Seamless

# Digital Product Passports Explained

A resource for the Australian clothing sector

GS1 Australia



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 early discussions have 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.

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 can improve access to product and supply chain information, supporting greater transparency, accountability and circular business models where suitable data is available.

## What is a Digital Product Passport?

A DPP is a structured digital record linked to an identifiable product. It brings together information that can be accessed by different users across the product's lifecycle.

### 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 provides general information and does not constitute legal advice. EU requirements continue to develop, and businesses should check the latest legislation and official European Commission guidance before making compliance decisions.

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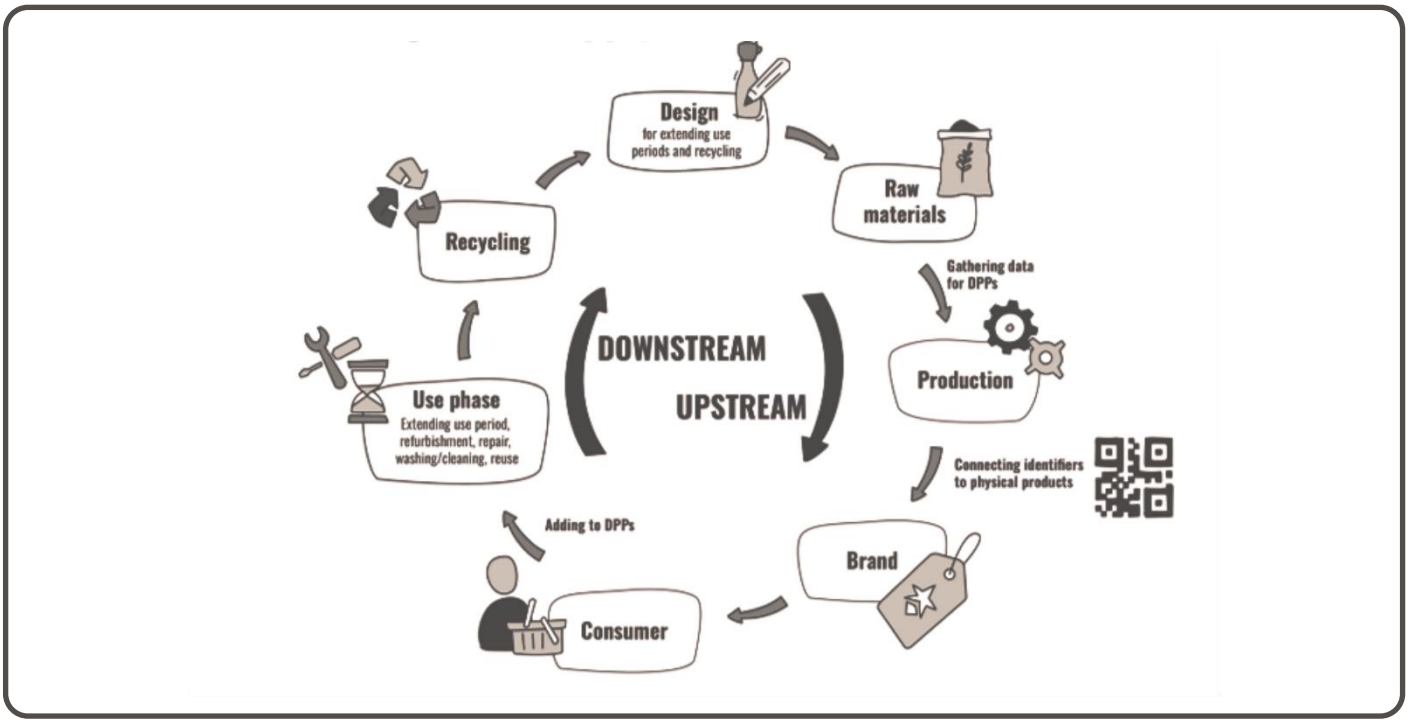
A DPP can be accessed from the physical product through a data carrier, such as a QR code. Using a standards-based approach such as GS1 Digital Link allows the code to connect an identified product to digital information and services.

Scanning the code can give businesses and consumers access to relevant product information, such as what the product is made from, where it was produced, and how it can be reused, repaired, or recycled. The reliability of that information depends on appropriate data governance, evidence and verification.

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 while 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.

Figure 1: Data exchange in the supply chain




## Why DPPs are important for a circular clothing economy

By making relevant product information more accessible, DPPs may support a circular clothing economy by:

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 trust by giving consumers confidence that sustainability claims are based on verifiable, transparent data.

5. Helping to address greenwashing. A review by the Australian Competition and Consumer Commission (ACCC) in 2023 found that the textiles, garments and footwear sector made a high proportion of concerning environmental claims. Across all sectors reviewed, 57% of the 247 businesses examined made concerning claims. By linking claims to supporting product data, DPPs may help businesses substantiate environmental claims, improve transparency and reduce legal and reputational risk.

## Are DPPs mandatory in Australia?

There is no general requirement for clothing placed on the Australian market to have a DPP. However, related policy developments are progressing.

Clothing has been listed as a priority product on the Environment Ministers Priority List since 2021; the Productivity Commission's inquiry report, Australia's circular economy: unlocking the opportunities has called for nationally coordinated regulation, stronger product stewardship and greater transparency and accountability in textile stewardship; and Commonwealth, State and Territory Environment Ministers have agreed a new Circular Economy Roadmap.

While these developments do not create an Australian DPP obligation, they indicate increasing policy focus on product stewardship, circularity and greater data and reporting transparency.

Additionally, the clothing and textiles sector operates in a global economy, and DPPs are becoming mandatory in other markets, which may affect Australian businesses.

Much of the current discussion on DPPs is being driven by the EU's mandatory framework. Under the EU Green Deal, the European Commission has introduced the Ecodesign for Sustainable Products Regulation (ESPR), which establishes the framework under which DPP requirements can be introduced for priority product groups. Product specific obligations, including the required information and commencement dates, will be established through delegated acts. Textile specific DPP requirements have not yet been finalised.

Australian brands placing products on the EU market will need to comply with applicable product specific requirements once they enter into force.

While details are yet to be provided, 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 to set themselves up for the future.

## Elements of a DPP



The content and structure of a DPP will differ between products, but it will typically have the following functionality:

1. A unique product identifier: the code that identifies the product, for example the Global Trade Item Number (GTIN), the number encoded in the barcode that links the relevant product, model, batch or item as required.
2. A persistent data carrier, such as a QR code, associated with the product. Without the data carrier it is difficult to link to off-pack product information.
3. Structured digital data made accessible through the identifier and data carrier.
4. Appropriate access controls, so different users can access the information available to them.
5. A user interface or landing page, which makes data available and visualises it.

## Who is GS1 and what is their role?

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

GS1 is a neutral, not-for-profit standards organisation that develops and maintains global standards for identifying, capturing and sharing information. These include the Global Trade Item Number (GTIN) which can be encoded in different data carriers, including barcodes. Certain GS1 standards have also been identically adopted as Australian and New Zealand Standards and recognised by Australian trade partners[1].

In July 2026, the first six harmonised European DPP standards were cited in the Official Journal of the European Union (Commission Implementing Decision (EU) 2026/1736)[2]. Some reference international standards published by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) that provide mechanisms used within the GS1 system. For example, European Standard (EN) 18219 on DPP unique identifiers references ISO/IEC 15459 (for which GS1 is a registered issuing agency) and ISO/IEC 15418 (which names GS1 Application Identifiers).

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[1] GS1 Australia, Identical Adoption of GS1 Standards as Australian Standards. Also see the GS1–ISO Alignment Summary (PDF).

[2] European Commission, Commission Implementing Decision (EU) 2026/1736 of 14 July 2026 on harmonised standards for digital product passports drafted in support of Regulation (EU) 2024/1781 of the European Parliament and of the Council, Official Journal of the European Union, L series, 2026/1736, 15 July 2026.

### What this means

GS1 standards can provide recognised mechanisms that support aspects of the EU DPP framework, namely for identification of products, operators and facilities, and the data carriers that link to them.

To help organisations put this into practice, GS1 has published a DPP Provisional Application Standard, first released in April 2025 and updated in June 2026, which sets out how GS1 identifiers and data carriers can meet DPP requirements.

GS1 also launched a textiles and apparel sub-team in May 2026 to agree how apparel can use existing standards such as GTINs and QR codes using GS1 Digital Link.

## When will we 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.

Product-specific details will be set in delegated acts under the ESPR. The European Commission's indicative timeline starts with delegated acts for iron and steel in 2026, followed by textiles, tyres and aluminium in 2027.

These dates are planned dates rather than confirmed dates for mandatory business compliance. Application dates and transition periods will be set in the relevant legislation. The general rule is that requirements apply no earlier than 18 months after a delegated act enters into force.

Table 1 provides an indicative overview of the product groups in the ESPR Working Plan 2025–2030 (released in April 2025), as well as examples of separate legislation where a DPP requirement has been incorporated.

Please note this information is subject to change. The latest information can be found on the European Commission Digital Product Passport webpage and the European Commission website.

Table 1: Indications of when requirements will apply to product categories.

| Product group | Delegated act adopted<br>Indicative | When requirements will apply<br>Estimate at 18 months after adoption |
|---|---|---|
| Batteries (EU Battery Regulation – separate law) | Already in law | Battery passport applies to specified battery categories from February 2027 |
| Iron and steel | 2026 (not yet adopted as of November 2026) | From around 2028 at the earliest |
| Textiles and apparel (footwear excluded[3]) | Q4 2027 (Commission planning) | From around 2029 at the earliest |
| Tyres and aluminium | 2027 | From around 2029 at the earliest |
| Furniture | 2028 | From around 2030 at the earliest |
| Mattresses | 2029 | From around 2031 at the earliest |

In July 2026, the Commission launched the EU DPP Registry, where economic operators will register their DPPs before placing products on the EU market.

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.

## Other related EU requirements

Other EU laws also introduce DPP requirements, including the Construction Products Regulation, the Toy Safety Regulation and the Detergents and Surfactants Regulation. Under the revised EU Waste Framework Directive, textile producers will also face extended producer responsibility (EPR) obligations, paying fees toward collection, sorting and recycling. The DPP is expected to support producer fee calculation. The ESPR ban on destroying unsold apparel and footwear has applied to large companies since July 2026 and will apply to medium-sized companies from 2030. Micro and small companies are exempt.

[3] The Commission is reported to be due to complete a study by the end of 2027 on whether footwear needs ecodesign requirements. Footwear brands should not assume they are permanently out of scope.

## Why clothing textiles are 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[4].

In Australia, 220,000 tonnes of clothing is sent to Australian landfill annually, and 1.5 billion new items of clothing are sold, which equates to 55 items of new clothing for every Australian[5].

## How the EU DPP affects 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.

Under the ESPR framework, obligations may apply to manufacturers, importers, authorised representatives, distributors, dealers, fulfilment service providers and online marketplaces, depending on their role and the applicable product specific rules. The final textile delegated act will clarify the detailed obligations. Australian businesses should therefore identify who places the product on the EU market and obtain product specific legal advice when the requirements are finalised.



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

[5] Seamless 2024 National Clothing Benchmark for Australia

Critically this includes goods exported to the EU. Therefore clothing and textile businesses across Australia that are placing products on the EU market (in store and online) may be impacted by these requirements, not just European retailers and brands.

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 sell finished textile products directly to customers in the EU. You will need to determine which EU economic operator and DPP obligations apply to your business model, including the role of any importer, authorised representative, fulfilment provider or online marketplace.
- You manufacture textile 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.
- You supply raw materials or components to an EU brand. You can expect downstream partners to request additional data from you in order to fulfil 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.

## What information is required for DPPs?

Outside of the EU, a DPP can contain data that brands choose to share. For example, information could include durability qualities, repairability of the garment, or where fibres are sourced from. It's recommended that where possible, brands consider industry guidance on what might be the appropriate minimum dataset that should be presented, alongside supply chain and consumer needs.

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.

### Early indications

In May 2026, the European Commission's Joint Research Centre (JRC) published the Study on DPP content for textile apparel products under ESPR. It is preparatory work to inform the future textiles delegated act which does not necessarily reflect the position of the European Commission, and the final requirements may differ.

The key points from the study are:

- **Scope:** finished textile apparel and apparel accessories (such as hats, scarves, belts and gloves) containing at least 80% textile fibres by weight, including workwear and sportswear. Intermediate products (such as fibres, yarns and fabrics), smart and electronic textiles, personal protective equipment, medical devices and toys are excluded. Footwear is not covered[6]. The DPP obligation would apply to the final product only, so it would not in itself require upstream suppliers to hold DPPs.

- **Product identification and classification to be included:** a unique product identifier, batch and model identifiers, a product category (ESPR and Product Environmental Footprint categories) and a customs commodity code.

- **Producer information to be included:** manufacturer or importer details (Economic Operators Registration and Identification (EORI) customs numbers), and facility identification (for example, using Global Location Numbers).

- **Product information to be included:** fibre composition, durability (a robustness score supported by standardised test results), substances of concern, a recyclability score, recycled and organic content (supported by chain of custody), environmental footprint, and care instructions.

- **Compliance documentation:** the EU Declaration of Conformity, technical specifications and test reports.

- **Access:** role-based. Basic information such as identifiers, fibre composition, care instructions and the robustness score would be publicly available. Parties with a legitimate interest, such as recyclers, would see more detail, such as the location of substances of concern and absolute environmental footprint values. Authorities, such as market surveillance and customs, would see compliance documentation, certificates and footprint calculation parameters, as well as manufacturer and importer contact details.

- **Sustainability information to be included:** The study proposes sustainability information such as fibre composition, durability, recyclability, recycled and organic content and environmental footprint. The final requirements and methodologies will be determined through the ongoing regulatory process.

- **Level of identification:** The study considers how information could be held at model, batch or individual-item level. The appropriate level may vary depending on the data and use case, with more detailed information creating additional data and implementation requirements. Most information may be common across a product model, while some information can vary between production batches or individual products. Item-level information may become particularly relevant where information changes during a product's life, for example through repair or maintenance.

- **Measurement**: Some sustainability attributes already draw on established standards and methods, while product-specific approaches, including how performance is measured and communicated for textiles, are still evolving.

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[6] The Commission is reported to be due to complete a study by the end of 2027 on whether footwear needs Ecodesign requirements. Footwear brands should not assume they are permanently out of scope.

Not all of the proposed DPP information is routinely available today. The study considers existing industry practices and data availability when assessing potential requirements, including whether information is currently collected, at what level it is held, and the practical barriers to providing it digitally.

Data readiness also varies depending on the type of information. More complex supply-chain information, such as substances of concern, may require greater data sharing and collaboration between businesses.

As the study is a draft, check the European Commission Digital Product Passport webpage and its textile apparel page for updates as the textiles delegated act develops.

### What guidance is available now?

While the final EU requirements for textile DPPs are still being developed, businesses do not need to wait before considering their data readiness. The JRC textile apparel study provides the most directly relevant starting point, setting out proposed data attributes and requirements that businesses can use to assess what information they already hold and where gaps may exist.

Other industry initiatives and data models can provide additional guidance on how textile and supply-chain data may be structured and exchanged. Examples include the Trustrace[7] DPP Data Protocol and the Sustainability In Fashion Data Model, Asian Development Bank and GS1 Asia Pacific.

GS1 is also developing a global clothing data model to support consistent industry data exchange, informed by feedback from brands internationally. This is currently progressing through public and industry review. Please contact GS1 Australia if you wish to be involved in the standards group.

These resources should be treated as preparatory guidance rather than a definitive checklist for EU compliance, as the final textile DPP requirements will be established through the regulatory process.

## How DPPs are relevant for Seamless

### 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 consistent way.

[7] Trustrace are a solution provider. Please note GS1 Australia and Seamless are technology neutral. This is an example reference only.

### Creating accountability infrastructure

Rather than relying on voluntary compliance or self-reporting from industry, DPPs can help make product information more accessible 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. For example, a resale platform can scan a garment's QR code and read its fibre composition and care instructions. It can price the item, decide whether repair is needed, and route it to the right recycler if it can't be resold.

### 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 you can do now

As noted above, while DPPs are not yet mandatory for products placed on the Australian market, Australian businesses operating with EU market exposure, or those supplying businesses that operate in the EU, may be affected as product-specific requirements develop.

Global headwinds and the benefits DPP offers to achieving a circular clothing economy mean 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.

An EU-funded review of 30 DPP platforms[8] found that the biggest barriers for smaller businesses are organisational rather than technical: getting data from suppliers, connecting existing systems, and staff skills in data standards. It also found that the effort of keeping DPP records up to date is often underestimated. Plan for this early, as it's often easier to start small and build up.

Looking to get started? Consider the following steps:

1. **Understand your exposure.** If you sell into the EU, or supply organisations that do, check whether emerging DPP requirements could apply to your products and talk to your customer or importer about what information they may need. If you don't have EU exposure, consider where better product information could support your customers, circularity objectives or future market requirements.

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

3. **Check how your products are identified.** Review how you identify products, batches or individual items and whether your existing systems can support emerging DPP requirements. Where appropriate, globally recognised identifiers such as GTINs can provide a standards-based foundation for linking products to DPP information.

4. **Start small and test.** Trial how product information could be digitally accessed and shared, for example through a QR code using GS1 Digital Link. You don't need a complete DPP dataset to begin learning what works. Contact GS1 Australia for further guidance.

5. **Work with your supply chain**. Talk to suppliers, customers and other partners about the information you may need to exchange and how it can be kept consistent and interoperable.

6. **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.

## Technology 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, you can create a transparent supply chain together.

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[8] DIGITRACE (2026), Deliverable D3.1 – Digital Tools Evaluation Report for DPP Compliance, Work Package 3, DIGITRACE project (Erasmus+ Alliances for Innovation), May 2026.

## How to protect your assets while delivering DPPs

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 product information should stay under the control of the brand, even when content is hosted or accessed through solution providers.

GS1 standards are designed for this. GS1 Digital Link, published as ISO/IEC 18975:2024, provides a standards-based way to connect GS1 identifiers to online information and services. When implemented with appropriate domain, resolver, contractual and data-governance arrangements, it can help brand owners retain flexibility and avoid unnecessary dependence on a single solution provider.

Work with solution providers but retain appropriate control over your identifiers, domains, product information and data-portability arrangements. 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 comply 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.

If you're comparing technology vendors, browse the GS1 Australia solution-provider directory to find providers with DPP implementation experience and a working knowledge of global supply chain standards.

## 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. For further guidance, visit the GS1 Australia Digital Product Passport website.