PASSAT

Digital Product Passport
Austria & Beyond

Data Ecosystems for the Digital Product Passport

Unlocking the potential of the DPP

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Vienna, 10.04.2025

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Federal Ministry
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Energy, Mobility,
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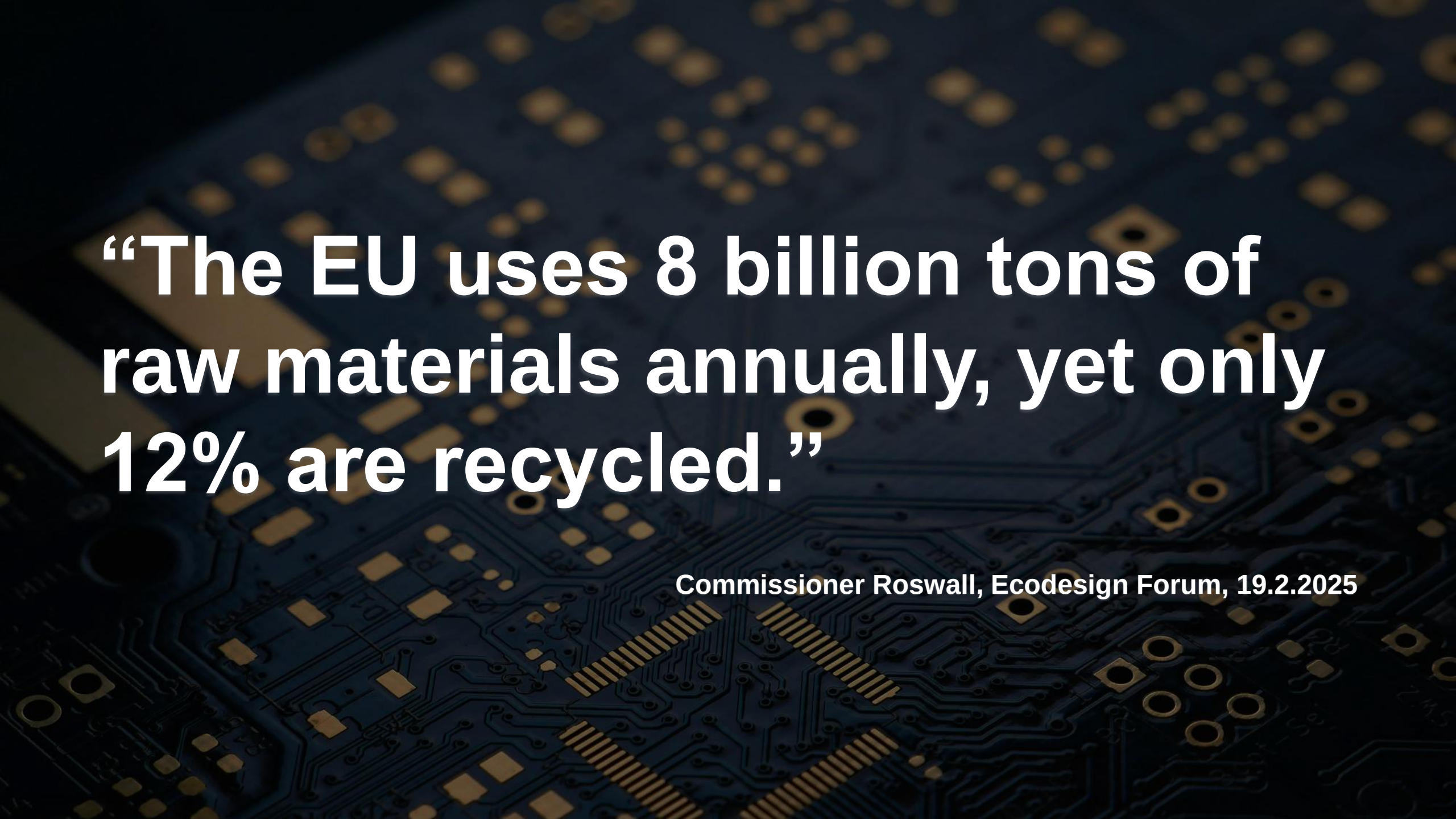
“Today, between 4 and 9% of all textile products put on the European market are destroyed without ever being used…

…nearly 600 000 tons of textiles each year.”

Commissioner Roswall, Ecodesign Forum, 19.2.2025

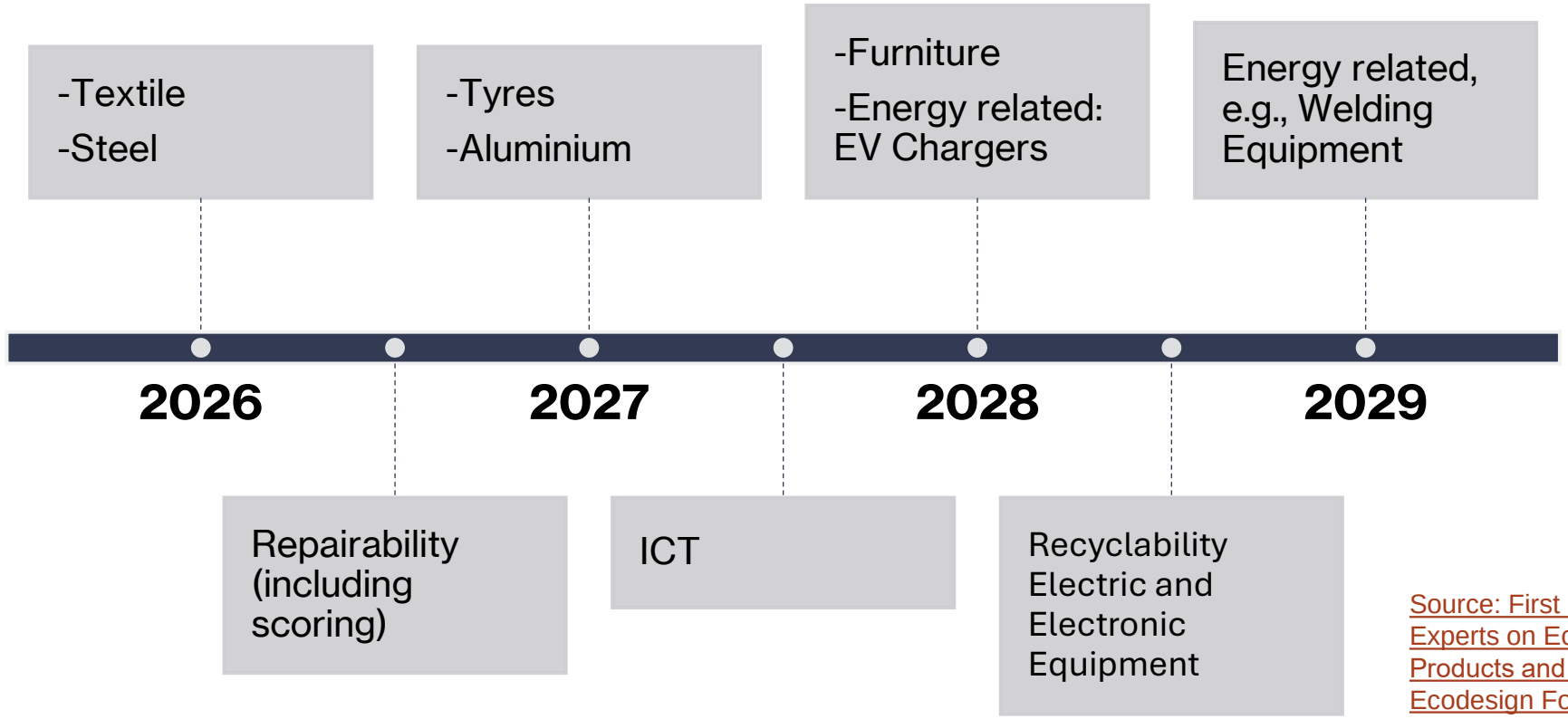

“The EU uses 8 billion tons of raw materials annually, yet only 12% are recycled.”
Commissioner Roswall, Ecodesign Forum, 19.2.2025

Digital Product Passport

- The Digital Product Passport (DPP) is an integral part of the Ecodesign for Sustainable Products Regulation (ESPR, entered into force in July 2024)
- A DPP is a collection of **data linked to a specific product**, describing its properties and **current state and accompanying it throughout and after its operation time.**
- The passport's goal is to **support the circular economy**, with participation from all actors **along the supply chain**.
- Data stored in the DPP supports informed decision making and a circular economy, **helps fulfil requirements for regulatory compliance and enables new, data-driven business models**.
- Data for a DPP originates from various sources, requires an underlying **data ecosystem to ease collaboration** within the whole value chain and throughout the entire product lifecycle.

Timeline

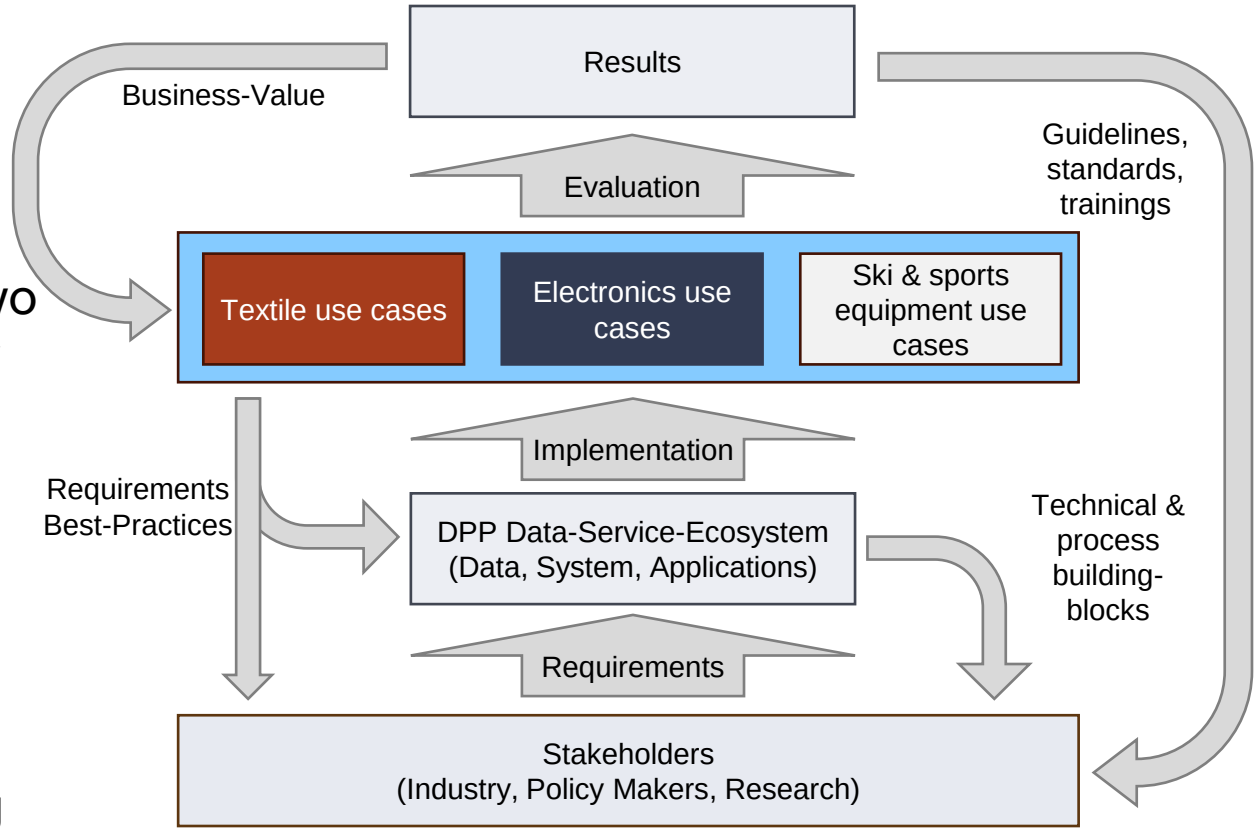
Planned prioritized final and intermediate product groups, and horizontal requirements in the first working plan (Art. 18 ESPR):



Source: First meeting of the Group of Experts on Ecodesign for Sustainable Products and Energy Labelling ('the Ecodesign Forum, 19-20. Feb. 2025

Objectives

1) **Analyze** the functional and non-functional **requirements and regulations** for implementing DPPs
2) **Develop generic data service ecosystem** concepts and components
3) **Demonstrate implementation** of DPPs in two specific product groups and a transferability use case, ski and sports equipment
4) **Provide information, support and training** for companies on implementing and utilizing DPPs
5) **Provide inputs** for international and national guidelines, standards, and legislations
6) **Provide policy recommendations**, including support for the development of a strategic adoption plan for Austria

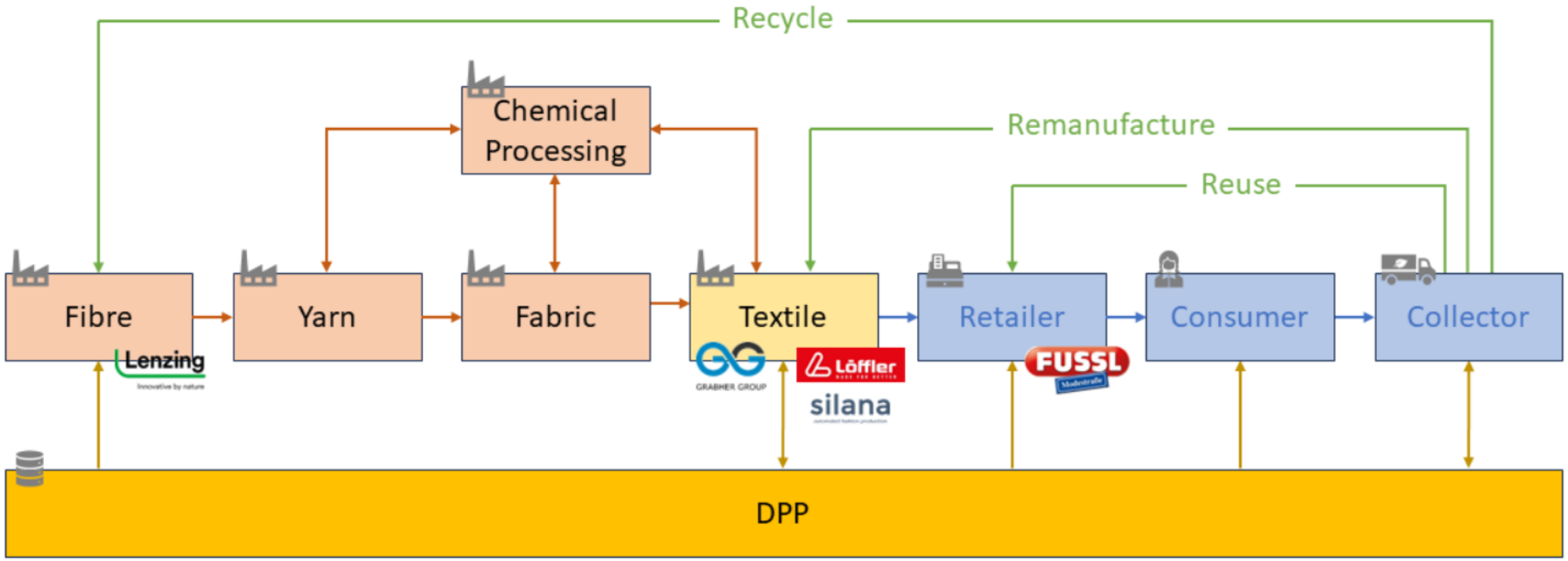


Consortium

Research	Industry	Network	Associated (LoI)	Linked Initiatives
• ABC Research • AIT • Fraunhofer • HTW Berlin (DE) • Joanneum Research • SRFG • UWK • V-Trion	**IT** • CANCOM • Nexyo • Onlim **Textile** • Silana • Grabher Group • Löffler **Electronics** • EAW (DE) • Fronius • SECONTRADE **Transferability** • Atomic • Wintersteiger	• GS1 • Plattform Industrie 4.0 • Rigo Wenning	• AVL-List • carla • DIH-Süd (EDIH) • DIO • FEEI • FMTI • Fussl • IDTA • IPC • IV • Lenzing • LNI40 • Refurbed • Schneider Electric (DE) • Sport Factory • UFH Holding	**Plattforms** • Catena-X • Gaia-X • IDSA • Manufacturing-X • Smart-Textiles Plattform Austria **Projects** • AI5Production (EDIH) • BATWOMAN • champI4.0ns • CIRPASS-2 • BatteryPass • RecAI • MoLIBity

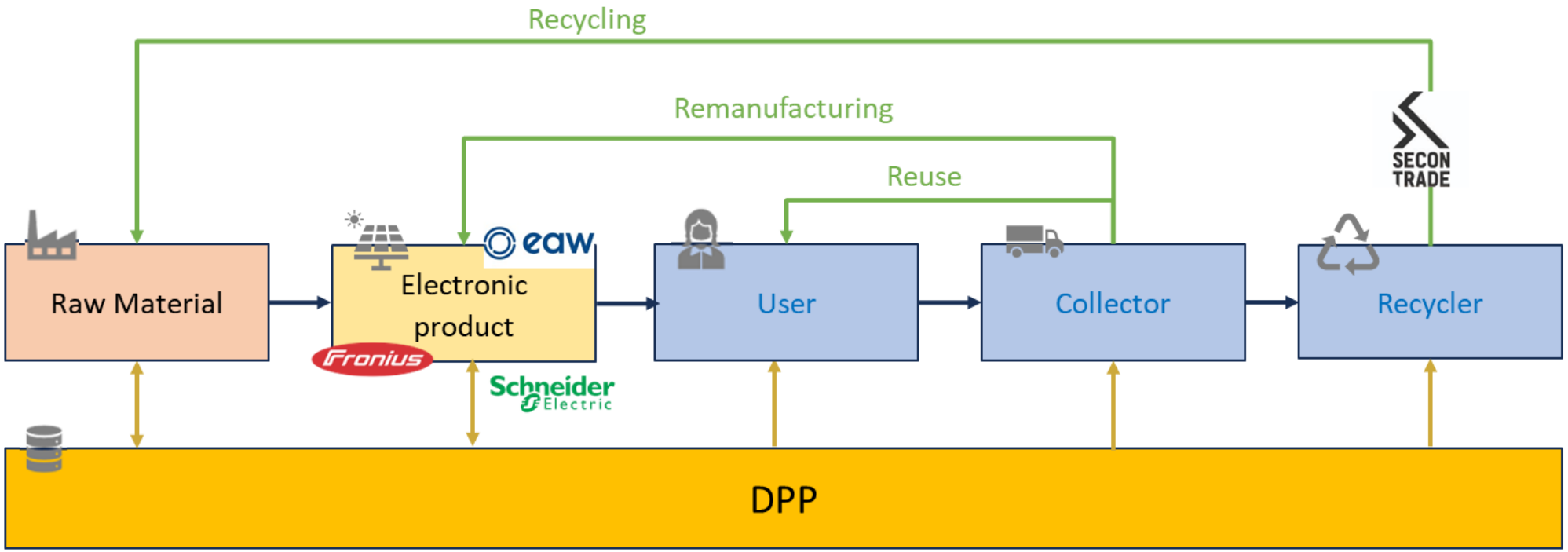
Product Group Textiles

By providing reliable product data across the entire product lifecycle, the DPP enables circular economy and new business models.



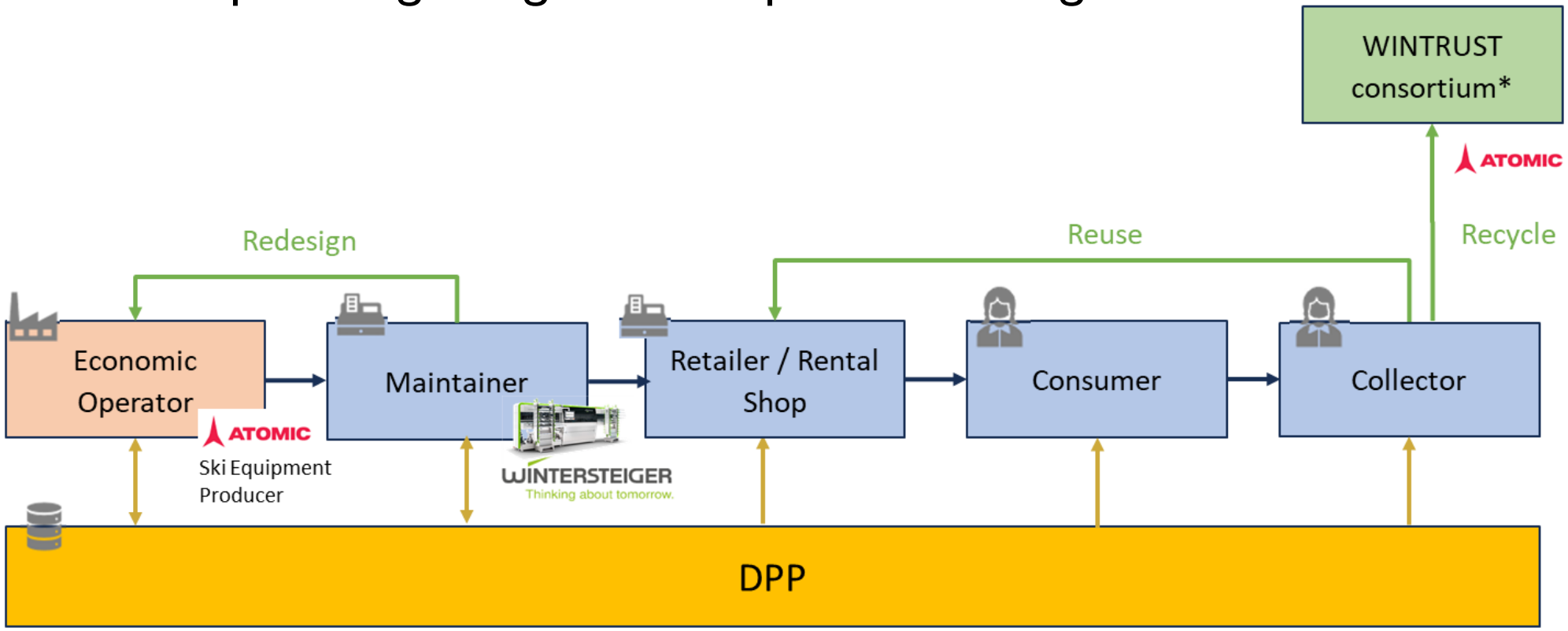
Product Group Electronics

Covering production-sales-maintenance-recycling and utilizing standards to increase product value and reduce e-waste.



Product Group Ski & Sports Equipment

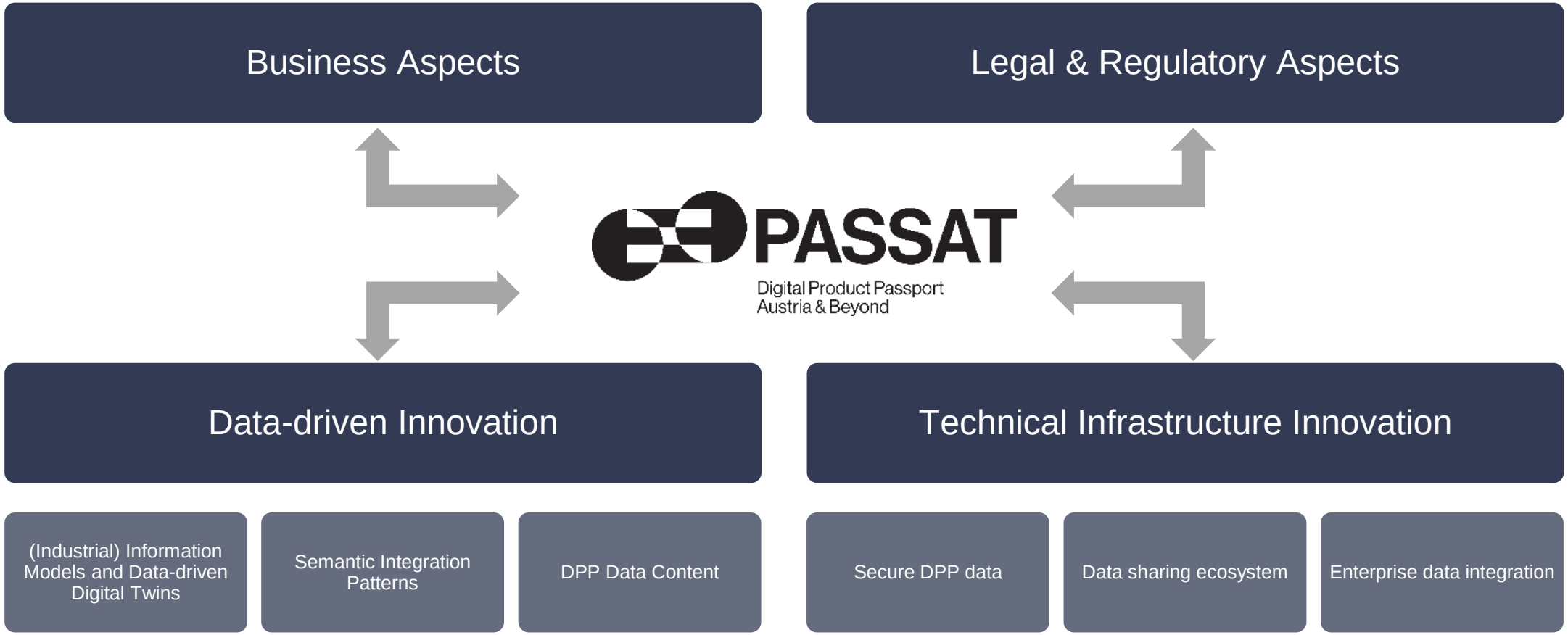
Enabling trustworthy traceability to create new business and service models incorporating usage data in product design



Challenges

- Managing fragmented data across various suppliers, manufacturers, retailers and recyclers
- Identification and authentication of „analog“ products
- Complexities in ensuring relevant data is available for long-term product care, repairs, and recycling (quality of secondary materials)
- Need for incorporating usage data and repair history across multiple actors in the supply chain
- Ensuring product transparency and protect intellectual property rights.

Approach


Business Aspects
Legal & Regulatory Aspects
PASSAT
Digital Product Passport
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Data-driven Innovation
Technical Infrastructure Innovation
(Industrial) Information Models and Data-driven Digital Twins
Semantic Integration Patterns
DPP Data Content
Secure DPP data
Data sharing ecosystem
Enterprise data integration

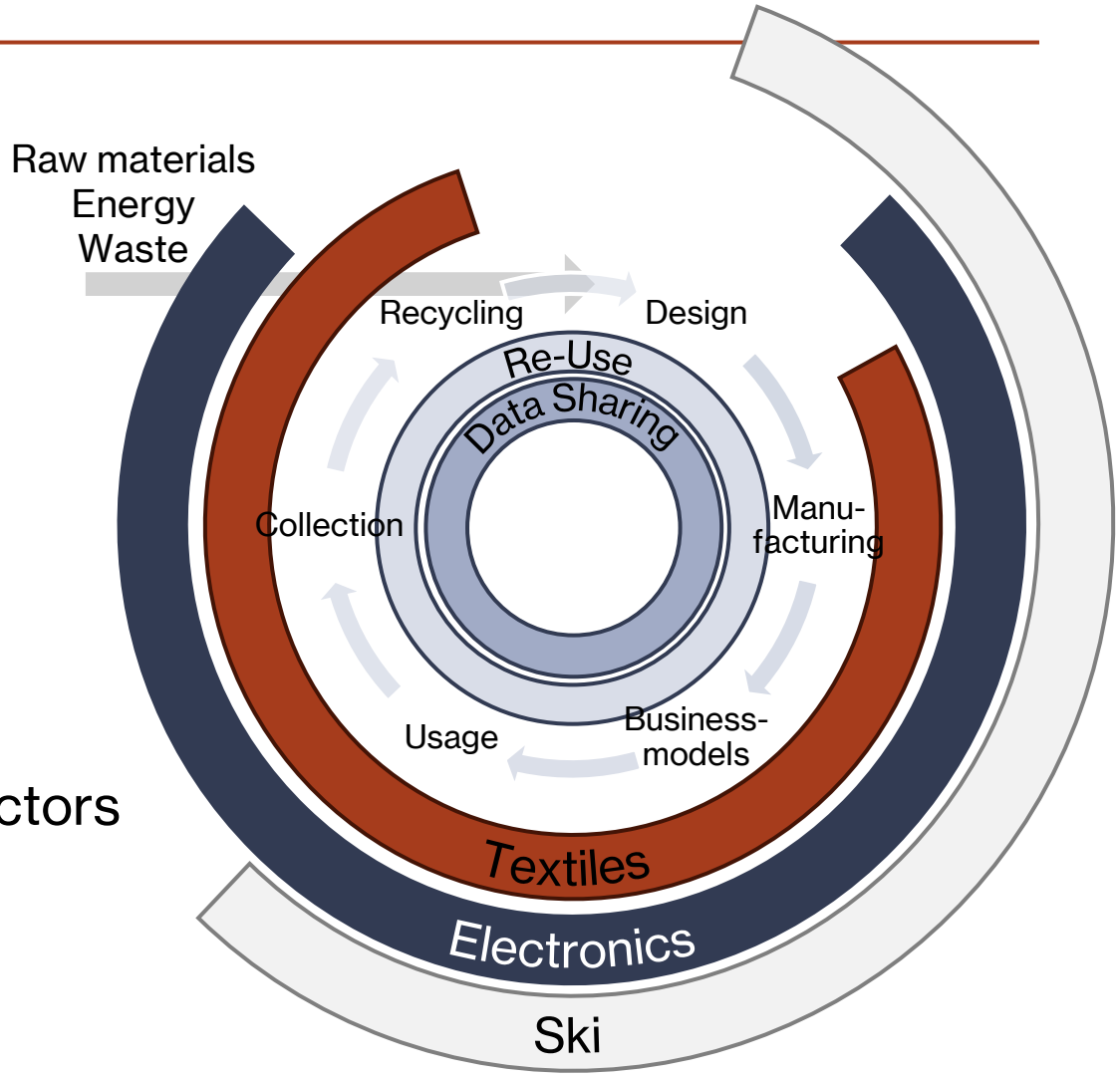
Unlocking the Potential

- Each actor controls and owns their data
- Trustworthy data sharing
- Regulatory compliance & data protection

Data Sovereignty

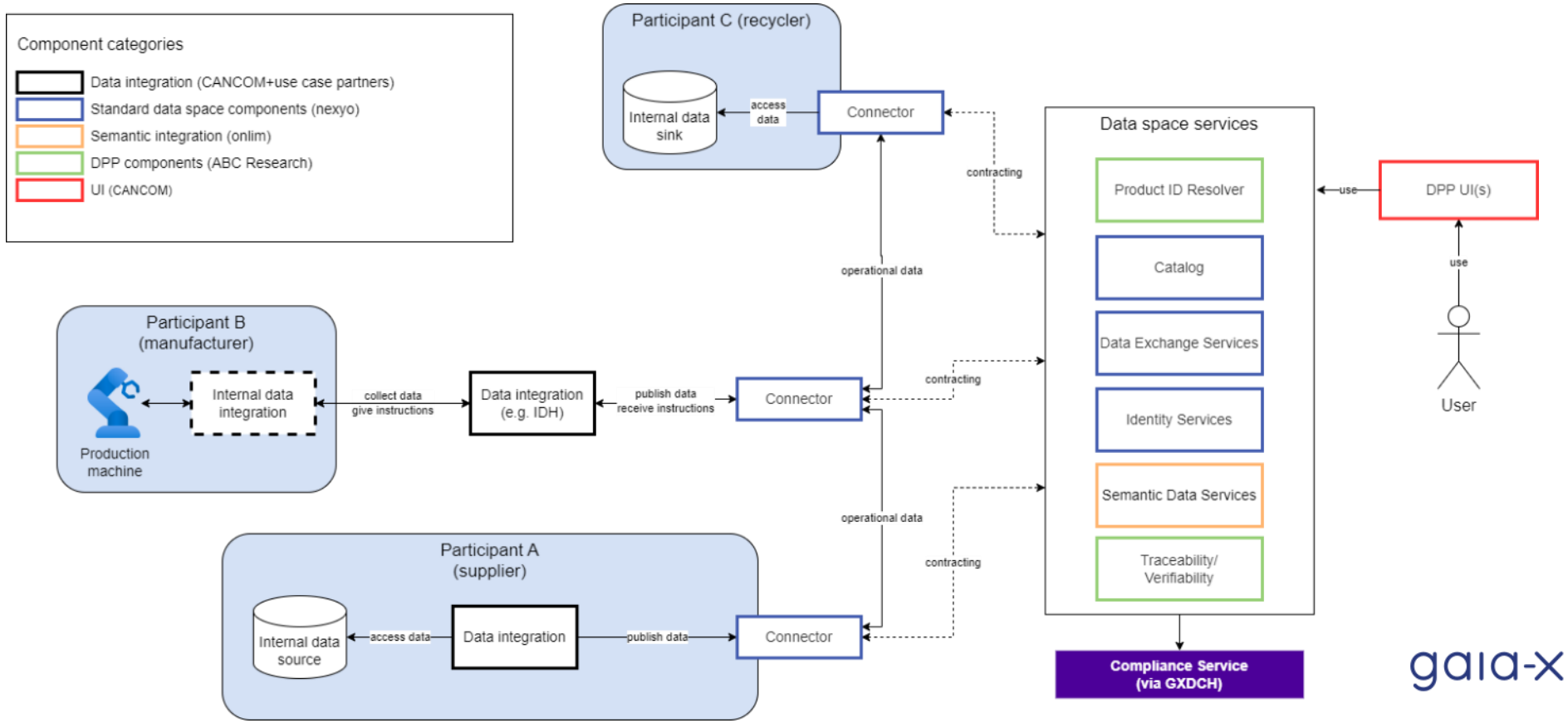
Interoperability

- Seamless integration of data from diverse actors
- Technical interoperability between systems
- Open standards and protocols



Architecture

By analyzing architectural options and best practices, PASSAT provides strategic guidance on establishing data sovereignty and interoperability



DPP Beyond

- Using the DPP beyond the mandatory requirements to enable new service and business models
- Reliable data for informed decision making and robust Machine Learning models
- Technology neutrality and openess
- Building on open standards and established trust frameworks
- Lowering the entry barriers for SMEs to utilize the potential of the DPP

Conclusion

Secure and trustworthy data sharing across the supply chain is the foundation to utilize the DPP.

Unlocking the potential of the DPP for sustainable growth and facilitate circular economy

Demonstrating data sovereignty and interoperability in living labs for textile, electronics and ski industry.

Get conntected

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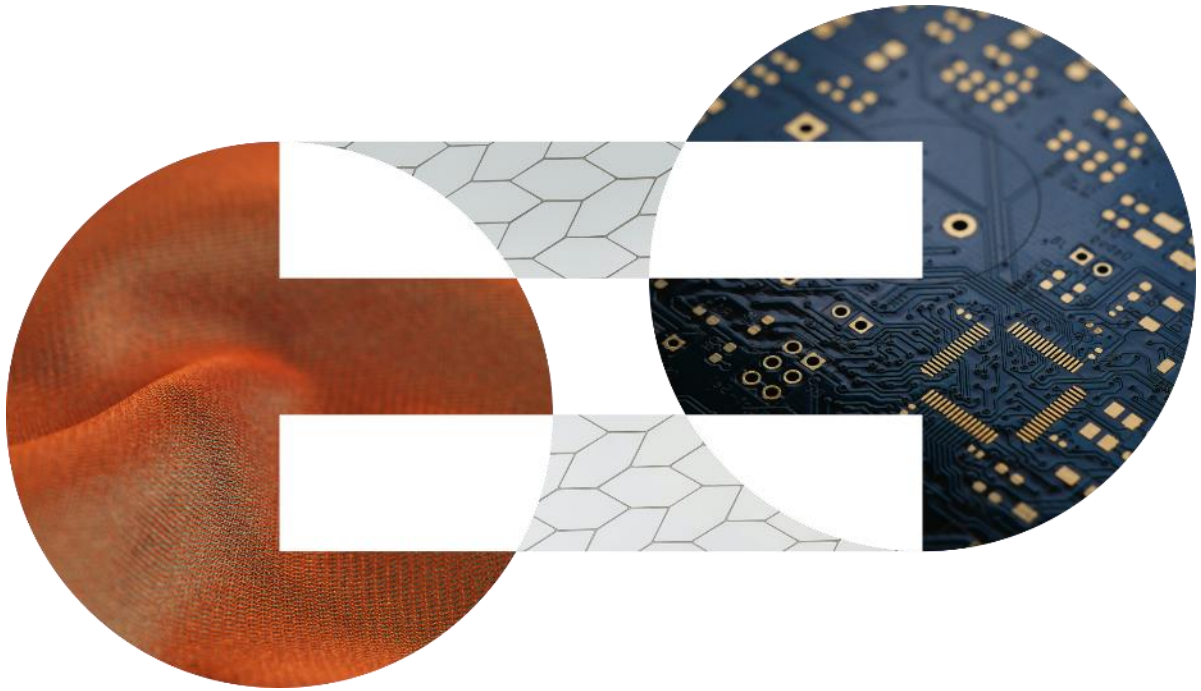
@passat-dpp



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Digital Product Passport

Ecodesign for Sustainable Products Regulation (ESPR, 18 July 2024)

Article 1: This Regulation establishes a framework for the setting of ecodesign requirements **that products have to comply with to be placed on the market or put into service**, with the aim of improving the environmental sustainability of products in order to make sustainable products the norm and to reduce the overall carbon footprint and environmental footprint of products over their life cycle, and of ensuring the free movement of sustainable products within the internal market.

This Regulation also establishes a **digital product passport**, provides for the setting of mandatory green public procurement requirements and creates a framework to **prevent unsold consumer products from being destroyed.**

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Industrial Needs

- Institutionalization of a DPP infrastructure
- Recommendations for the collection, documentation and processing of product information
- Training courses for companies (SMEs)
- Protection of company know-how
- Interoperability at system and data level via open standards
- Consideration of the heterogeneity of stakeholders
- Better market insights and operational efficiency
- Experiments in lab environments

Development Cycles