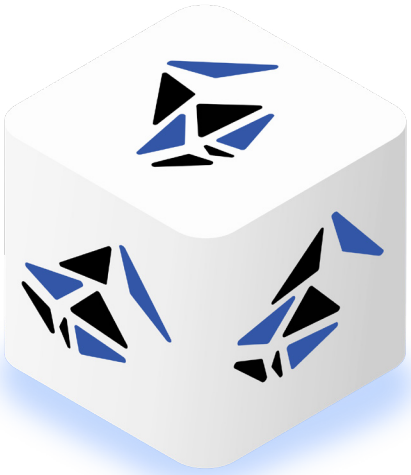
Bluestone PIM

How to Create a Digital Product Passport

A Guide for Retailers & Manufacturers



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Introduction

The Digital Product Passport is a core element of the European Commission's Ecodesign for Sustainable Products Regulation (ESPR).

From 2026, the regulation will begin to apply to selected product groups, requiring companies to provide structured, detailed information about the products they place on the EU market.

Between 2026 and 2030, Digital Product Passports will become mandatory for most products sold in the EU, making product data transparency a baseline requirement. Products that do not meet these requirements **risk losing access** to the EU market over time.

This e-book explains what the Digital Product Passport is, who it affects, and how manufacturers and retailers can create passports for their products using their product data.

Key Takeaways:

- The Digital Product Passport is more than a regulatory obligation. It improves supply chain transparency, supports sustainability goals, and builds consumer trust.
- Nearly all products sold in the EU will require a Digital Product Passport, containing structured data on origin, materials, environmental impact, compliance, and end-of-life handling.
- Managing this level of detail requires accurate, structured, and governed product data.
- Organisations that prepare early gain flexibility as regulations evolve and reduce compliance and market access risk.

Chapter 1
Understanding The Digital Product Passport

What is the DPP?

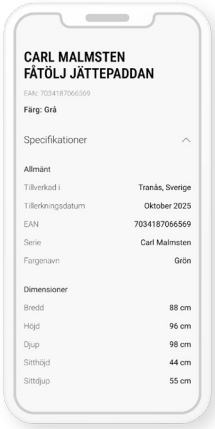
The Digital Product Passport (DPP) provides a digital identity for products, components and materials under the Ecodesign for Sustainable Products Regulation (ESPR).

It consists of a structured set of product data that manufacturers are responsible for providing and maintaining.

Here's what a Digital Product Passport looks like:

When a customer scans the QR code on your product or its packaging, they are directed to a branded microsite powered by your DPP service provider. There, your Digital Product Passport is presented in a clear, user-friendly format aligned with your brand identity.

Digital Product Passport example created by Kolla



After scanning the QR code the customer will find clear, verified product information, such as:

- Where and how the product was made
- The materials used and their environmental footprint
- Certificates and sustainability proofs
- Guidance on care, repair, reuse, or recycling

Why the Digital Product Passport Exists

Product information today is fragmented. It sits across spreadsheets, PDFs, supplier portals, and isolated databases. When questions arise about materials, compliance, or sustainability credentials, teams waste hours tracking down answers or worse, can't find them at all.

The Digital Product Passport creates a single, standardised source of truth that connects everyone in the value chain, from manufacturers to end users.

What it delivers:

- **Complete Transparency And Traceability**

  Every product gets a verified digital record of its origin, materials, and lifecycle. When retailers, regulators, or customers ask questions about provenance or composition, the answers are immediately accessible.

- **Actionable Sustainability Data**

  Real information on environmental impact, durability, and end-of-life options. This means products get repaired instead of discarded, materials get properly recycled, and circular economy initiatives become operationally viable rather than aspirational.

- **Consolidated Compliance Documentation**

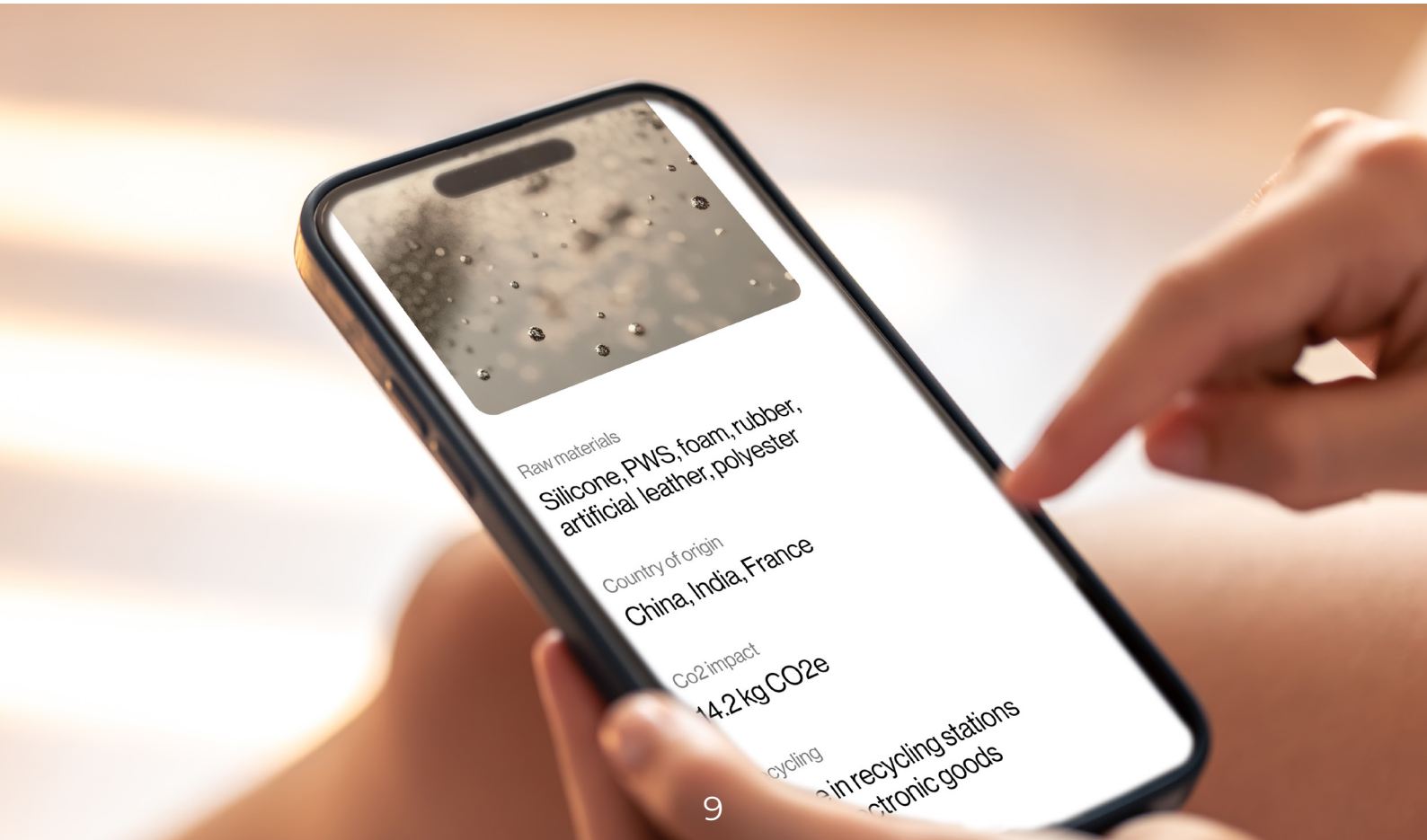
  All certificates, safety documentation, and test results in one verifiable location. When regulations require proof of compliance, your team has instant access rather than scrambling through multiple systems under deadline pressure.

- **Informed Purchasing Decisions**

  Consumers and B2B buyers increasingly want to make responsible choices. The DPP provides verified data behind sustainability claims, replacing vague marketing statements with measurable information.

- **Secure, Controlled Access**

  A standardised data structure that meets ESPR requirements while protecting commercially sensitive information. You control who sees what, sharing regulatory-required data publicly while keeping proprietary information secure.



Core Requirements for Digital Product Passports

The European Commission is still finalising product-specific requirements, but the core technical framework is already defined. If you're implementing a Digital Product Passport, here's what needs to be in place:

- **Link to a unique product identifier via a data carrier, such as a QR code or RFID.**
- **Display the data carrier clearly on the product, packaging or documentation.**
- **Use open, non-proprietary international standards.**
- **Store data in a machine-readable, interoperable, structured and searchable format.**

What This Means in Practice

Your PIM system or data management system needs to generate unique identifiers for each product and link them to passport data.

The data structure must allow other systems, whether a retailer's platform, a regulatory database, or a consumer app, to query and extract information automatically.

This initiative extends beyond generating PDFs with QR codes. It centres on building a data infrastructure capable of responding to queries in real time and seamlessly exchanging information with external systems without manual intervention.

What Information Goes Into a Digital Product Passport

The Digital Product Passport is a structured dataset that connects product information across the entire lifecycle.

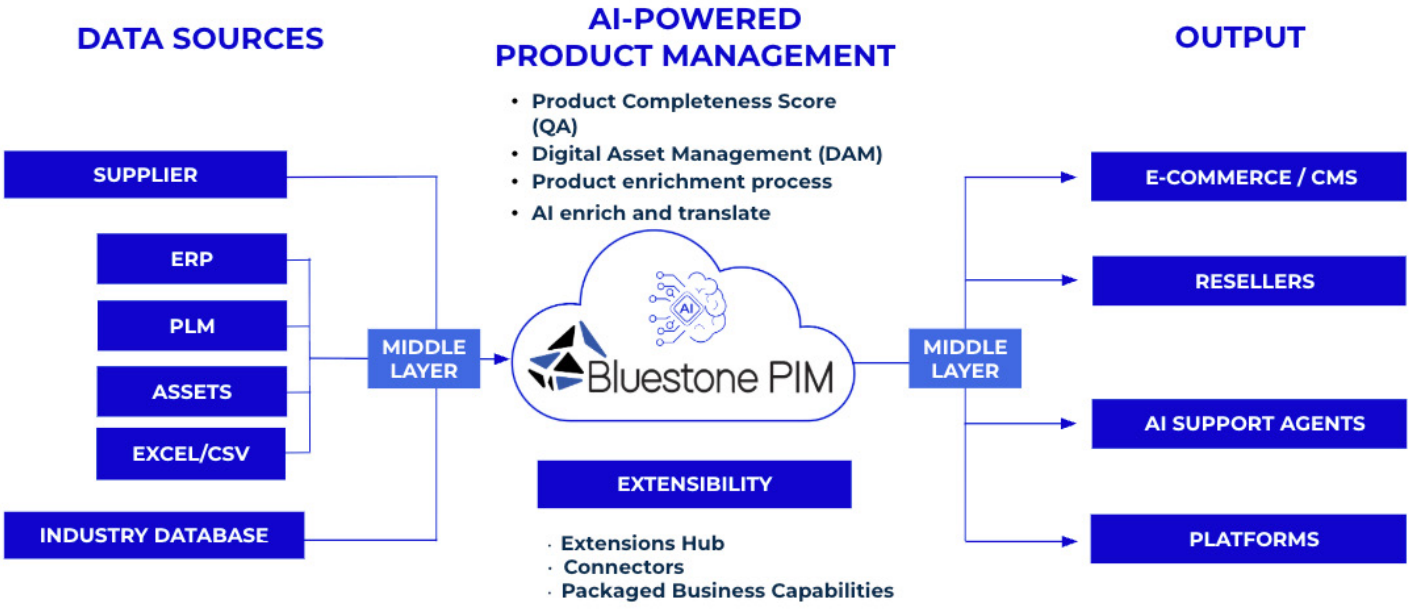
While specific data requirements vary by product category, these are the core information areas you'll need to capture and maintain:

How Bluestone PIM Creates Digital Product Passports

The technical challenge with Digital Product Passports isn't collecting the data. Most companies already have it somewhere.

The challenge is structuring it correctly, keeping it updated, and publishing it in a format that meets regulatory requirements while remaining usable for customers.

This is where a proper PIM system becomes essential infrastructure, not just a nice-to-have.



1. All product data lives in Bluestone PIM: specifications, materials, certifications, sustainability metrics such as CO_2 emissions, care instructions, and supporting documentation. Everything that needs to appear in a Digital Product Passport is already being managed in one centralised system.

2. A DPP service provider connects through API and maps each attribute to the right place on the digital microsite:

   - The product image and description appear on the main page.
   - Sustainability metrics and materials data show under a dedicated section.
   - Certificates and supporting documents are linked to sub-pages.

3. Every update made in Bluestone PIM automatically flows through to the live passport. Change a material specification or upload a new certificate, and the digital product passport reflects it immediately.

4. A QR code on the physical product connects directly to its unique digital passport, giving instant access to anyone who scans it.

Results:

- Thousands of microsites can be populated instantly from your PIM or e-commerce system.
- Multilingual content is served automatically based on the user's location.
- Templates allow full brand customisation, keeping every passport consistent with your brand identity.

Most importantly: you maintain a single source of truth. **Update once, publish everywhere.** The Digital Product Passport becomes another output channel from your existing product information infrastructure.

Chapter 2
Who Needs to Prepare for the Digital Product Passport?

The Digital Product Passport is an EU regulation, but its reach extends to any business that wants to sell physical products in European markets.

The location of your headquarters is irrelevant. If your products cross EU borders, you're in scope.

- **Manufacturers And Brand Owners**

  If you design, produce, or sell physical products in the EU, you're directly responsible for providing accurate, structured product data covering materials, sustainability metrics, safety information, and end-of-life handling. This applies whether your manufacturing operations are in Hamburg or Hanoi.

- **Importers And Distributors**

  Importers need reliable, structured product data from their suppliers. The Digital Product Passport supports customs checks, making traceability and data availability a requirement for market access. Authorities can identify and block non-compliant goods before they enter the EU.

- **Retailers And Marketplace Sellers**

  Retailers selling own-brand or third-party products must ensure that Digital Product Passport information is available and accessible at the point of sale, even when the data is provided by suppliers.

  Online marketplaces face particular scrutiny, as the European Commission treats e-commerce as a high-risk area and plans stricter enforcement of DPP rules, regardless of where sellers are based.

- **Suppliers And Partners**

  Raw material suppliers, component manufacturers, and logistics partners will be required to provide structured product data as part of the DPP. This affects the entire supply chain, not only the final seller.

  Producers of intermediate products such as iron, steel, and aluminium, prioritised in the **2025–2030 Working Plan**, will need to share data on carbon footprint and recycled content with downstream partners to avoid regulatory gaps.

- **Non-EU Businesses Selling Into The EU**

  The Digital Product Passport applies to products sold in the EU, not to where your company is registered. For UK businesses, this is an immediate concern, not a theoretical future problem.

  Any company selling goods into EU markets must meet the same Digital Product Passport requirements as EU-based competitors to maintain market access. Waiting to prepare increases the risk of shipment delays, customs blocks, or complete loss of market access once enforcement begins.

- **Sales And Bidding Teams**

  Sales and public tender teams will also be affected. As the EU moves towards mandatory Green Public Procurement requirements, the DPP is likely to become a prerequisite for securing public sector contracts and tenders.

Chapter 3
DPP Rollout: Timeline and Priority Products

The first Digital Product Passport Working Plan will define the initial scope of implementation. It will cover four final products and two intermediate products, alongside two legal acts that establish horizontal requirements applicable across product categories.

The plan will also draw on a substantial body of work developed under the previous Ecodesign and Energy Labelling Working Plan, carrying those priorities forward into the new framework.

Product/Measure	Indicative Timeline for Adoption
Textiles/Apparel	2027
Tyres	2027
Furniture	2028
Mattresses	2029
Intermediate Products	
Iron & Steel	2026
Aluminium	2027
Horizontal Requirements	
Repairability (including scoring)	2027
Recycled content and recyclability of electrical and electronic equipment	2029

https://environment.ec.europa.eu/document/download/5f7ff5e2-ebe9-4bd4-a139-db881bd6398f_en?filename=FAQ-UPDATE-4th-Iteration_clean.pdf

Energy-Related Products And Digital Product Passports

Energy-related products with an EU Energy Label are generally exempt from a standalone DPP and rely on the European Product Registry for Energy Labelling (EPREL).

Bluestone PIM includes a direct EPREL connector that automatically retrieves and synchronises official EU energy labels and efficiency data, ensuring compliant, up-to-date information across all channels without manual effort.

Products without an energy label, such as electric motors, welding equipment, standby devices, and low-temperature emitters, are more likely to require a Digital Product Passport.

Industries Not Affected By The DPP

Some sectors are currently outside the scope of the Digital Product Passport. These include:

- Food and animal feed
- Medical products
- Motor vehicles

Chapter 4
Digital Product Passport Solution For Manufacturers

Under the ESPR framework, the primary obligation to create and maintain a Digital Product Passport lies with the manufacturer or the economic operator placing the product on the EU market.

Manufacturers are responsible for ensuring that:

- Product data is complete and accurate
- Required sustainability and compliance attributes are provided
- The passport is accessible through a compliant data carrier
- Information remains up to date over time

Creating a DPP will be a structured data process. It transforms fragmented product information into a machine-readable digital identity that can be accessed by regulators, customs authorities, retailers and customers.

- **Step 1: Establish A Single Source Of Truth For Product Data**

  Product data typically exists across ERP, PLM, manufacturing, and sustainability systems. To meet DPP requirements, the relevant product attributes must be structured, governed, and maintained in a consistent format.

  With Bluestone PIM, manufacturers can establish a single source of truth for product data by:

  - Structuring DPP-required attributes
  - Maintaining consistent product definitions
  - Managing compliance-related information
  - Applying validation rules and governance controls
  - Ensuring data is machine-readable and interoperable

  This foundation is critical. Without it, compliance becomes manual and error-prone.

- **Step 2: Structure And Enrich For Traceability**

  Once centralised, product data is enriched in layers:

  - Core model and SKU data
  - Batch-level information such as sourcing and production dates
  - Item-level identifiers where serialisation is required

  This layered model ensures scalability across large product portfolios.

- **Step 3: Link Documentation**

  A compliant DPP must include verifiable documentation:

  - Declarations of conformity
  - Lab test results
  - Repair and maintenance instructions
  - Safety documentation

  Managing this content alongside structured product data ensures accuracy and audit readiness.

- **Step 4: Connect To The Physical Product**

  Structured data is linked to a physical data carrier, such as:

  - QR codes
  - NFC tags
  - RFID labels

  Validated product information is then distributed to Digital Product Passport service providers and EU registries for compliance verification.

- **Step 5: Governance And Audit Readiness**

  Before publication, data must be validated against regulatory requirements. Audit trails record:

  - When data was created
  - When it was updated
  - Where it originated

  This governance layer protects manufacturers from compliance risk and unsupported sustainability claims.

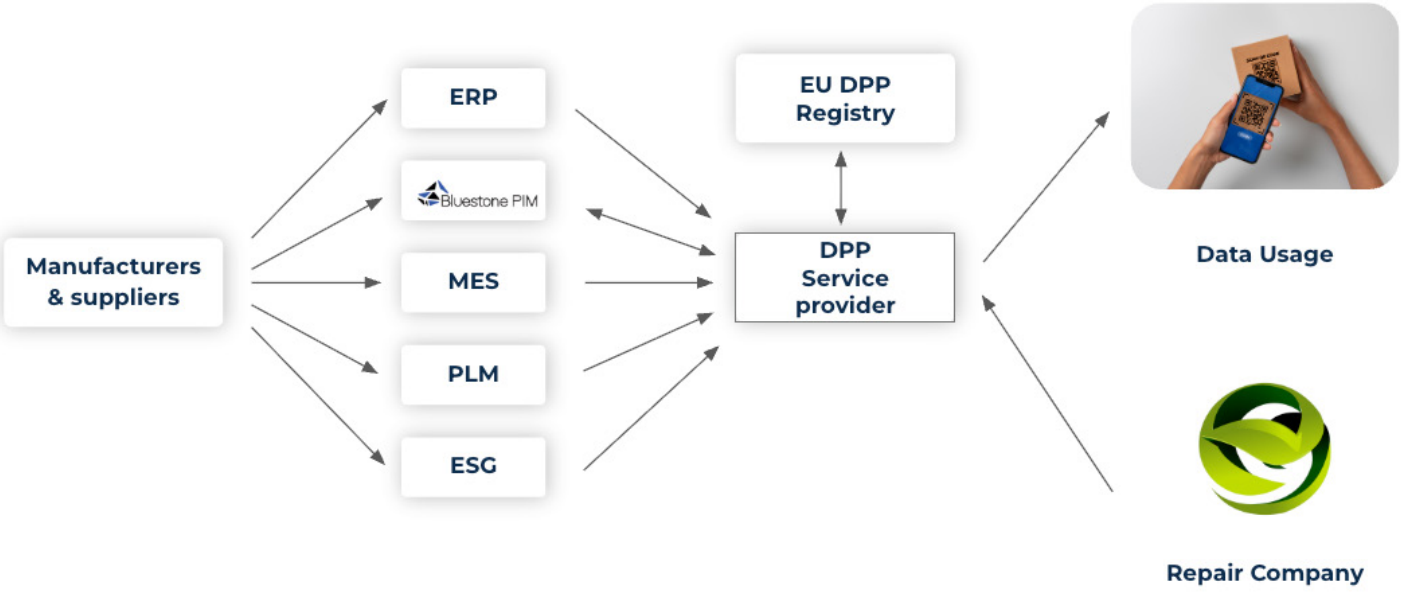
Manufacturers With D2C Channels

For manufacturers selling directly to consumers, the Digital Product Passport can go beyond compliance. By integrating a publishing connector or plugin from a DPP provider, manufacturers can:

- Automatically generate compliant QR codes
- Publish passport data to branded microsites
- Combine regulatory information with customer-facing content
- Present sustainability and repair information in an accessible format

In this setup, the PIM remains the single source of truth for product information. The publishing layer simply retrieves structured data and transforms it into a consumer-ready experience.

For example, partners such as Kolla enable manufacturers to create branded Digital Product Passport microsites linked to QR codes. This allows one structured data foundation to serve both regulatory and customer engagement purposes.



Chapter 5
Digital Product Passport Solution for Retailers

Retailers face a different challenge than manufacturers. They don't create Digital Product Passport data, that responsibility sits with the brands and suppliers they stock.

But retailers will be responsible for ensuring that DPP information is accessible and correctly presented at point of sale.

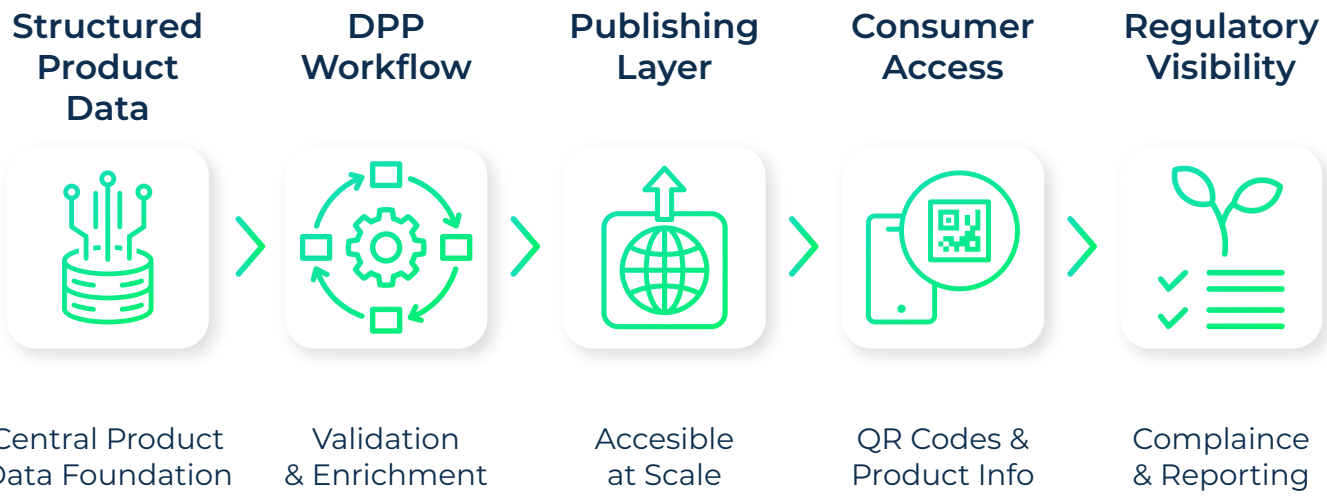
Manual coordination at this scale doesn't work. Retailers need infrastructure.

What retailers must ensure

- Display Digital Product Passport access points
- Ensure data availability for products sold
- Avoid presenting outdated or inconsistent information
- Cooperate with enforcement and traceability requirements

Retail DPP Workflow

For retailers, implementing Digital Product Passport compliance means building a workflow that connects three critical elements: structured product data, consumer-facing access points, and regulatory visibility.



This typically requires two layers of infrastructure working together.

- **Layer one: Product data foundation**

  Bluestone PIM ingests product data from multiple suppliers, standardises it according to DPP requirements, and ensures that sustainability metrics, compliance documentation and origin information are complete before products reach sales channels. It prevents duplication, inconsistency and version control issues that arise when product data resides in disconnected systems.

- **Layer two: Publishing infrastructure**

  A publishing layer that transforms structured product data into Digital Product Passport microsites or other compliant digital interfaces.

  Partners such as Kolla specialise in this area connecting to your PIM via API, mapping product attributes to passport templates, and generating the customer-facing experiences that sit behind QR codes or product page links.

Requirements for Retail-Scale DPP Solutions

Any retail solution must handle volume and complexity without a linear increase in manual effort. This means:

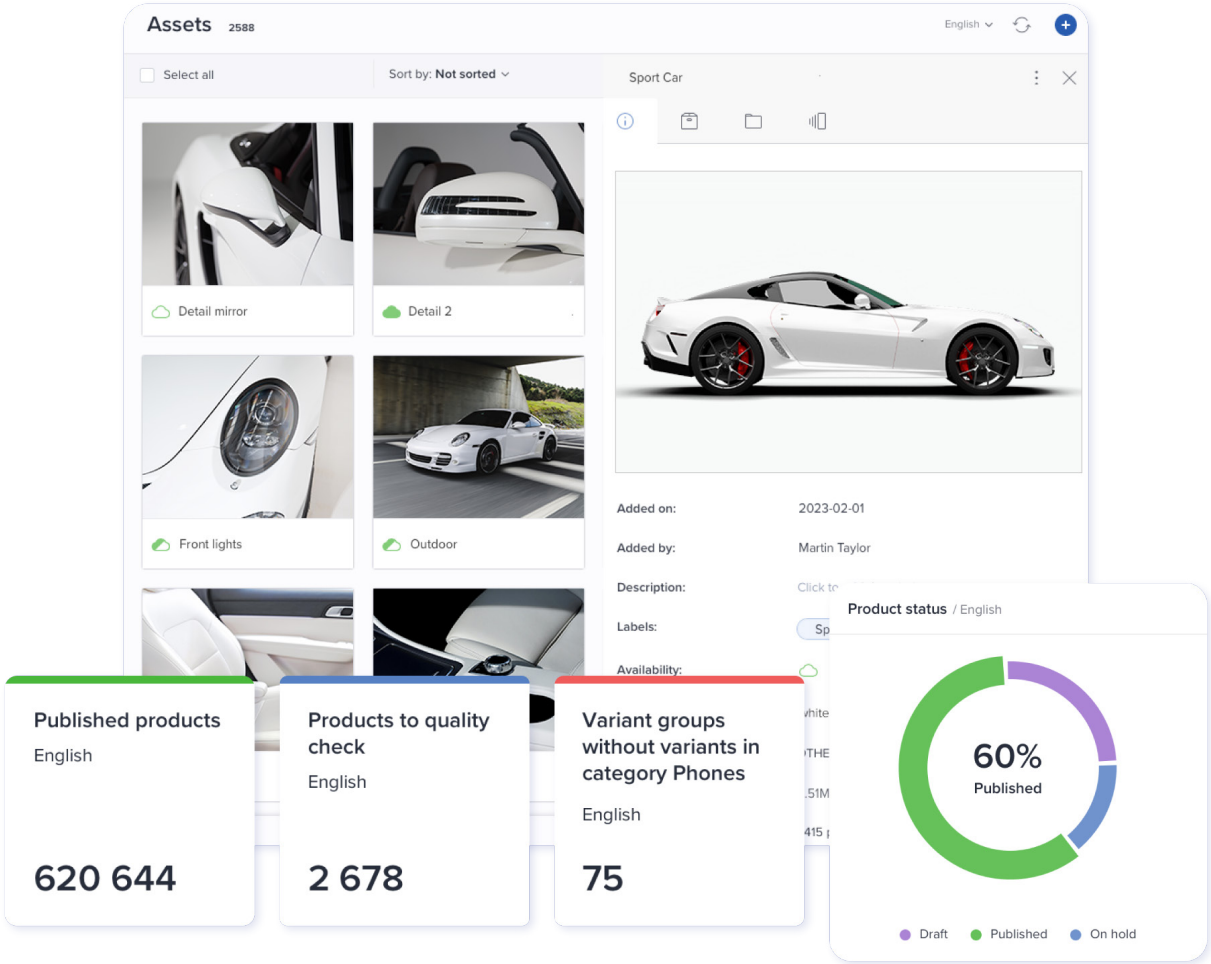
- Supporting thousands of products without individual configuration for each one. Templates and automation are non-negotiable at retail scale
- Automatically generating and updating passport pages as product data changes, manual republication breaks down quickly when managing large catalogues
- Serving localised content based on user location. A German customer sees the passport in German, a French customer sees it in French, automatically, from the same source data
- Maintaining brand consistency across all passports while allowing product-specific customisation where needed
- Presenting compliance information alongside customer value: care instructions, repair options and sustainability credentials, so the passport becomes useful, not purely regulatory.

The Outcome For Retailers

By separating data management from data presentation, retailers gain:

- A stable product data backbone.
- Flexibility to adapt publishing layers.
- Dramatically reduced manual effort through. automation.
- Lower risk of outdated or conflicting information.
- Scalable deployment across entire catalogues.

The infrastructure supports 100 products or 500,000 products using the same operational model.



Chapter 6
Leveraging the PIM Solutions for the DPP Compliance

Product Information Management (PIM) systems are not just helpful tools; they are the critical “System of Record” needed to handle the vast amounts of fragmented data required for the Digital Product Passport.

- The Digital Product Passport relies on structured, machine-readable product information sourced from multiple systems across the organisation.
- Without a central data layer, businesses risk depending on manual processes, spreadsheets, and disconnected tools that do not scale and fail as regulations change.
- PIM systems create the controlled product data foundation required to support regulators, registries, and customer-facing channels.
- By aggregating and governing product data in one place, PIM platforms turn siloed information into compliant, interoperable Digital Product Passport records.

3 Reasons Bluestone PIM Is Essential for DPP Compliance

Digital Product Passport requirements demand structured, validated product data distributed to multiple stakeholders. You cannot do this manually at scale.

1.

Single Source of Truth

Bluestone PIM provides a product data foundation where Digital Product Passport information is structured, validated, and maintained in a consistent format.

It brings DPP-relevant product attributes together into a controlled environment, reducing version conflicts, missing fields, and the coordination challenges that arise when managing data across spreadsheets and disconnected tools.

2.

Built-in Compliance Validation

The platform flags incomplete data before publication. Missing sustainability metrics? Expired certificates? Incomplete material composition? Gaps are identified during onboarding, not when customs blocks your shipment.

Manual validation does not scale when managing thousands of products, each with dozens of required attributes. Automated completeness checks are non-negotiable for DPP compliance.

3.

Automatic Synchronisation Across All Channels

Update product data once in Bluestone PIM and the change flows automatically to Digital Product Passports, e-commerce platforms, marketplaces and regulatory systems. No manual exports, no version mismatches and no conflicting information.

The bottom line: DPP compliance requires PIM infrastructure in place.

The alternative

Coordinating structured data manually across disconnected systems will fail under regulatory scrutiny. Bluestone PIM solves the operational challenge created by DPP regulation. It is not optional tooling. It is the foundation that makes compliance possible.

Chapter 7
The Benefits of Implementing DPP Ahead of the Deadline

Early vs Late Digital Product Passport Implementation

Implementing Early	Implementing Late
Time to clean and structure product data properly	Rushed data fixes under deadline pressure
Gradual supplier onboarding and alignment	Last-minute supplier requests and missing data
Stable, reusable DPP setup across products	One-off, fragmented solutions per product
Lower compliance and market access risk	Higher risk of errors, delays, or blocked sales
Product data reused across compliance, marketing, and sustainability	Duplicate datasets maintained by different teams
Ability to adapt quickly as rules evolve	Reactive changes driven by regulation updates

About Bluestone PIM

Bluestone PIM is a **true best-of-breed, composable Product Information Management (PIM) solution**, trusted by users in over 70 countries across five continents. As the first MACH-certified PIM vendor recognised by the MACH Alliance, Bluestone PIM helps enterprises build a flexible, API-first foundation for managing complex product data across channels and markets.

With Generative AI built directly into its architecture, Bluestone PIM transforms how teams create, translate, and optimise product content. Instead of relying on manual, copy-paste processes or disconnected tools, customers use AI inside their PIM.

Bluestone PIM is regularly recognised by leading analysts for its innovation and enterprise readiness:

- Featured in Gartner's Market Guide for PIM Solutions
- Designated a "Vendor of Assurance" by Ventana Research
- Named a "Major Player" by IDC
- An AWS Technology Partner within the AWS ISV Accelerate programme

Digital Product Passport Insights from Bluestone PIM

How to Create a Digital Product Passport: Step by Step

Practical Guide To Creating A Digital Product Passport For Electronics

The Implications of Digital Product Passport (DPP) Requirements for British Retailers

10 Examples of Digital Product Passport-like Initiatives

Let’s talk!

See Bluestone PIM in action

- Discuss your product information needs and challenges
- Learn how PIM software can benefit your business
- Book a live Bluestone PIM overview with one of our experts

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