

SGS C&P SOFTLINES

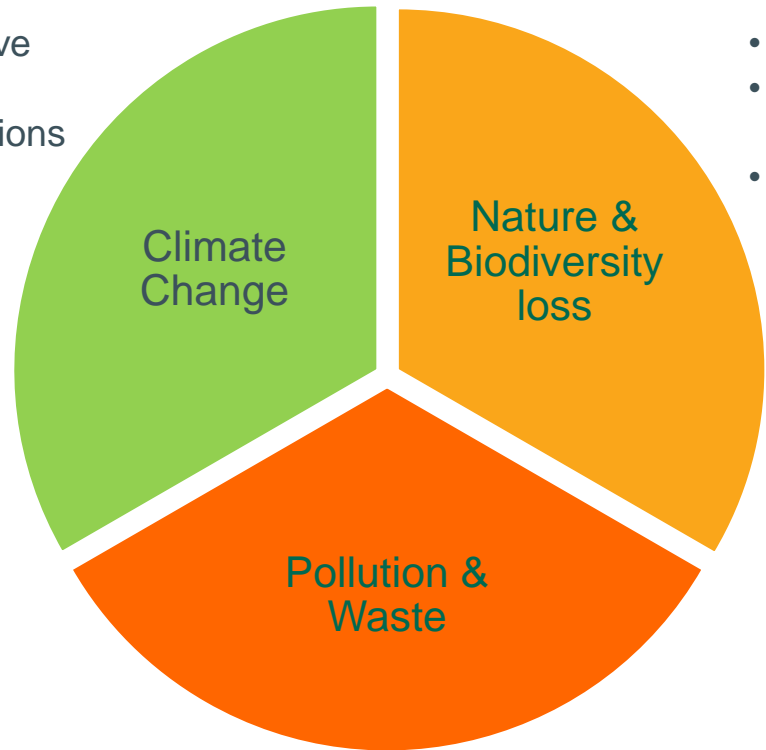
Recycling and Circular Economy Approaches



Current Status

➤ **Triple planetary crisis:** textile and footwear industry has great impact to environment

- Water & energy-intensive production
- Greenhouse gas emissions



- Deforestation, habitat conversion
- Heavy use of pesticides, fertilizers, etc in raw material production
- Intensive monoculture farming

- Water and chemical pollutions
- Microplastic pollution
- Overconsumption & Overproduction

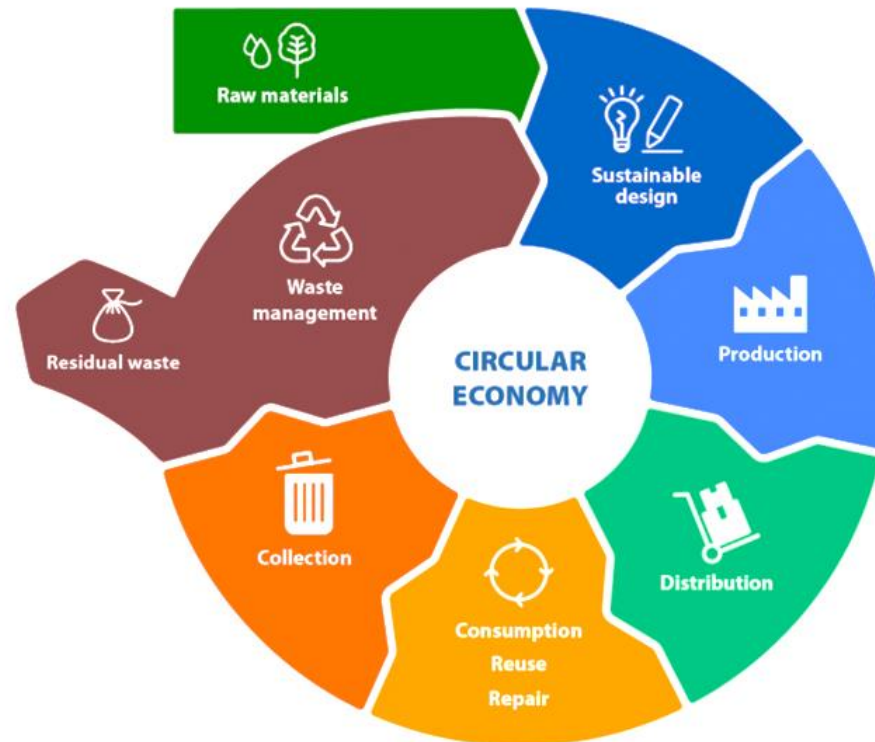
Stakeholders in the fashion industry are critical to achieve the **Sustainable Development Goals (SDG)**



Circular Economy

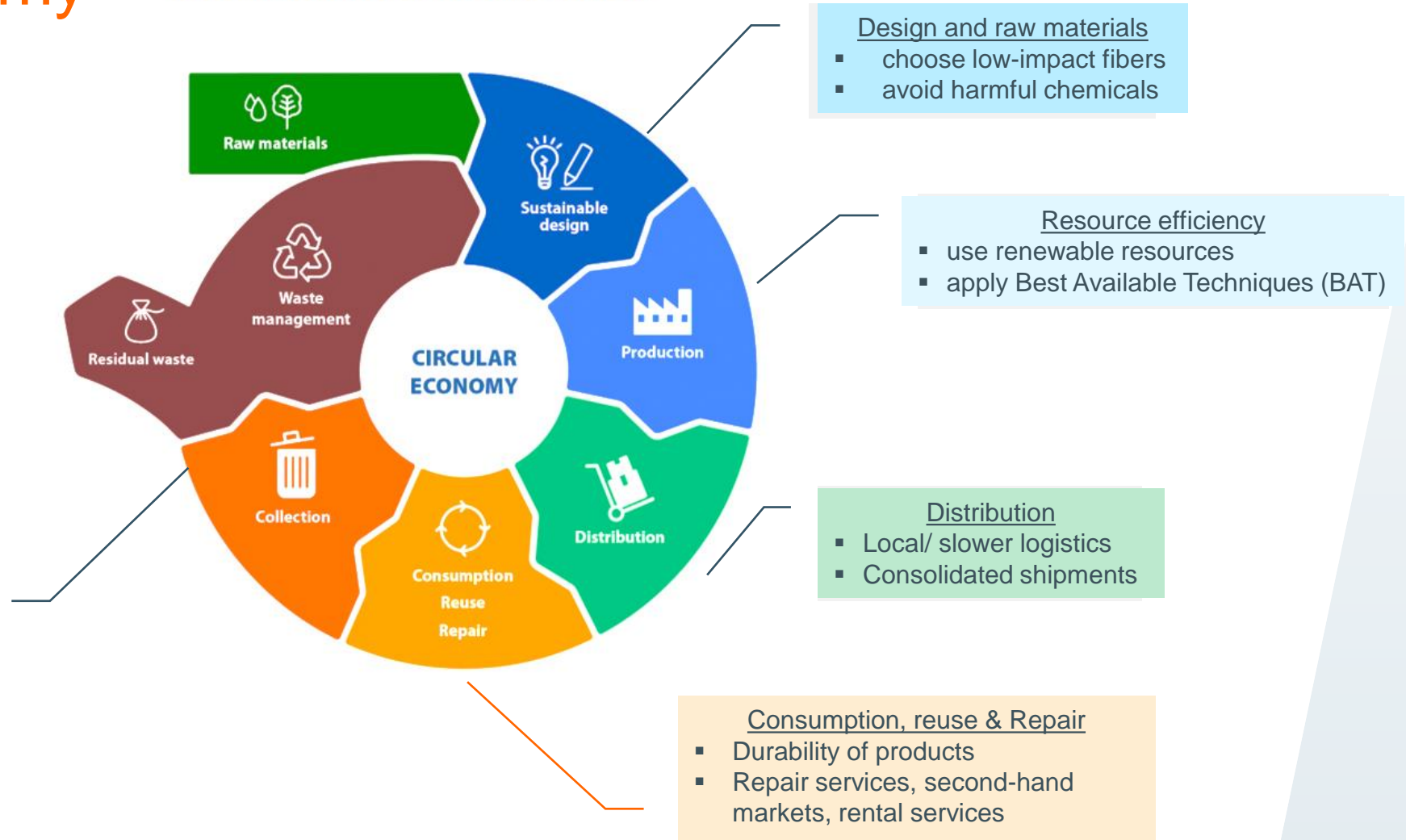
- Urgent Transition from **Linear System** (take-make-waste) to **Circular Economy**
- Reduce **Environmental Impacts** in the Whole Product Life Cycle

The circular economy model:
less raw material, less waste, fewer emissions



Circular Economy

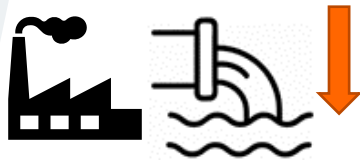
The circular economy model:
less raw material, less waste, fewer emissions



Circular Economy

Benefits

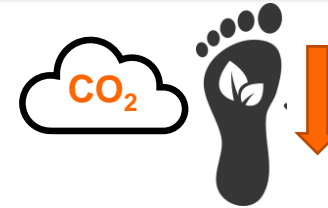
Minimize Waste & Pollution



Restore and Regenerate ecosystems



Reduce CO₂ Emissions & Environmental Footprint



The circular economy model:
less raw material, less waste, fewer emissions



Driving Forces of Circular Economy for Fashion Supply Chain

Regulatory Compliance



- EU New Circular Economy Action Plan (CEPA)
- EU Ecodesign for Sustainable Products Regulation (ESPR)
- US California: SB 707 Responsible Textile Recovery Act of 2024
- France: The Anti Waste Law for a Circular Economy
- China: 14th Five-Year Plan for Circular Economy

Environmental Protection



- Enormous Waste Generated During Textile Production and Use
- Significant Resource Consumption and Environmental Impact
- Greenhouse Gas (GHG) Emission

Market Demands



- Meeting Growing Demand for Products with Low Environmental Footprint
- Attracting Investment for Business Growth
- Enhancing Brand Value to Meet Consumer Expectation

EU New Circular Economy Action Plan (CEPA)

- Adopted in Mar, 2020
- Part of the European Green Deal, focus on sustainable growth
- Introduction of initiatives that target entire lifecycle of products

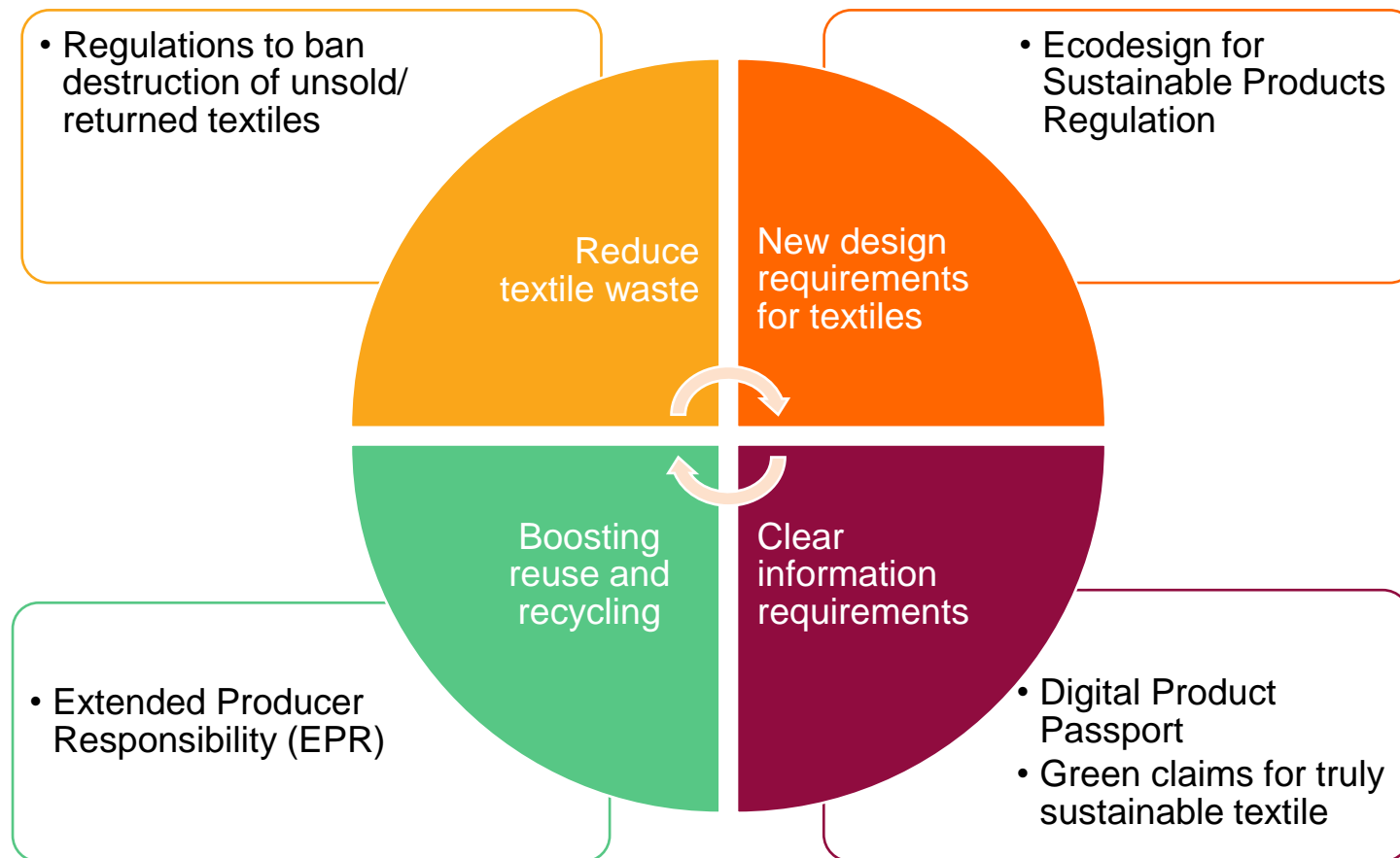
➤ Main Objectives

- Waste prevention
- Maximizing the longevity of resources within the economy



EU Strategy for Sustainable and Circular Textiles

- **Sector-specific roadmap** that turns Circular Economy Action Plan (CEAP) into concrete rules and measures for textiles



Ecodesign for Sustainable Products Regulation

Regulation (EU) 2024/1781, signed on June 13, 2024, establishes a comprehensive framework for setting Ecodesign requirements to enhance the environmental sustainability of products within the European Union. The key objectives:

- Enhancing Product Sustainability
- Resource and Energy Efficiency
- Reduction of Hazardous Substances

According to the **Article 18 - Prioritisation and planning** - the Commission would priorities the following product :



Battery



Textile & Apparel



Footwear



Chemical

Ecodesign Requirements – Article 5



Framework for products to enhance environmental sustainability that focuses on aspects:

- Durability and reliability
- Substances of concern
- Energy use and energy efficiency
- Water use and water efficiency
- Resource use and resource efficiency
- Carbon footprint and environmental footprint
- Recycled content and recyclability

Data Disclosure & Digital Product Passport (DPP) – Article 9










Introduces the concept of the Digital Product Passport, which is intended to **provide comprehensive information** about the product's environmental sustainability.

Ecodesign Requirements Framework for Sustainable Products

(Article 5)

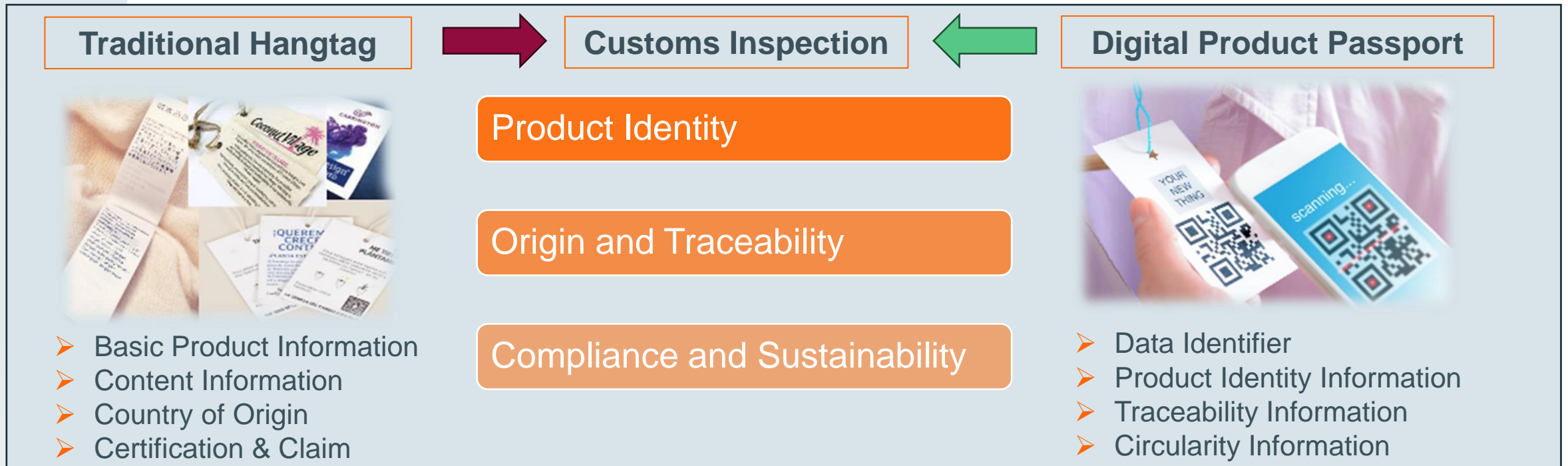


Ecodesign Requirements in ESPR

ESPR Category	Exemplary Requirements
 Durability and reliability	Physical properties of the product, including special materials and test performance
 Substances of concern	Proof of compliance for hazardous chemicals in products, such as reports and certificates
 Energy use and energy efficiency	Energy consumption and energy-saving verification results during product production
 Water use and water efficiency	Water consumption and water-saving verification results during product production
 Resource use and resource efficiency	Resource consumption, resource-saving verification results, and waste management during product production
 Carbon footprint and environmental footprint	Product carbon footprint calculation and life cycle assessment report
 Recycled content and recyclability	Verification of preferred materials in products

What is a Digital Product Passport (DPP) ?

Similar to human passports, **digital product passports serve as information carriers** to prove product identity information **in international trade and circulation**. As a carrier of information, digital product passports accompany products **through the entire life cycle of product design, manufacturing, application, recycling, and disposal**.



Ecodesign Data Disclosure & Digital Product Passport

Traditional Hangtag



Digital Product Passport




Information	Basic product information (size, material, care instruction, price, and etc.)	Basic product information + Verified environmental data (production process, carbon footprint, recyclability, material origins, and etc.)
Accessibility	Only can be accessed by consumers in store via printed labels	Integrating data on a DPP platform and offering consumers instant access to the verified data without overwhelming them via QR Code
Supply Chain Transparency	Limited supply chain visibility for end consumers	Include supply chain data, facilitating traceability of material origins, production locations and certificates
Use Scenarios	Mainly used in physical retail to quickly provide basic product data and information to consumers	For broader applications, including online distribution, repair and recycling process

ESPR - Prohibitions on Destruction of Unsold Products

- Economic operators shall take necessary measures which can reasonably be expected to prevent the need to destroy unsold consumer products
- Obligation for economic operator discarding unsold products to disclose information on destruction on their website:
 - Number and weight per year;
 - Reasons for destruction;
 - Relevant exemption if applicable;
 - applicable waste treatment operation;
 - measures taken to avoid destruction
- Destruction of unsold consumer products as listed in Annex VII (apparel and footwear) shall be prohibited
- Applicable to large enterprises 2 years after ESPR entry into force, 6 years for medium sized enterprises. Micro and small enterprises exempt
- Commission will adopt Delegated Act to set out derogations 12 months after entry into force to ensure proportionality and prevent indefinite storage of unsold products

SGS Ecodesign and Digital Product Passport Solutions

		Benefits	Services
	Gap Analysis & Goal Setting	<ul style="list-style-type: none"> Identify Gaps Define Targeted Objectives Foster Continuous Improvement Develop a Strategic Plan 	<ul style="list-style-type: none"> SGS Voluntary Product Certification SGS Traceability Solution SGS Decarbonization Solution
	Supply Chain Training	<ul style="list-style-type: none"> Adopt Best Practices Develop Expertise Ensure Environmental & Safety Compliance Optimize Performance 	<ul style="list-style-type: none"> Ecodesign and Digital Product Passport Series Workshop
	Assessment & Verification	<ul style="list-style-type: none"> Ensure Environmental Safety and Legal Compliance Maintain Quality Assurance Enhance Consumer Confidence 	<ul style="list-style-type: none"> Recycling Process Verification Material Safety and Performance Assessment Consistency of Quality and Supply Traceability Capability Assessment Resource Efficiency Verification
	Best Practice Implementation & Improvement	<ul style="list-style-type: none"> Optimize Process Enhance Safety Reduce Environmental Impact Improve Quality 	<ul style="list-style-type: none"> SGS SMART Source 



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