Digital Product Passports explained

A resource for the Australian clothing textiles sector

Digital Product Passports (DPPs) are a concept that first emerged in Europe as a way of giving consumers clearer, more detailed information about the products they buy. For the clothing textiles sector, this often includes details about materials, where products are made, and how they can be reused or recycled.

While much of the early discussion has focused on the role of clothing brands and retailers in sharing information with consumers, the idea of DPPs is broader. In practice, they can apply across the entire supply chain – from raw material providers and manufacturers, through to retailers and regulators.

About this guide

Digital Product Passports (DPPs) are a way to give consumers clearer, more detailed information about the products they buy.

This guide has been created specifically for Australia's clothing textiles sector to explain DPPs and their potential benefits and impacts.
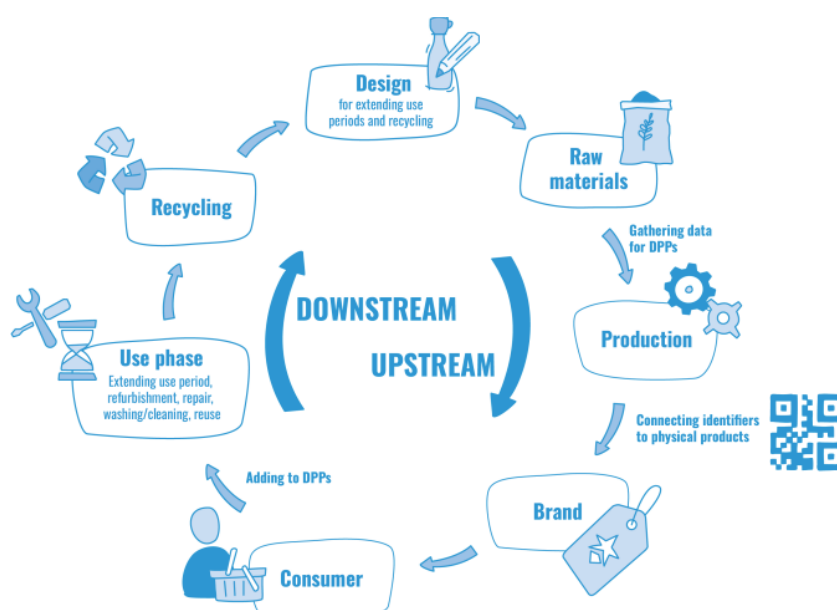
This resource, developed by GS1 Australia and Seamless, provides useful information on DPPs generally, as well as European Union (EU) DPPs for the Australian clothing textiles sector. DPPs present an opportunity for producers and consumers to track a product's resource use and impact across the entire supply chain, providing increased transparency and accountability, and the opportunity for circular innovations.

Figure 1: Data exchange in the supply chain

What is a Digital Product Passport?

While it sounds like a physical booklet or certificate, a Digital Product Passport (DPP) is actually a metaphor for a product's digital ID.

In practice, the passport is created, or provided, by linking to information about a product via the product's digital label – most commonly a QR code containing the product identifier. Scanning that code gives businesses and consumers quick access to trusted information, such as what the product is made from, where it was produced, and how it can be reused, repaired, or recycled. This serves as a digital identity for the product throughout its value chain.

Just as many products today direct customers to online washing or usage instructions, a DPP connects garments to a broader set of information. This makes data that was once hidden deep in supply chains readily available, helping people make better choices and keeping products in use for longer.

Information contained in a DPP may also be printed on care labels or packaging. DPPs don't replace this information - they extend it, often making information more accessible, for example, in different languages or font sizes that people can easily find and read.

Why are DPPs important for a circular clothing economy?

DPPs make attributes that are necessary for a circular clothing economy accessible. This delivers benefits, including:

1. Enabling new business models such as clothing resale, rental, or repair services, which rely on accurate information about product history and composition.

2. Closing the loop on materials by tracking fibre and material content. This ensures products can be more easily sorted for recycling or reuse.

3. Reducing waste and resource use by ensuring that valuable materials don't end up in landfill simply because the right information was missing.

4. Building consumer trust by giving people confidence that sustainability claims are based on verifiable, transparent data.

5. Offering solutions that support other legislative reporting obligations, including for example, the new Non-Financial Reporting Directive (NFRD) climate disclosure requirements. NFRD requires companies to report on certain information, which will increasingly depend on businesses collecting better data about their products, operations and impacts. DPPs will support this by providing a structured and standardised way to capture, store and share product information. This access to granular, auditable data which can be aggregated for corporate reporting will help reduce reporting burden in the long term, while also increasing the reliability, comparability and transparency of disclosures.

6. Helping to address greenwashing. A review by the Australian Competition and Consumer Commission (ACCC) in 2023 found that the textiles, garments and footwear sector had the second greatest proportion of concerning environmental claims[1]. It revealed that more than half of the environmental claims made by companies in the sector are either exaggerated, vague, or misleading. By anchoring claims to verifiable product data, DPPs provide a practical way for businesses to demonstrate compliance, avoid reputational risk, and strengthen consumer confidence.

Are DPPs mandatory in Australia?

DPPs are not currently mandatory for products placed on the Australian market. However, the clothing and textiles sector operates in a global economy, and DPPs are becoming mandatory in other markets, which will have impacts on Australian businesses.

Much of the current discussion on DPPs is being driven by the European Union's mandatory framework. Under the EU Green Deal, the European Commission has introduced the 'Eco-design for Sustainable Products Regulation (ESPR)', which makes DPPs a legal requirement for certain in-scope products.

For Australian brands exporting these products to the EU, compliance with the EU DPP requirements stemming from the ESPR will be necessary.

As the ESPR is a framework legislation, most of the detail will be provided in the implementing and delegated Acts. However, many companies are already testing and learning. Companies are seeing the benefits of DPP as a way to respond to stakeholder and regulatory needs and are starting now, to set themselves up for the future.

What are the basic elements of a DPP?

The content and structure of a DPP will likely differ between products, but it is likely they will have the following basic functionality:

1. An identifier: the code that identifies the product, for example the Global Trade Item Number (GTIN) (the barcode).
2. A carrier, such as a QR code that links to the DPP. Without the data carrier it is difficult to link to off-pack product information.
3. Associated data, sources of information located at a URL (one or more website addresses).
4. A landing page, which makes all the data available and visualises it.

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[1] **Greenwashing by business in Australia** – findings of the ACCC's internet sweep

Who is GS1 and what is its role?

For most of these elements, such as the product unique identifier (digital ID), data carriers (for example, QR code) and exchange of information between supply chain partners, there are existing global supply chain standards which are already widely adopted by industry.

GS1 is the global supply chain standards organisation that manages Global Trade Item Number (barcode) issuance, and related standards.

GS1 Supply Chain Standards are also Australian and New Zealand Standards and recognised by Australian trade partners.

When are we likely to implement DPPs, and for which products?

DPPs can be developed and used for any product – with or without regulations.

For the EU DPP requirements, the EU has drawn up a list of products that have the greatest impact on the environment and therefore should be addressed as a priority.

Specific delegated acts are expected for release between 2026 and 2027 which will outline the product-specific details, starting with textiles (final product) and iron and steel (intermediate products).

Below is an overview of the final products in the ESPR First Working Plan 2025-2030 released in April 2025, as well as examples of vertical legislation where a DPP chapter has been incorporated. Please note this information is subject to change, and the latest information can be found on the **European Commission website**.

- Batteries[2] – 2027 (EU Battery Regulation)
- Cosmetics – second quarter of 2026 (Cosmetics Products regulation)
- Detergents – end of 2025 (Detergents and Surfactants regulation)
- Textiles and Apparel – early 2027
- Furniture – 2028
- Tyres and energy-related products – 2027
- Mattresses and ICT products - 2029

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[2] Note that there will be specific details for each product category that the European Commission will dictate, for example requirements will be on industrial batteries and EV batteries initially.

Why is the clothing textiles sector a priority?

The clothing textiles sector is one of the first to be addressed by the EU legislation. The global production and consumption of textile products continues to grow and so does their impact on water resources, energy consumption and the environment.

Global textile production almost doubled between 2000 and 2015, and the consumption of clothing and footwear is expected to increase by 63% by 2030, from the current level of 62 million tonnes to 102 million tonnes in 2030[3].

In Australia in 2024, 222,000 tonnes of clothing was sent to Australian landfill, and 1.5 billion new items of clothing were sold, which equates to 55 items of new clothing for every Australian[4].

Who is impacted and how does the EU DPP affect Australian businesses?

Australian clothing and textiles businesses placing products on the Australian market have no existing mandatory obligation to provide DPPs.

As noted previously however, Australian businesses operating with global trading partners, are likely to be impacted by requirements of the EU DPP.

For the EU DPP, every entity that manufactures or places products on the EU market for the first time is responsible for the creation and maintenance of the DPP. Importers and marketplaces can also fall into this definition.

Critically this includes goods exported to the EU – therefore clothing and textile businesses across Australia that are placing products on the European market will be impacted by this legislation, not just European retailers and brand owners.

Indirectly, suppliers to EU brands and brands in global supply chains may also find themselves needing to meet EU buyer requirements and increased demand for standardised product information.

So Australian textile and apparel companies may find themselves impacted if:

- You export finished textile goods to the EU, that is, you are the economic operator placing product on the market. These businesses will be required to create and maintain the EU DPP for their exported products.

- You manufacture finished textiles goods, and an importer places the product on the EU market for you. You will be required to collect and supply product information so that the organisation that places the product on the EU market can ensure EU DPP requirements are met.

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[3] **ReSet the Trend: EU calls on young people to promote circular and sustainable fashion**

[4] **Seamless 2024 National Clothing Benchmark for Australia**

- You supply raw materials or components to an EU brand. You can expect downstream partners to request additional data from you in order to fulfill their EU DPP requirements.

- You participate in the supply chain that deals with the EU market. You may find there is increased demand from global buyers for standardised, verified product information.

When will EU DPP regulation occur?

Clothing organisations trading with the EU should be prepared for DPP regulation to start in early 2027.

The final requirements for textiles for the EU DPPs are still being confirmed by the European Commission and are expected to be finalised in 2026 – 2027, with a transition period of 18 months from adoption. These requirements will be released under the Textiles Delegated Act.

Currently, brands in Europe are actively engaged in pilots to identify implementation challenges and map out future plans. **Contact GS1 Australia** for more information on completed pilots and learnings.

For products placed in the Australian market only, there are no mandatory timelines for DPPs.

What specific information is required for DPPs?

Outside of the EU, a DPP can contain data that brands choose to share. For example, information could include circularity aspects on durability and repairability of the garment, or traceability information showing where fibres were sourced.

For the EU DPP, there will be specific mandatory requirements. The exact information for textiles products will be defined by the European Commission in the Textiles Delegated Act, which is still in development.

While the mandatory data elements of an EU DPP are not yet known, there have been projects conducted in Europe to develop data models. Examples of data models are provided below. These can be a useful guide for the types of data attributes that will become expected to be digitally available alongside the product.

Trustrace[5] DPP Data Protocol

Sustainability In Fashion Data Model, Asian Development Bank and GS1 Asia Pacific

Additionally, GS1 is working on developing a clothing data model to support global industry standardisation, following feedback from brands across the world. More information on this will be provided once the model is developed.

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[5] Trustrace are a solution provider. Please note GS1 Australian and Seamless are technology neutral. This is provided as an example reference only.

How are DPPs relevant for Seamless and its objectives?

Addressing data gaps

DPPs provide the foundational data infrastructure to map the material flow of clothing and textiles in Australia. This information can support the design of effective interventions, new business models, and measure real impact in a standardised way.

Creating accountability infrastructure

Rather than relying on voluntary compliance or self-reporting from industry, DPPs establish a system where product information becomes embedded and verifiable. This allows customers and supply chain partners to access standardised data about products entering and circulating within Australia – supporting evidence-based policy development and informed business decisions for recyclers assessing future feedstock.

Enabling downstream feedback loops

When clothing repair services, resellers, and recyclers can quickly access product specifications, it reduces the barriers to and cost of circular services, making these business models more efficient.

Enabling upstream feedback loops

DPP data about clothing use and end-of-life pathways can be shared with designers, providing insights into where products need repairs, how they perform across multiple owners, and what happens throughout their extended lifecycle. This creates a continuous learning loop that informs better design decisions for circularity.

Regulatory preparedness as market advantage

Adopting DPPs can help organisations get ahead of global requirements, while building domestic data sets and capacity.

What do you need to do now?

As noted above, while DPPs are not yet mandatory for products placed on the Australian market, Australian businesses operating in the global market can expect to be impacted by the EU regulation.

Global headwinds and the benefits that DPP offers to achieving a circular clothing economy means that voluntary adoption of DPP can also be expected. This presents an opportunity to position businesses to meet compliance requirements while driving innovation.

Tip: Even if you don't export to the EU, global retailers and brands are likely to expect DPP-ready data from their suppliers in the future. Early preparation reduces compliance costs and builds competitive advantage.

Looking to get started? Consider the following steps:

1. **Map your data**. Pick a product category or item and identify what product information you already hold and where it's stored.

2. **Pilot a QR code or digital label**. Use what you have to start trialling how product data could be linked and displayed. Think about placement of the QR code or digital label and how you want to engage with your stakeholders. Use information you already have and start small. Use standards such as GS1 identifiers and GS1 Digital Link standards to ensure your DPP architecture and QR code is interoperable and globally recognised. **Contact GS1 Australia** for further guidance.

3. **Align your supply chain**. Work collaboratively with suppliers, partners and customers to ensure data consistency and shared standards across the chain.

4. **Close the gaps**. Plan how to capture missing information, especially material composition and certifications. To know what your gaps are, review draft data models and pilots, like those in this resource, or **contact Seamless** to discuss which Seamless supporters may be able to assist.

What technology is available to support your business?

Use cases out of Europe have revealed that scaling DPPs is easier to achieve if you start working with existing data infrastructure and data systems.

For example, use your existing Product Information Management (PIM) or Enterprise Resource Planning (ERP) system to capture your product data centrally, choose existing DPP solutions and ensure you can share data based on industry-specific standards. By connecting physical products to DPPs with identifiers encoded in QR codes, we can create a transparent supply chain together.

How can you protect your brand assets while delivering DPP requirements?

Solution providers will play an important role in hosting and providing access to product information as part of a DPP. But it's important to understand that:

- Different information about your products may sit in different places. You may want to share some information you manage directly, for example, product specifications, while other data could be shared by industry bodies, for example, certification records. It is unlikely that one provider will ever hold all information needed for a DPP.

- Brand owners need to remain in control. Product information is a valuable brand asset. Links to that information should stay under the control of the brand owner, even when content is hosted or accessed through solution providers.

- GS1 standards are designed for this. The GS1 Digital Link standards conform with ISO/IEC and Australian national standards and ensure brand owners stay in control of their digital assets and choose which solution providers they work with, while still making data easily accessible to consumers, supply chain partners, and regulators.

In short: work with solution providers, but don't hand over control of your brand. Use global standards to stay flexible, interoperable, and stay in charge of your data. When talking to technology vendors, ask them questions about integrating to your existing data systems and ensure they are complying with interoperable global standards, so that information captured can be exchanged and understood by everyone. **GS1 Australia has prepared this document** with questions to ask when engaging with solution providers about traceability related platforms.

GS1 Australia can also connect you with a range of solution providers that are actively working on DPP implementations and understand global supply chain standards, if you are looking at technology vendor options.

About GS1 Australia

GS1 Australia is part of a worldwide network, operating in over 118 countries. As a member-based, not-for-profit organisation, its charter is to operate and manage supply chain standards, including barcodes, in accordance with the global GS1 system and to provide related solutions and services to its members, to enhance efficiency, safety, supply chain resilience and sustainability. GS1 Australia collaborates with industry partners across different sectors to ensure global supply chain standards are useful and can be utilised for sustainability and circularity use cases.

GS1 Standards are used by more than 2.5 million businesses worldwide and across 25 sectors, including retail, healthcare and logistics, to streamline operations and support sustainable practices.