



EU Digital Product Passports

Advancing Sustainable & Circular Products



Evelyn Ritter and Mackenzie Coon

October 4th, 2023

Agenda



Concept



Regulatory Framework



Benefits & Barriers



Industry Adoption Efforts



Updates



DPP Concept

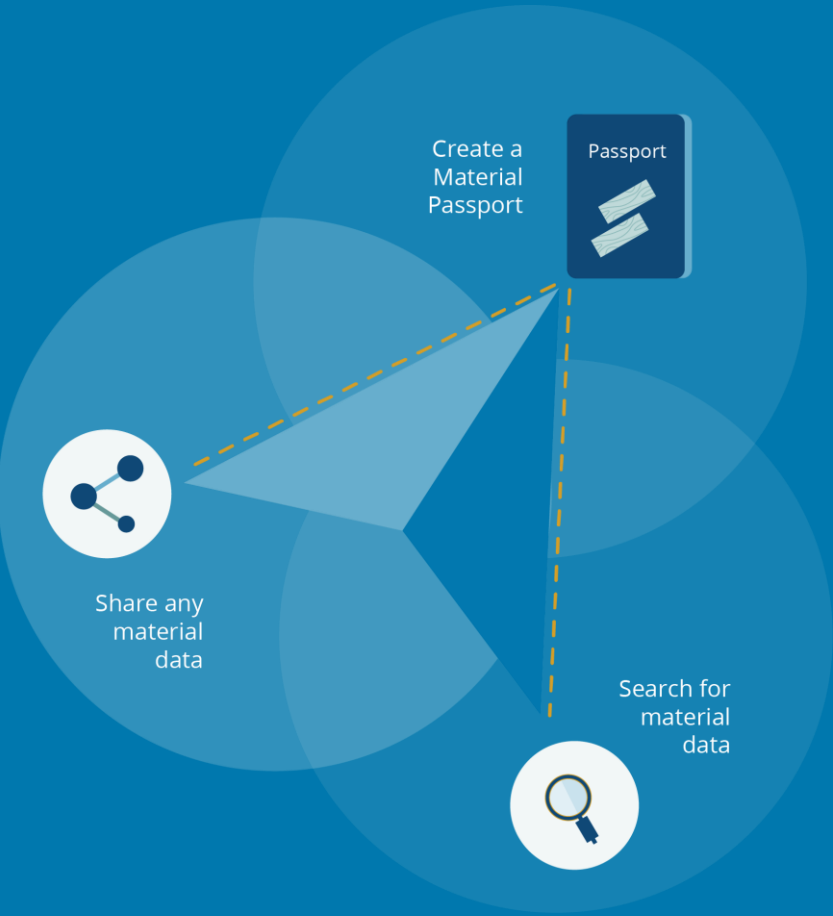
Product Passport

What is it?

- Similar to a country passport
 - Travels with the product
 - Includes necessary information
- Information much beyond a passport
 - Expandable digital framework
 - Circularity
 - Sustainability
 - Compliance and Chemicals of Concern



Digital Product Passports



Company	Name	Category	Disclosure Level
 TOXNOT EXCHANGE	Circularity Inc	Eco Fabric	Fabric
			1000 ppm



- ✓ CA Prop 65
- ✓ Conflict Minerals
- ✗ RoHS
- ✓ EU REACH
- ✓ SCIP



[Invite Your Suppliers](#)



Level	Part Name	Chemical Registry Number	Rating
> Summary	Sustainable Fabric	12345-50-9	LT-P1

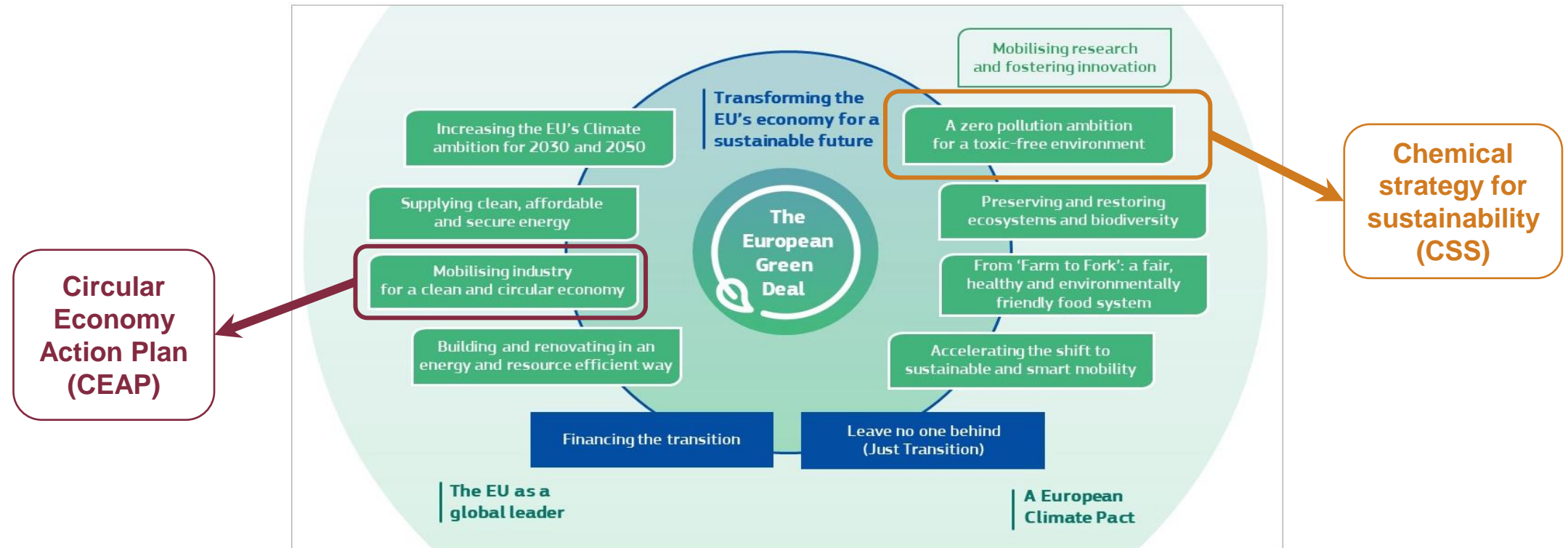


DPP Regulatory Framework

Specific Regulatory Framework

Specific Regulations	Implementation Status	Industry Scope
EU Battery Regulation	Strategy is implemented – Specific updates later in this presentation	Batteries
Ecodesign for Sustainable Products	Implemented – Proposal regulation is planned for 2024	Electronic items
EU Strategy for Sustainable and Circular Textiles	Implemented – Specific requirements in process	Textiles
Construction Products Regulation	Implemented – Specific requirements in process	Construction Products

Regulatory Context



Regulatory Context

How do DPPs Fit in?

- European Green Deal (EGD)
 - Circular Economy Action Plan (CEAP)
 - Specific regulations within this
 - Still finalizing regulations and requirements
- Framework and requirements
 - Framework will be the same for all Product Passports
 - Requirements will be distinct for based on product type
 - Batteries have been established
 - All other product types still in progress

European Green Deal

Circular Economy
Action Plan

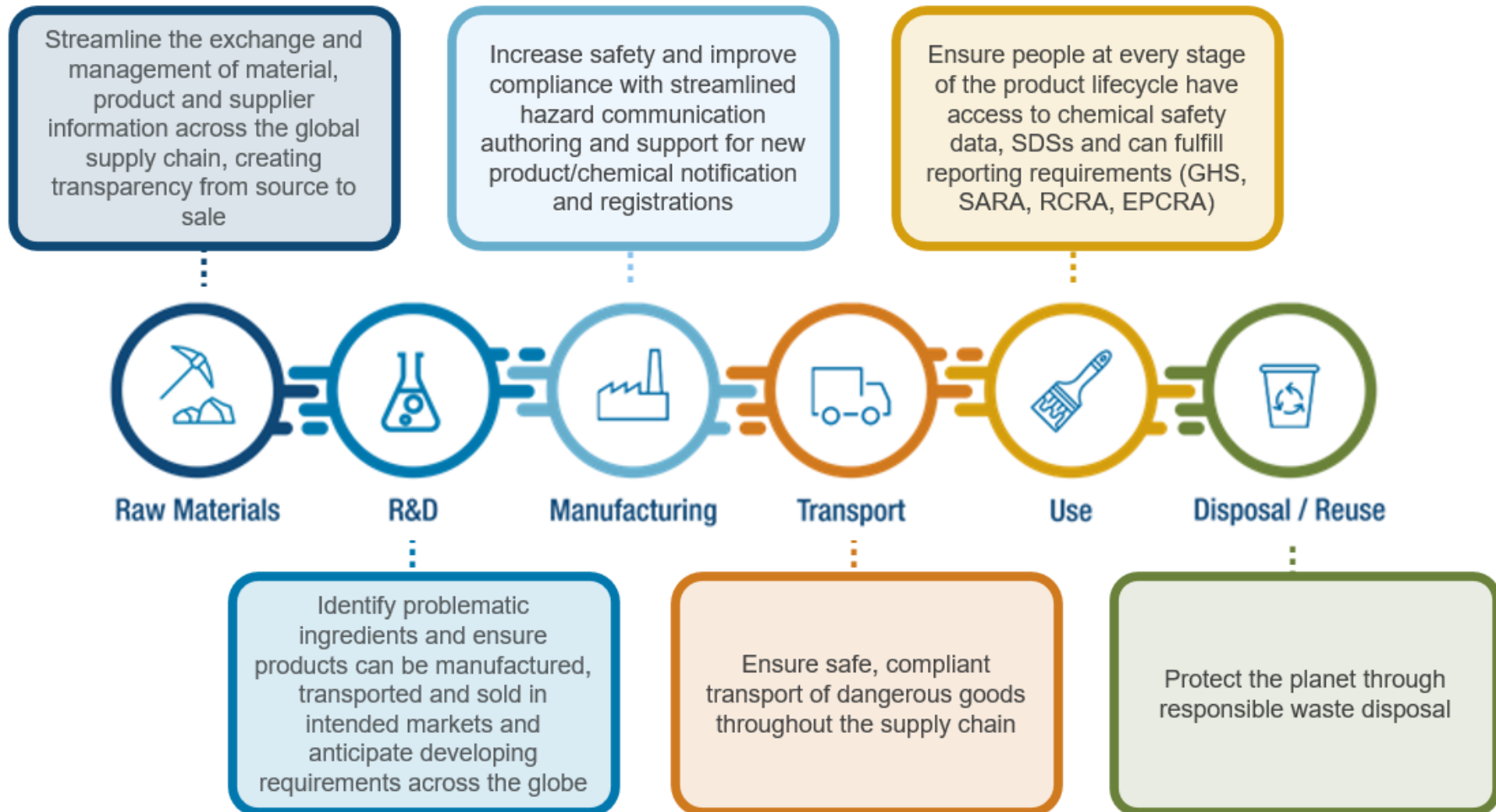
EU Battery
Regulation

Ecodesign
for
Sustainable
Products

EU Strategy
for
Sustainable
and Circular
Textiles

Construction
Products
Regulation

Intended Outcomes





Benefits & Barriers

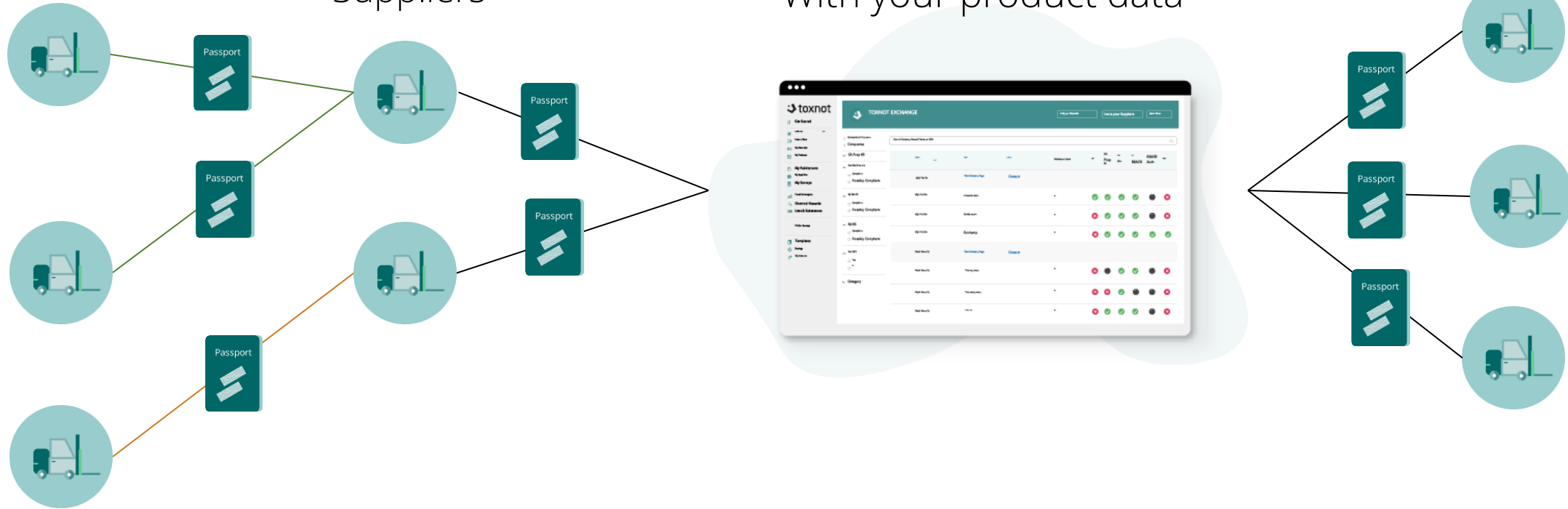
Understanding the Supply Chain

Upstream Suppliers

Your Suppliers

Manufacturer
With your product data

Your Customers
and Regulators



Industry Demands - Barriers to Transparency

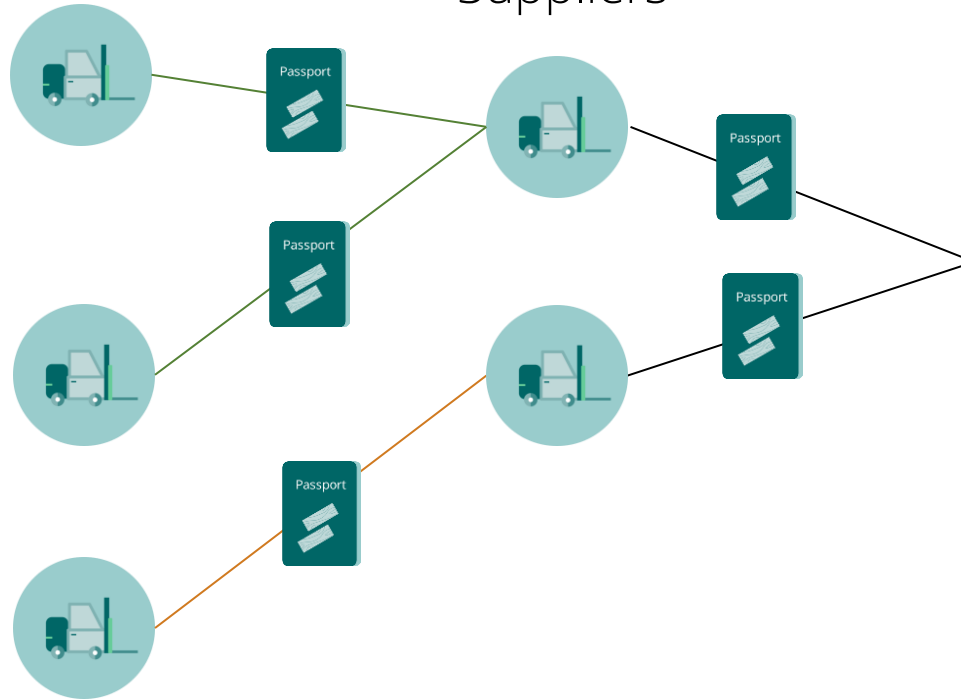
- Lack of knowledge to appropriately respond to inquiries
- Do not have the data
- Hesitant to share intellectual property
- Too many requests are burdensome
- Requests come in many shapes and formats
- Regulations are numerous, different in each market, and all are changing
- Complex product catalogs



Supplier Benefits

Upstream
Suppliers

Your
Suppliers

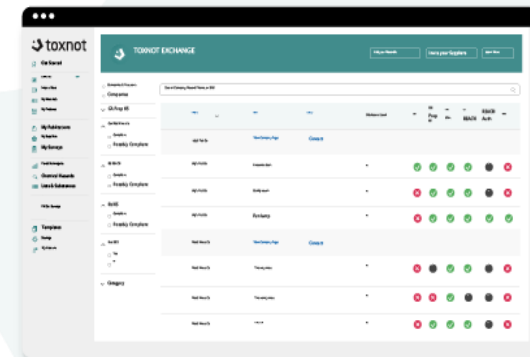


- Reuse responses to multiple customers
- Centralized compliance data
- Clear, defined requirements

Manufacturer Benefits

- Retains value of “waste” at product end-of-life
- Centralized communication with multiple stakeholder groups
- Extend product life
- Clear, standardized display of product attributes
- New sales opportunities and models at product end-of-life
- Reduces environmental impact

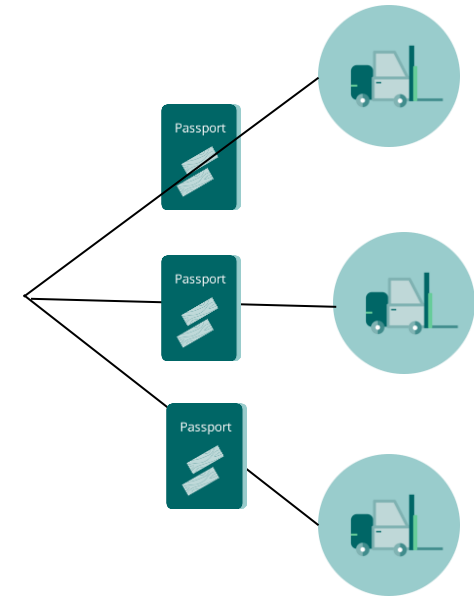
Manufacturer
With your product data



Customer and Regulator Benefits

- Standardized way to access compliance and sustainability attributes
- Standardized, easy to use access to product documentation:
 - warranty
 - maintenance information
 - disposal information
 - repair and remanufacturer
- Sustainability products should be more cost competitive to disposable products because of higher end-of-life value

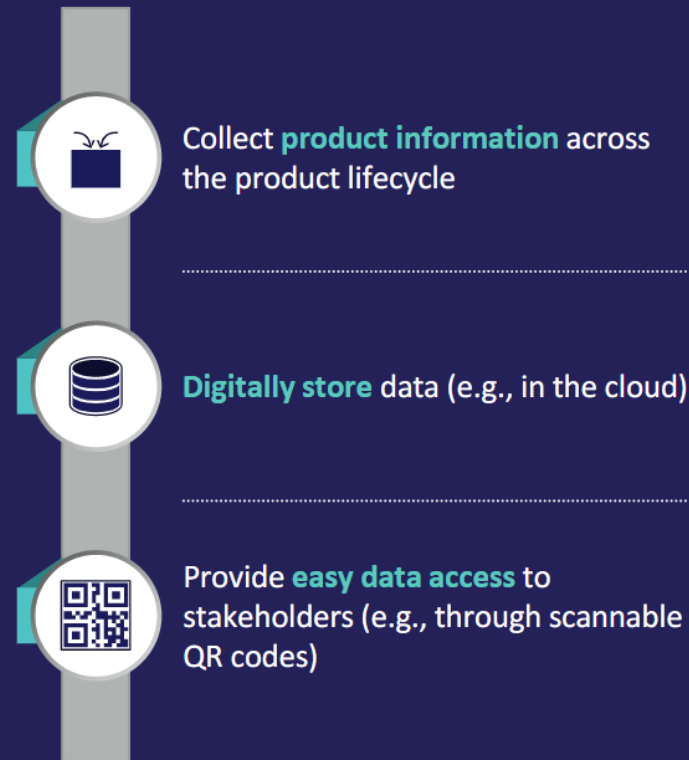
Your Customers
And Regulators



Value to Stakeholders

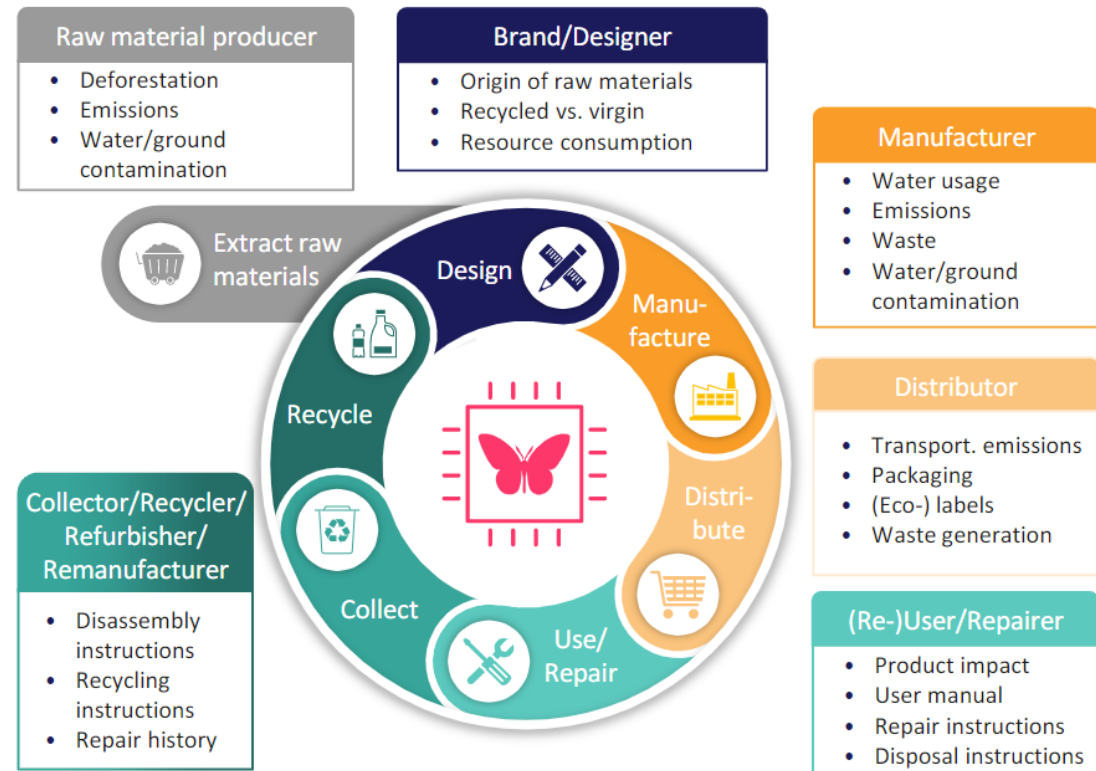
Impact on Circularity and Sustainability

DPPs have several functionalities



They share product information across the product lifecycle

Exemplary information shared in a DPP across the product lifecycle¹



Value Drivers

DPP could be a key tool to improve circularity ...



Empowers informed, **more environmentally conscious decision-making** across the value chain (VC)



Facilitates **effective management of waste flows and EoL¹ treatment**, thereby increasing recycling rates and access to recycled materials and products



Enables **traceability of environmental impact and thus more accurate measurement** (e.g., scope 3 emissions)



Provides **common foundation and clear requirements** for becoming circular



Enables setting and digitally tracking **regulatory circular economy targets and verifying compliance** with them

... and thereby drive economic value

Creates **corporate value through collaboration** (e.g., operational efficiency improvements and innovation of new materials/products, business models, and markets)

Leads to **higher value retention** from waste, **longer material lifetime, job creation, and lower raw material dependency**, thus mitigating impacts of supply shocks and price volatilities

Enables **more efficient energy and resource consumption** and thereby reduces associated costs for economy, society and env.

Ensures an **equal level playing field**, enhances visibility and credibility of sustainable products, and decreases VC deficiencies

Spurs digital **capability development** of authorities, thereby increasing the efficiency of regulatory processes and reducing resource spending



Industry Adoption Efforts

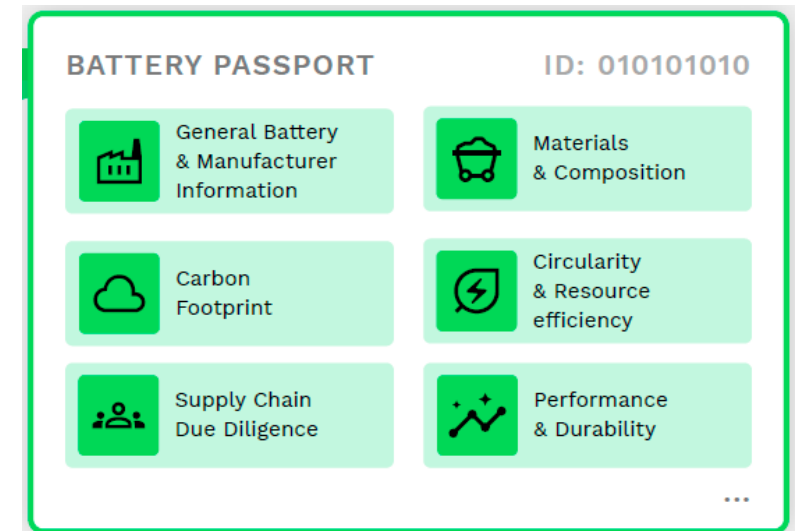
Example: Battery Passport

- New Battery Regulation
 - European Commission proposal (10.12.2020)
 - Gradually replacing Directive 2006/66/EC
 - Goal: Minimising the harmful effects of batteries
 - Hazardous substance limits
 - Collecting and recycling target
 - Labelling and marking requirements (QR code and CE marking)
 - Carbon Footprint Declaration
 - Documentation and information sharing (Battery passport)



Example: Battery Pass

- Latest Milestone: Hannover Messe 17.04.2023
 - Publication by the battery pass consortium of the “[Battery Passport Content Guidance](#)”
 - Content requirements of the EU Battery regulation
 - The guidance is addressed to different groups e.g., Responsible operators, EU commission, Standardisation organisations but also for education to the public
 - Complemented by a [Data Longlist](#) and rules for [calculating the carbon footprint](#)



[Resources - The Battery Pass](#)

On the horizon: Detergent Proposed Legislation

- In particular, the proposal intends to introduce various new requirements, including:
 - New types of detergents: Microbial cleaning products
 - New sales method (refill sales)
 - New labeling technologies (voluntary digital labeling)
 - Product passport
 - Abolishing the ingredient data sheet for hazardous detergents
 - Maintaining ingredient data sheet only for non-hazardous detergents
 - Non-EU manufacturers may now appoint an authorized representative
 - Allowing self-conformity assessment (with no certified body)

CE



Expected Inclusions for Other Product Types

Varies by Product Type

- Product and Manufacturer Details
- Chemicals of Concern and Composition
- Safe Use, Maintenance, and Repair Information
- Carbon Footprint and other Environmental Impacts
- End-of-life Options
 - Take-back programs, recyclability, etc.
 - Composition and Compliance Information for Recyclers or Second-Hand Users
 - Waste Information
- Durability and Reliability Information
- Recycled Content

What does this translate to for manufacturers?

Industry Example: Building Materials

- Product Identifiers

- Image, Name and SKUs



- Documents

- TDS
- Compliance
- Warranty
- Specification Sheets

- Embodied Carbon and EPD

- Sustainability Certifications



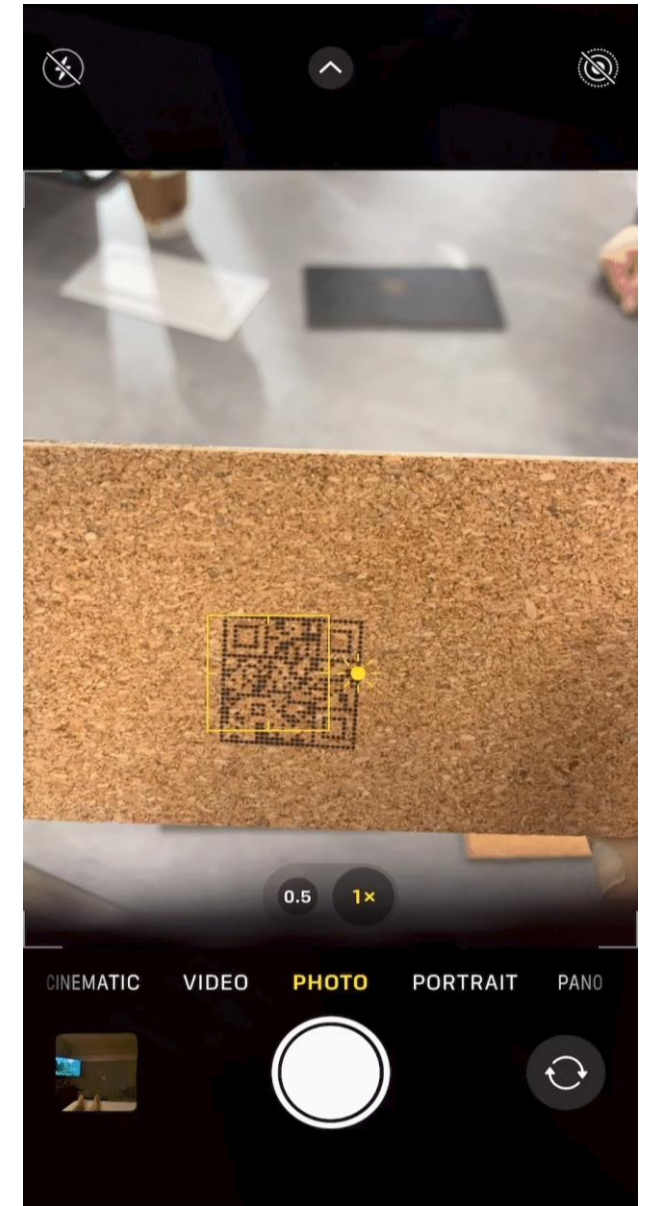
- Instructions

- Installation Guidance
- Maintenance
- Repair
- Removal and Reuse

Novalis Product Passports

How are companies using this today?

- Passport contains:
 - Maintenance and Warranty Information
 - End-of-life Options
 - Chemical Composition and Compliance
 - Embodied Carbon
 - Sustainability Certifications
- QR code printed on product links back to passport
- Linked on product website and as key customer documentation





Updates

Recent Activities

- EU call for proposals out for pilot projects. Less than 5% of participating companies have active Product Passport pilots
- Data Sharing Structure Options
 - Decentralized Nodes
 - Centralized with Interoperability Frameworks
 - Other
- Sustainable Products Library Mindful MATERIALS integrating with 3E Exchange Digital Product Passports
- Growth of DPPs
 - ~20% per month
 - 150% over the last year



Thank you!
Let's continue conversations at Booth 12

evelyn.ritter@3eco.com

mackenzie.coon@3eco.com