As information requirements grow and space on physical labels shrinks, it becomes important to designate certain information for digital labels only. At the same time, greater use of neutral language, harmonized symbols or pictograms can help address both space constraints and translation needs. Certain product information for example should be increasingly accepted in common language across regions which share a language or within specific countries with multiple official languages (in such case the DPP can offer access to the alternative official languages). The assessment of which

information can be displayed digitally instead of on the physical product should happen on a **case-by-case basis, focusing on the specific product legislation**. Below are some more general principles:

Information to Move to Digital Labels	Information to Keep on Physical Labels
• Instruction manuals or detailed recommendations	• Economic operator details
• Detailed quality information	• Safety information
• Usage/end-of-life instructions	• Product identification
• Detailed sustainability information	• Harmonised symbols
• Additional claims or labels	• Certain labels/claims
• Legal guarantee of conformity & commercial guarantees (instead of burdening the package, displayed at store and then online)	
• Additional information requirements	
• Additional official languages in a member state	
• Universal charger compatibility information	
• All official languages in a member state	

Benefits of Digital Labels

- **Environmental Benefits:** reduced package size, reduced material/resource use and related carbon emissions, less waste.
- **Burden Reduction:** Less need for translations, lower printing costs, more opportunities for competitiveness and innovation in the display of consumer information.
- **Consumer Benefits:** more legible and less crowded packaging, useful and relevant information accessible after sale, no loss of information (e.g. discarding of user manual).
- **Compliance & Supply Chain Benefits:** Possibility to automatically and instantly update or correct information, flexibility, durability of information.
- **Circular Business Models:** e.g. Enabling the display of information related to repairs and spare parts.

8. International Element & Level Playing Field

DPP obligations must apply to third country imports – products purchased directly from third-country online retailers – to ensure meaningful impact and prevent non-EU sellers from providing inaccurate information or evading compliance. It should be accompanied by enforcement efforts to ensure that the information contained in the DPP is accurate and complete. Given the globalization of supply chains, consistent information-sharing across all tiers is essential to create a level playing field and reduce unnecessary burdens on European operators and importers, safeguarding the DPP's relevance and the competitiveness of EU businesses. The DPP should be populated with the relevant fields that can help authorities ensure compliance (e.g. information related to the Authorised Representative), the exchange of data and contribute to automated compliance checks. The DPP should also be interoperable and enable automatic linkage between the product information (including compliance

information) and the relevant platforms (e.g. ICSMS, Safety Gate, Customs Single Windows, DPP Registry) so that issues with compliance are automatically flagged and addressed. More information can be found in our position listing recommendations on restoring the Level Playing Field. ([Link](#)).

9. Simplification & Sector Specific Recommendations

Opportunities

- **Compliance:** The DPP can serve as a one-stop shop for product compliance information (e.g. conformity assessments, declarations of conformity, substantiation of labels/claims) or for information on chemicals (e.g. e-Safety Data Sheets to be included in the DPP where appropriate).
- **Supply Chain Information & Traceability:** The DPP could be updated following regulatory changes (e.g. changes in classifications of chemicals, chemicals restrictions) or corrections on product information and it can enable a swifter information flow to ensure product compliance.
- **Connecting Different Platforms & Accessibility by Various Digital Touchpoints:** Updates in a DPP could automatically lead to updates in various platforms that authorities operate. Greater alignment and interoperability between regulatory frameworks and reporting platforms would be highly beneficial.
 - E.g. Right to Repair (R2R) Directive's European (and member states') online platform for repair: The DPP could link to the EU wide portal by automatically offering local repair options within a section in the DPP, or linking consumers to the relevant R2R portal based on product type and location. The DPP's repair information could also be hosted in retailers' user accounts. Retailers could also act as repair information hubs by linking to DPP repair sections or national repair directories – the DPP could include a 'point of contact for repair field' which could be filled by the manufacturer or retailer.
- **Customs:** The DPP could improve opportunities to screen for products' formal compliance in customs checks, and could facilitate the risk-based approach, provided it does not overturn or complicate existing systems.
- **Circularity & Geospecific DPP Content:** The DPP could include fields for country specific end-of-life information, and the relevant actors could be directed to national portals based on location. DPP context aware and location-based queries could be displayed (including recycling information). The same can be achieved with locally relevant repair information.

Concerns

- **Shifting of Burdens Downstream:** Digitalisation should not shift the burden of printing documents from the manufacturer to the retailer/wholesaler. This is not just a monetary cost related to printing, but also a bureaucratic and admin cost, potentially obliging retailers and wholesalers to have storage room with organised stocks of printed documents per product.
- **Multiple data carriers in one product:** There is multiple legislation that might introduce different information requirements (or even labels) for the same product. It is important that one data carrier hosts all such information where appropriate. Special attention should be given to the possible scenario of a DPP being requested both for a product and for its packaging, or where a DPP is foreseen for a component but also for the final product.

- **Redundant Information Next to the Data Carrier:** It is important to avoid redundant statements next to the data carrier such as ‘Scan here for more information’, which risk cancelling out the simplification and environmental potential of digitalisation (i.e. reducing space on pack and requiring more translations). This was seen in the trilogues for the Detergents Regulation and Omnibus IV.
- **Authorities Requesting Paper Formats:** In practice, member state authorities are likely to still request paper formats. At the same time, product legislation even in recent revisions still allows authorities to request compliance information in paper format.
- **Digitising Internal Processes:** This is a costly and time-consuming process, especially for SMEs. From ex-post compliance verification, companies will be called to have all information in one place ex-ante. There is also the cost of digitalising the online presence of thousands of products and in particular the administrative exercise and cost of moving all product information online.
- **Double Compliance Systems:** If digitisation in the supply chain is partial, there is the risk of economic operators working on a paper and on a digital based system in parallel. This could trump the cost saving potential of the DPP vs. the cost of its investment.
- **Incomplete Process and Instrument:** The standards and all horizontal legal acts on the DPP are still under development. Horizontal requirements should be set prior to setting deadlines for the DPP implementation in product delegated acts.
- **Costs:** The capital and operational investments or the costs of outsourcing to DPP service providers should be outweighed by the benefits offered by the DPP.
- **Consistency:** While we move to the gradual implementation of the DPP in product legislation, in parallel to the Paperless Omnibus, it is essential to ensure consistency with other EU legislation which might need to be updated to allow for the digitisation of certain information.
- **Information Overload:** There is a risk of overwhelming consumers with information as more data requirements are introduced by different legislation, thus this exercise losing its added value.

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