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Product Carbon Footprints

Unlock your competitive edge in the EU market and
master your Scope 3 goals with Product Carbon Footprints –
a strategic asset that turns environmental compliance into untapped profit

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Product Carbon Footprint

The role and definition of Product Carbon Footprint.

What is a Product Carbon Footprint (PCF)?

A **Product Carbon Footprint (PCF)** is a focused methodology used to quantify the total greenhouse gas (GHG) emissions associated with a specific product. It is increasingly becoming a prerequisite for doing business in the European market.

- **Scope of Impact**
  Focuses exclusively on climate change (CO_2eq)
- **System Boundaries**
  Usually a "Cradle-to-Gate" approach (extraction to factory exit), but this may vary by use case (e.g., cradle-to-customer-gate, cradle-to-grave)

PCF versus Life Cycle Assessment (LCA)

A **Life Cycle Assessment (LCA)** is a systemic approach which supports the integration of sustainability into design, innovation and evaluation of products and services and related policies in the EU and internationally.

- **Scope of Impact**
  Holistic approach, covering water, land use and toxicity
- **System Boundaries**
  "Cradle-to-Grave" approach (including use and disposal)

The role of PCF in the market

Suppliers

Use PCF defensively to avoid being de-risked by major buyers, and offensively to win tenders by demonstrating they are the low-carbon options.

Manufacturers

Use upstream PCFs to procure lower-carbon inputs and inform product design; and develop PCFs to provide to brands that require them.

Brands

Use upstream PCFs to reduce Scope 3.1 emissions (often a major concentration) via smarter procurement; and use cradle-to-gate PCFs for credible product/consumer communications.

Technological evolution

Adopting PCF measurement has historically been a challenge because of manual data collection and static results that were outdated upon arrival. Technology is now bridging the gap in creating a digital twin of your products.

The Challenge

Supply chains are complex

Manual PCFs can take months to complete and are difficult to connect to the corporate carbon footprint.

< 5% of supplier interactions contain actual PCF data

< 30 % responsive rates from survey suppliers for PCFs

The Solution

Technology is bridging the gap

Platforms like Watershed allow companies to build “production models” (i.e., the framework or methodology used in manufacturing and production processes to transform inputs into finished goods or services) once, by injecting primary data into a constant framework.

80-90% reduction in data collection time compared to traditional methods

Key Benefits

Watershed

Velocity & Efficiency

Measurement speed is controlled by the buyer, not the supplier’s reporting cycle. Technology can reduce data collection and calculation time to up to **2 minutes**.

Scenario Simulation

Technology enables scenario simulation, allowing rapid comparison of material adaptations and their impacts.

Comparability

Results are consistent year-over-year and from supplier-to-supplier.

Why would organisations adopt PCF now?

Organisations are moving beyond compliance to leverage PCF measurement for commercial advantage, through securing market access, meeting regulatory compliance, capturing operational value, and driving innovation.

	Suppliers	Manufacturers	Brands
SECURING MARKET ACCESS (PROCUREMENT)	**Public tenders** The NHS requires suppliers' PCFs by 2028; Green Public Procurement (GPP) mandates PCF thresholds		
	B2B requirements PCF data is becoming a supplier qualification requirement		
	Credit for action Without PCFs, companies often can't credibly quantify and claim credit for supply-chain actions in their carbon footprinting		
REGULATORY NECESSITY	**Digital Product Passport (ESPR)** PCF is a core requirement for batteries, with requirements phasing in during 2026-2027. Other key sectors are likely to follow.		
	CBAM EU importers must report actual embedded emissions via PCF to avoid costly "default value" penalties		
	Construction (CPR 2024/3110) Mandatory environmental disclosures in 2028, with carbon backstops for certain sectors (e.g., cement) by 2029		
OPERATIONAL VALUE & INNOVATION	**Hit targets via strategic sourcing and product design** Several manufacturing and chemical companies leverage PCF data to secure lower-carbon supply chains		
	Energy efficiency Tech companies already managed to significantly cut emissions by using component carbon data		
	Process optimisation Companies across several sectors embed PCF in supplier assessments, enabling them to reduce GHG emissions		

PCF as a competitive requirement

Carbon data has transitioned from a transparency exercise to a business requirement.

Reach out to us today to adopt dynamic, technology-driven PCF measurement. This approach will not only help you to achieve regulatory compliance but also secure a *strategic advantage in procurement*, optimise *manufacturing costs*, and future-proof your *"right to supply"* in a rapidly decarbonising global economy.

Organisations that adopt PCF today gain:

Regulatory Compliance
Meet Digital Product Passport, CBAM, and CPR requirements

Strategic Advantage in Procurement
Gain favourable consideration from major buyers

Optimized Manufacturing Costs
Identify carbon hotspots and reduce operational expenses

"Right to Supply"
Secure long-term market access in a decarbonized economy

Not yet started with PCFs?

For more information, reach out to one of our experts

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