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Preparing the Global South textile sector for the European DPP

Digital Product Information Systems and Digital Product Passport: Opportunities and Challenges



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Who are we?

174
Member
States

UNIDO is a specialized agency of the United Nations (Established 1966, became agency 1985) with a unique mandate to promote, dynamize and accelerate industrial development.



compass.unido.org

UNIDO Priorities

- ▶ Ending Hunger
- ▶ Sustainable Supply-Chains
- ▶ Climate Action
- ▶ Digitalization and AI



~ 680 Ongoing Projects in
120+ countries

\$1.5 billion portfolio



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Mandate

Our mandate is reflected in Sustainable Development Goal (SDG) 9, but UNIDO's activities contribute to all the SDGs.





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UNIDO's Role in Digital and AI-Driven Industrial Transformation

Our **PURPOSE** is to help developing countries and economies in transition **harness digitalisation, AI and innovation as drivers of inclusive and sustainable industrial transformation**

01.



Guiding countries to harness innovation, digital and AI effectively

We inform **global standards** and provide **guidance** to help countries navigate emerging technologies and adopt and develop innovation, digital and AI solutions responsibly, inclusively and sustainably

02.



Mobilising partnerships/donors to scale Innovation, digital and AI solutions

We **bridge** governments, the private sector, academia, and civil society to **co-create, communicate, and amplify** solutions to accelerate adoption and development of innovation methods, digital and AI technologies

03.



Strengthening countries' AI, innovation and digital industrial capabilities

We work with **governments and industry** to develop, implement, and scale **innovation, digital and AI solutions**, while building the **institutional and workforce capabilities** for sustainable industrial transformation



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What is the Digital Product Passport?

The **Digital Product Passport (DPP)** is a key element of the **European Union's Ecodesign Product Regulation (ESPR)**, with the aim to make products placed on the EU market more sustainable, durable, repairable, and circular. The DPP serves as a **digital identity card** for products, components, and materials, providing relevant information to support sustainability, promote circularity, and ensure regulatory compliance.

The DPP will **be introduced progressively across selected product groups**, including:



Batteries



Textiles



Iron & Steel

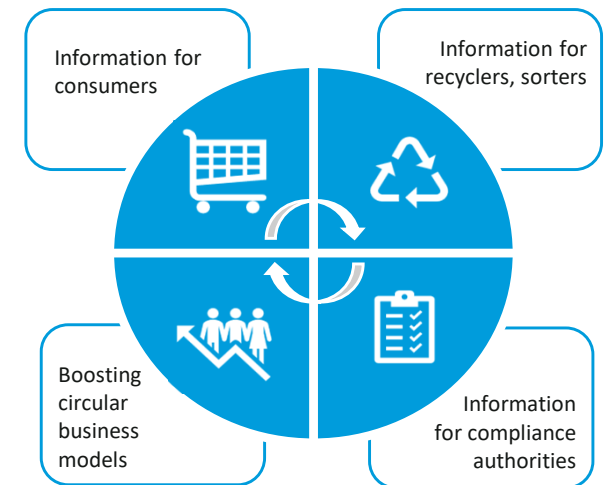


Construction products



Furniture

→ The ESPR is a market access regulation: products covered by applicable ESPR requirements **must comply in order to be placed on the EU market**

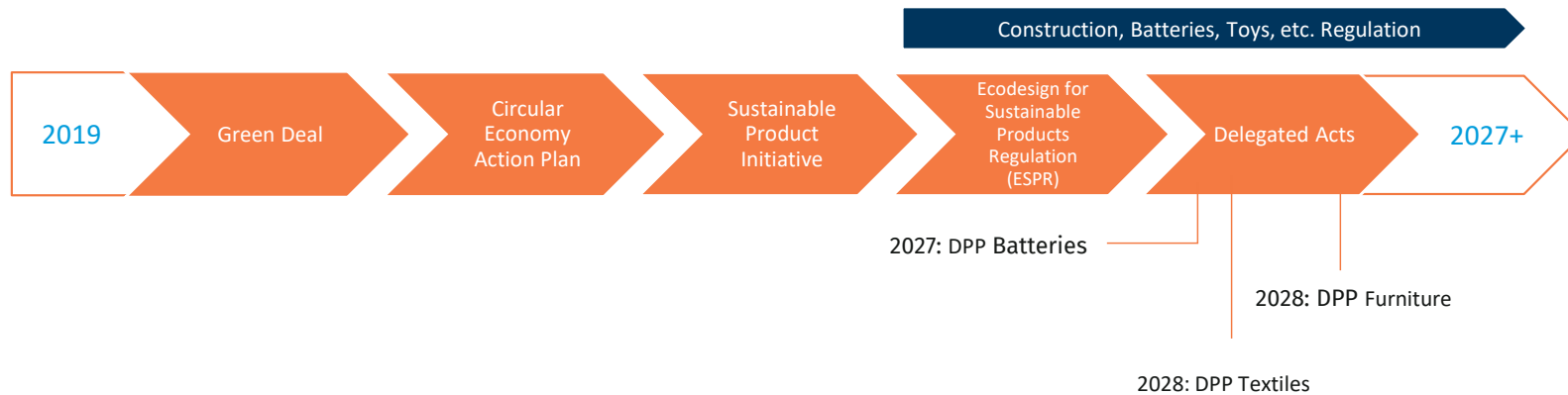




Political Background: Why is everyone talking about the DPP?

Core goals:

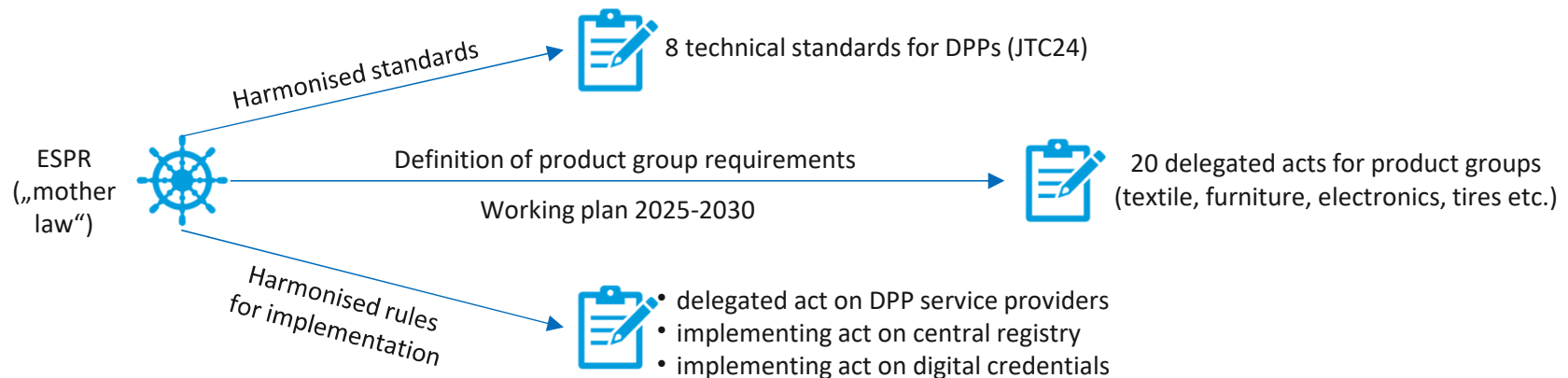
- EU wants to make (almost) all products “digital”, beyond ESPR
- “Digital by default”
- From 2027: first DPP mandatory (Batteries)





How will the DPP be implemented?

- 1 × ESPR = „Regulation, establishing a framework for the setting of ecodesign requirements for sustainable products”, horizontal and product-independent
- >20 delegated acts = product-specific legislation
- DPP requirements apply to selected product groups; delegated acts define the product group-specific requirements
- Additional legislation also introduces DPP requirements





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DPP in the textile sector

Textile apparel is one of the **priority product groups** under the **ESPR Working Plan 2025–2030**. In the EU, textile consumption ranks 4th highest for negative environmental and climate impact, and 3rd highest for water and land use, from a global life cycle perspective.

What the DPP will contain for textiles (*final scope set by delegated act*)



Product identification and characteristics



Fibre composition



Information supporting use, repair and maintenance



End-of-life & recycling information



Origin information



Identification of relevant economic operators

Indicative implementation timeline

- **Q3–Q4 2027:** Planned adoption of the **ESPR Delegated Act for textiles**
- **Following adoption:** Additional guidance, technical specifications and implementation measures will be developed to support the introduction of DPP requirements for textile products.



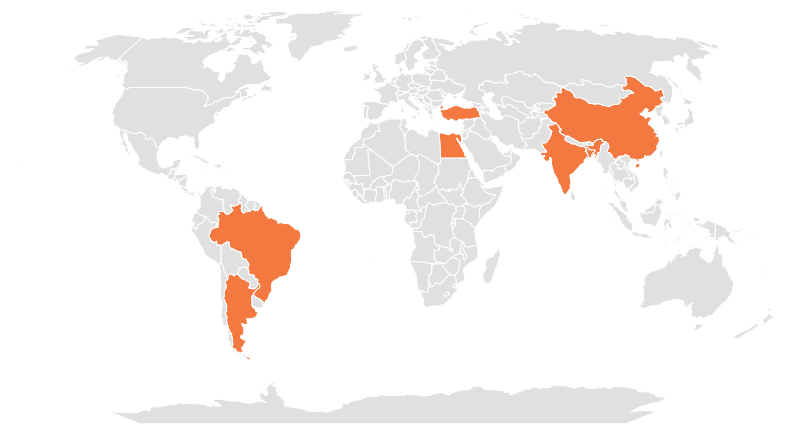
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Is the Global South Ready?

- Previous research by CIRPASS explored DPP readiness among **European SMEs** but did not capture the specific context and challenges faced by firms in the Global South.
- **To address this gap, UNIDO conducted the first large-scale empirical assessment of DPP readiness** across seven major textile-producing economies **in the Global South**: Argentina, Bangladesh, Brazil, China, Egypt, India, and Turkey.
- **More than 200 firms** across all tiers of the value chain and **19 industry associations** participated.



Scan to access
the DPP study



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How the Assessment Was Conducted

Survey Methodology

- ✓ Semi-structured interviews conducted using LimeSurvey
- ✓ Enumerators trained through a Training-of-Trainers (ToT) program in each country
- ✓ Targeted 35-40 firms per country to balance data reliability with resource constraints
- ✓ Sampling focused on medium-sized firms, followed by small and micro-sized enterprises
- ✓ Proportional allocation sampling used, with a 3:2:1 ratio for firm representation
- ✓ Multi-layered analysis of awareness and adaptability to change.

Focus Areas



Company and Stakeholder Characterisation
Firm size, role in the value chain, and market scope



Sustainability Data Reporting
Accuracy of environmental and social metrics



Policy and Regulatory Readiness
Compliance levels with existing and upcoming EU frameworks



Organizational Readiness
Internal DPP awareness, workforce training, and change management



Technological Readiness
Digital systems for data collection, product tracing, and reporting



Supply Chain Readiness
Material sourcing, traceability mechanisms, and product lifecycle data management



Key Findings

Firm Characteristics		
	Diversity of Firm Sizes	Medium-sized firms show higher compliance capacity , while numerically dominant micro-firms remain vulnerable due to limited resources & typically fall outside the ESPR scope by focusing on informal, local markets.
	Position in the Value Chain	Clear correlation between firm size & value chain position. Medium/larger firms dominate all tiers , while small firms hold secondary positions . Micro-firms remain marginal & are nearly absent from downstream activities .
	Sector Specialisation	Apparel Textiles dominates , especially India, Bangladesh, & China. Egypt ranks higher in home & footwear. India, Argentina, & Brazil show a notable presence in technical textiles. Turkey & China show moderate sectoral diversity.
	Role in Value Chain	Surveyed firms are primarily manufacturers , indicating a strong production focus . While 25% operate as brands , participation in downstream activities (e.g., importing, distributing, recycling, or reuse) remains marginal .
	EU Market Integration	Turkey & Egypt: strongest direct export links to the EU . Firms in India & Bangladesh: mostly supply intermediaries who then export to the EU. China, Argentina & Brazil: diversified trade orientations with limited EU focus .
	Affected by the DPP	Perceived likelihood of DPP impact correlates with firm size . Medium and large enterprises report the highest impact compared to small and micro-enterprises. Uncertainty is widespread among smaller firms regarding whether the DPP applies to them. Yarn and garment producers see themselves as most affected by traceability needs, while fabric and raw material suppliers anticipate lower impact.



Key Findings



Policy Readiness

- **64% aware of general ESPR requirements, but only 18% report full legal comprehension**
- Turkey and Egypt lead; China, Argentina, Brazil show almost no awareness
- **Awareness drops sharply with firm size** (68% large firms → 22% small firms for full comprehension)



Technological Readiness

- **70%+ use digital tools** (ERP/databases), but most still rely on **unstructured formats** like Excel
- Only a **minority meet interoperability/authentication standards** required by ESPR
- 55% plan to build DPP systems in-house, but **infrastructure often does not match this ambition.**



Organisational Readiness

- **Employee adaptability and willingness to change is high** across all countries; 80%+ offer training
- Actual **DPP knowledge among employees is minimal**
- Larger firms report far more resource readiness than micro/small firms



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Key Findings



Supply Chain Readiness

- **83% of firms** already **share product-related data** with partners
- However: **Only 38% use recognized industry standards** for that data exchange (most sharing is informal/inconsistent)
- Standardization is **weakest at Tier 3/4**



Information Readiness

- **Traceability is strong at fabric and garment level**, but deteriorates sharply upstream (fibre/yarn)
- **~1/3 of upstream actors can not provide material-level data** at all
- Significant gaps in chemical/substance-of-concern reporting and environmental metrics



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Strategic Recommendations

To enable an inclusive and equitable transition towards DPP compliance, the following recommendations are proposed:



For Policymakers

- Develop Clear, Sector-Specific Guidance
- Adopt a Phased Implementation Approach
- Involve Global South Stakeholders in Standard-Setting and Legislation
- Provide Financial and Technical Incentives



For Industry Associations

- Translate and Localize Resources
- Facilitate Peer Learning and Capacity Building
- Promote Standardized Data Exchange
- Offer Technical and Strategic Advisory Services



For Development Agencies

- Design Targeted Support Programs
- Foster Multi-Stakeholder Dialogues
- Build Digital Public Infrastructure
- Advocate for Equitable Transition Funding



For SMEs

- Strengthen Digital Data Management and Traceability
- Build Internal Capacity on DPP and ESPR Requirements
- Adopt Standardized Data Exchange and Product Identification Systems
- Leverage Shared Digital Platforms and Service Providers for DPP Compliance



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Digital Product Passport (DPP) Intervention in EU-funded TIAGRA project for Egyptian Textile



Capacity Building Workshops

Brought together SMEs, industry leaders, policymakers, and support institutions to build digital capabilities and demonstrate how digital interventions can enhance the sector's performance and global competitiveness.

UNIDO open survey

Two short, self-contained checks for EU Digital Product Passport obligations. Nothing you answer is stored on our servers — results are computed on the fly from your answers.

Do I have to create a DPP?

Check whether a DPP requirement applies to your product and find out your role in the supply chain.

[Start EU DPP obligation checker](#)

What is my readiness level?

Assess your organization's DPP readiness, identify gaps and get your individual roadmap for EU DPP compliance.

[Start readiness assessment](#)

Readiness Assessment

offered companies tools to assess whether they are affected by DPP and evaluate their readiness.



Tailored Roadmaps

provided step by step improvement plans tailored to different SME profiles outlining phased technical and organizational actions needed to achieve DPP-ready data systems, interoperability, and internal capacity.



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