Terms used in this paper

KEY TERM	DEFINITION
Cradle-to-gate	Refers to the assessment of a partial product lifecycle from resource extraction (cradle) to the factory gate, before it is transported to the customer. This term covers all the processes involved in the production phase but excludes the use and disposal phase.
Cradle-to-grave	Describes the full lifecycle assessment of a product from resource extraction (cradle) to disposal (grave), including all stages of production, usage, and end-of-life treatment.
Lifecycle assessment (LCA)	A systematic method for evaluating the potential environmental impacts associated with a product, process, or service throughout its entire lifecycle, from raw material extraction to disposal.
Scope 1-2-3	 Categories of greenhouse gas emissions as defined by the GHG Protocol. Scope 1: Direct emissions from owned or controlled sources. Scope 2: Indirect emissions from the generation of purchased energy. Scope 3: All other indirect emissions that occur in a company's value chain, including both upstream and downstream emissions.
Direct v. indirect emissions	 Direct emissions: Emissions from sources that are owned or controlled by the reporting entity. Indirect emissions: Emissions that are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity.
Upstream v. downstream	 Upstream: Emissions that occur in the supply chain before the product reaches the reporting entity, such as raw material extraction or production. Downstream: Emissions that occur after the product has left the reporting entity, including the use, disposal, and recycling of the product.
Global Warming Potential (GWP)	A metric developed by the Intergovernmental Panel on Climate Change to compare the climate impact of different greenhouse gases. GWP measures how much heat a gas traps in the atmosphere over a specific time horizon—typically 20, 100, or 500 years—relative to the same amount of carbon dioxide (CO ₂), which is assigned a value of 1. For example, methane has a GWP of 28–36 over 100 years, meaning it warms the planet 28 to 36 times more than CO ₂ over that period.
Primary data v. secondary data	 Primary data: Determined by direct measurement, estimation, or calculation based on specific original source measurements for the system under investigation. Secondary data: Estimates for emissions based on reference to industrywide averages, comparable activities elsewhere in a business, and the like.