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PRODUCT OVERVIEW

Supply Chain Emissions Calculator

SUPPLY CHAIN EMISSIONS CALCULATOR

Why Conduct a Supply Chain Emissions Analysis?

Risk Mitigation:

- Meet regulatory and environmental reporting requirements
- Estimate carbon tax liabilities in applicable jurisdictions
- Track progress towards environmental objectives and emissions targets

Financial Benefits:

- Identify cost saving opportunities by understanding the largest energy/resource use in your supply chain
- Maintain relationships with key vendors, partners, and other third parties that require emissions reporting and transparency
- Meet requirements of new business opportunities (RFPs)

Emission Summary Report

Total Emissions KPI - 2022

1,000,000

Metric Tons CO_2e

This amount of CO_2e is the same as:

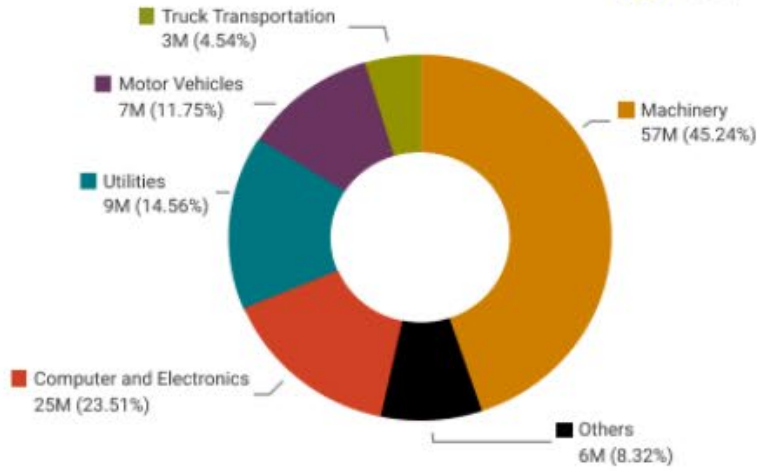
194,575

average homes' electricity use for one year*

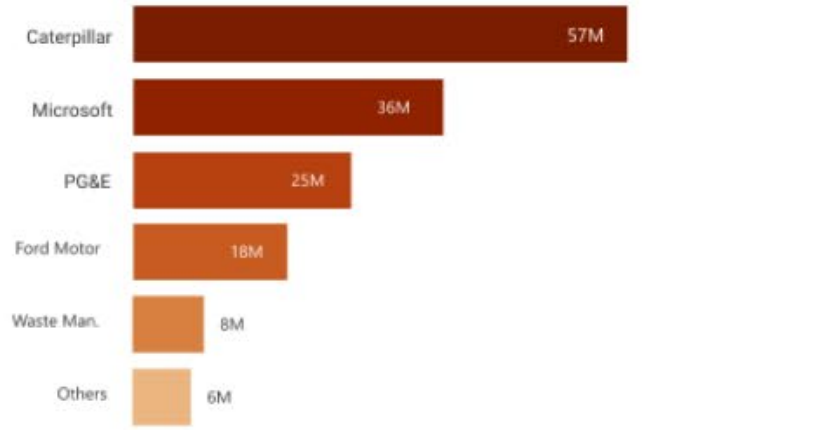
Greenhouse Gas Equivalencies CALCULATOR

*Calculations based on United States EPA greenhouse gas emissions calculator. https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

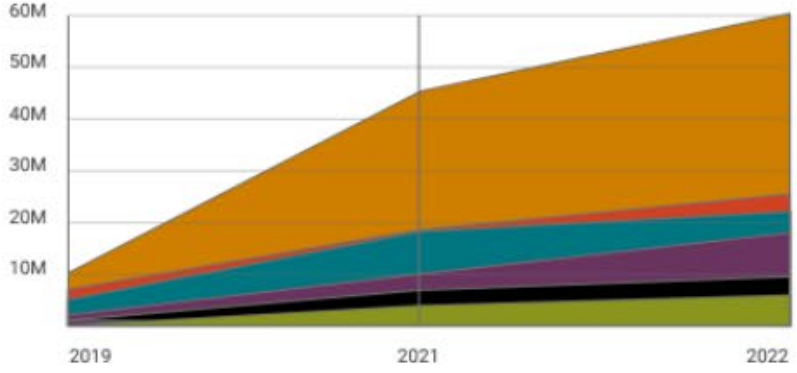
Top 5 total emissions by Commodity - 2022



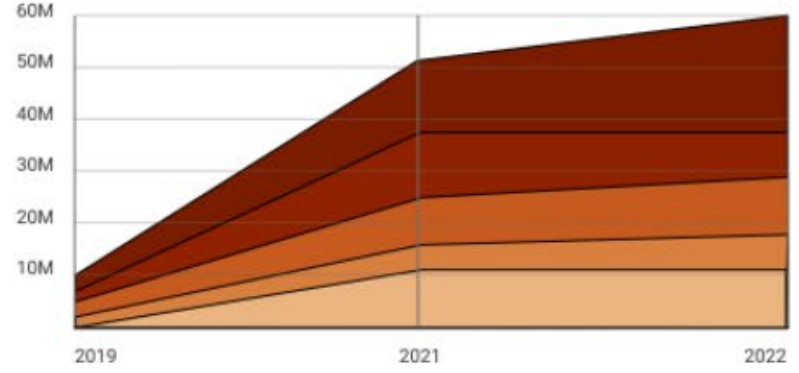
Top 5 total emissions by Vendor - 2022



Top 5 total emissions by Commodity over time



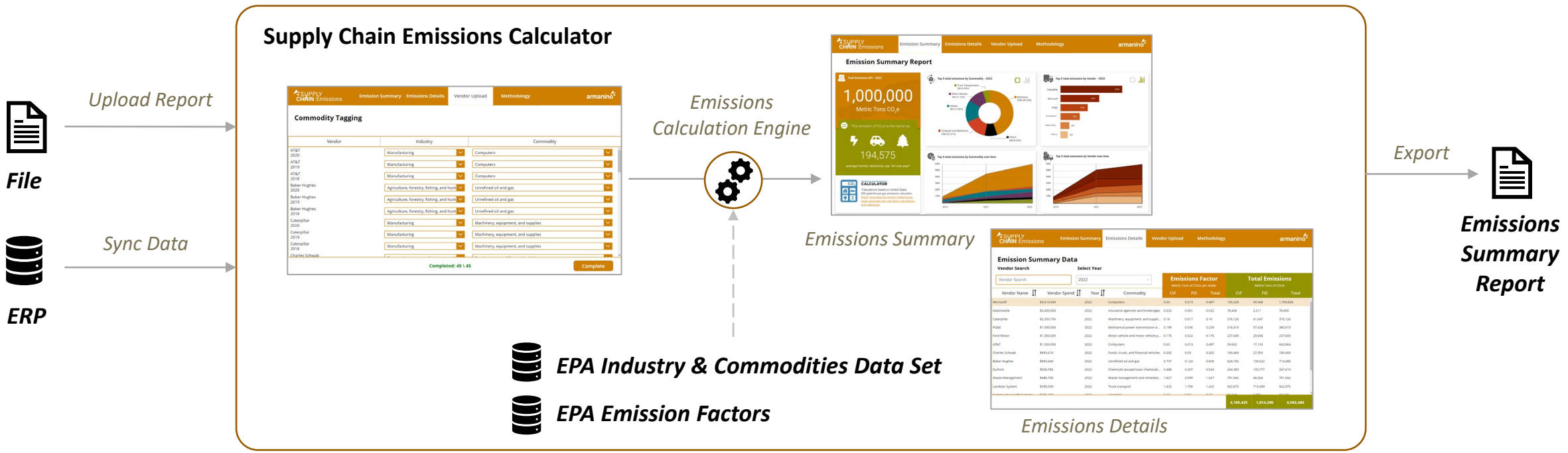
Top 5 total emissions by Vendor over time



SUPPLY CHAIN EMISSIONS CALCULATOR

Complete a rapid supply chain emissions analysis in a few simple steps:

1. Import historical vendor spend
2. Label industry and commodity for each vendor
3. View supply chain emissions dashboard and details
4. Export emissions summary for reporting and distribution to stakeholders



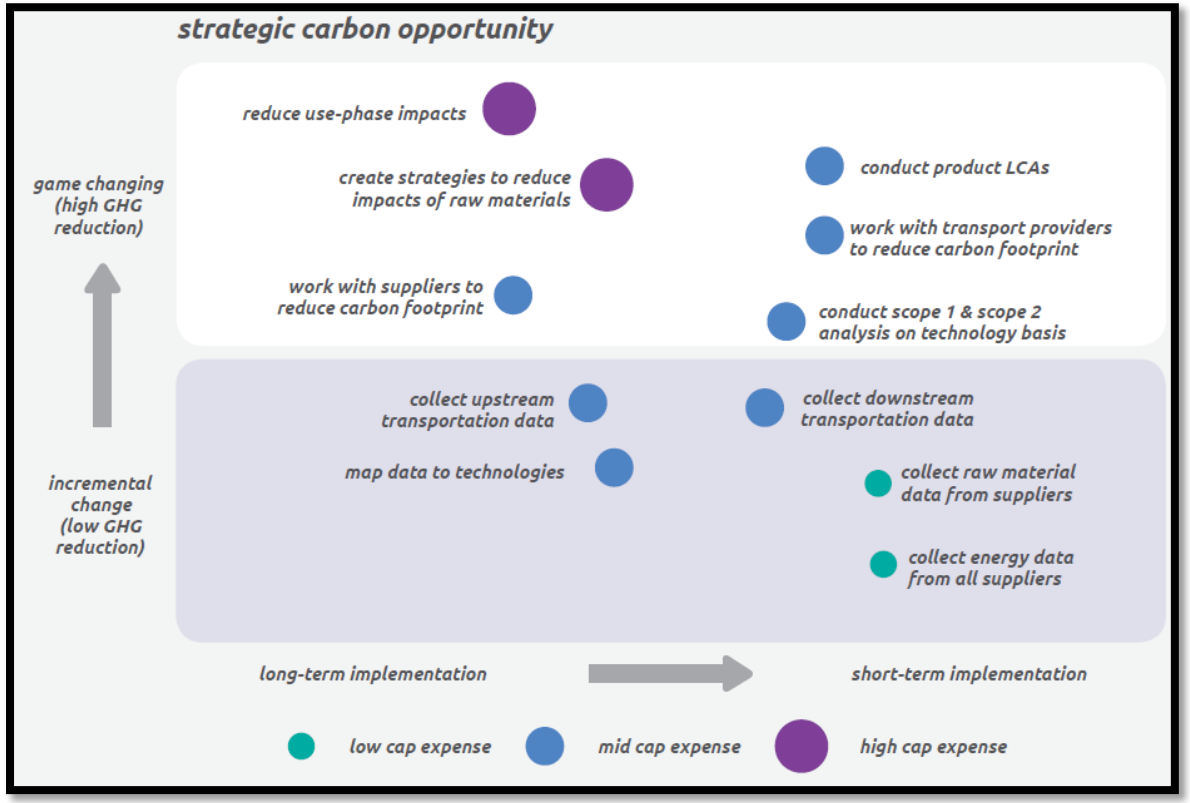
ENVIRONMENTAL ACCOUNTING METHODOLOGY

Supply Chain Emissions Calculation

SCOPE 3 EMISSIONS

Sustainability Opportunities in the value chain

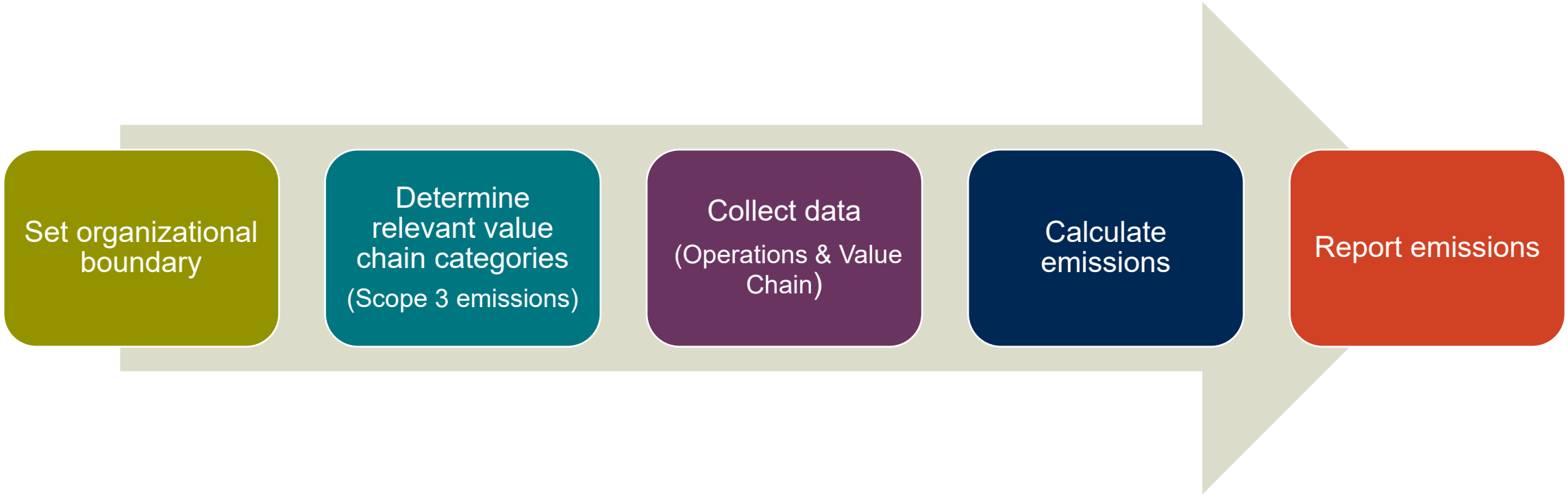
- Identify top vendors to reduce cost and carbon emissions
- Partner with raw material producers to reduce impacts
- Optimize transport and deliveries of purchased goods and services



SOURCE: GHG Protocol Scope 3 Accounting and Reporting Standard

EMISSIONS ACCOUNTING PROCESS

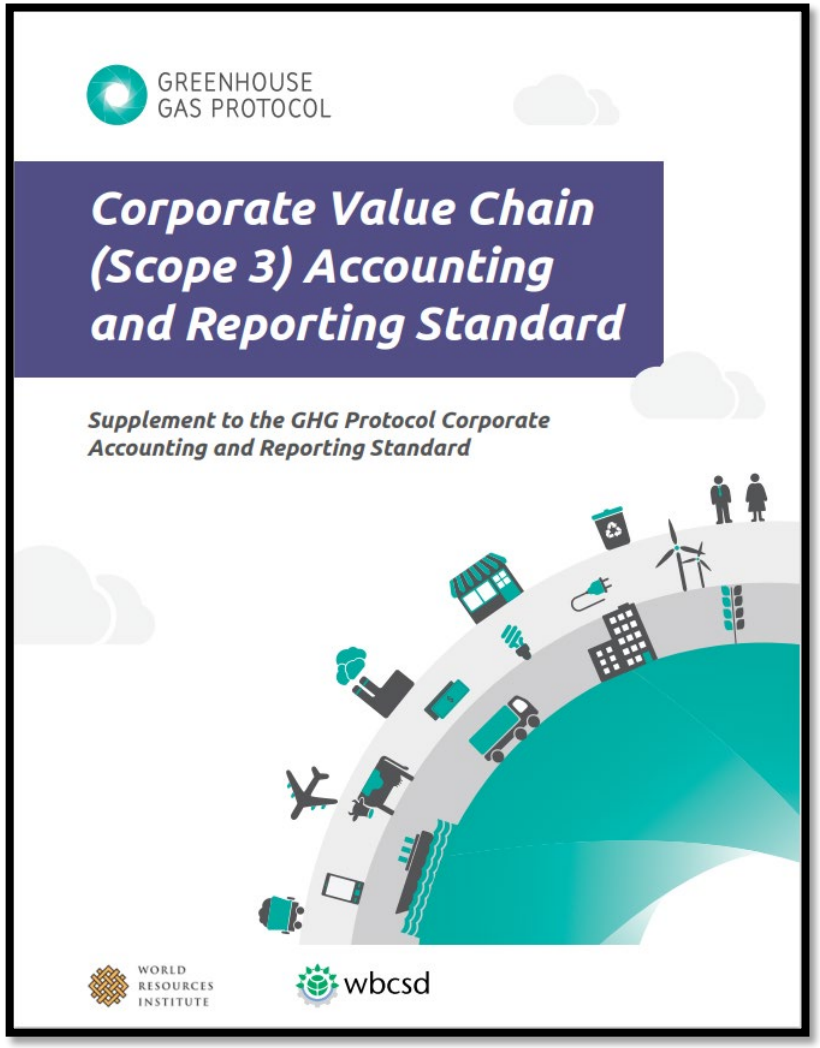
Greenhouse Gas Protocol Corporate Standard



EMISSIONS ACCOUNTING AND REPORTING

Corporate Value Chain Standard

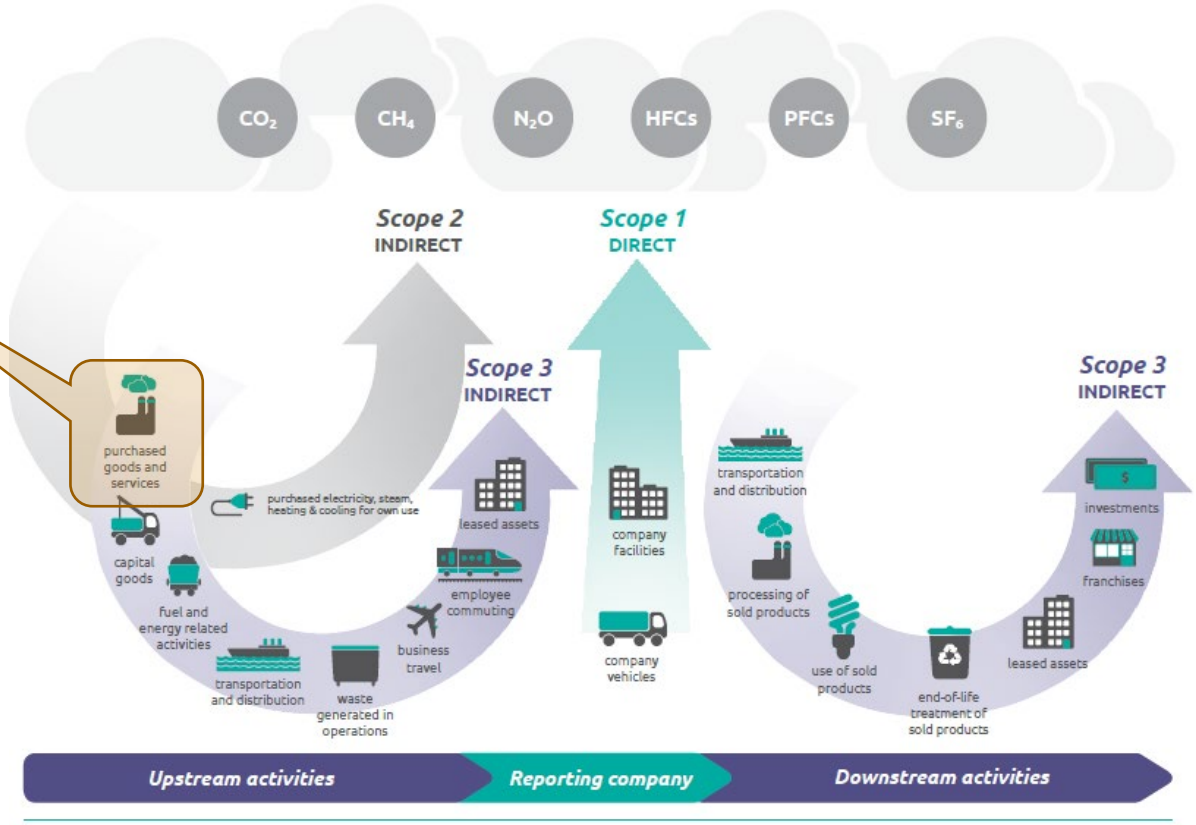
- Greenhouse Gas Emissions Accounting and Reporting Standard based on: Greenhouse Gas Protocol Technical Guidance for Calculating Scope 3 Emissions
- Scope 3 Emissions include “Purchased Goods and Services” along with other upstream and downstream activities
- Supply chain emissions often account form more than 90% of an organization’s total greenhouse gas emissions (SOURCE: EPA Center for Corporate Climate Leadership)



SCOPE 1 + SCOPE 2 + SCOPE 3 EMISSIONS SOURCES

Operations and Value Chain

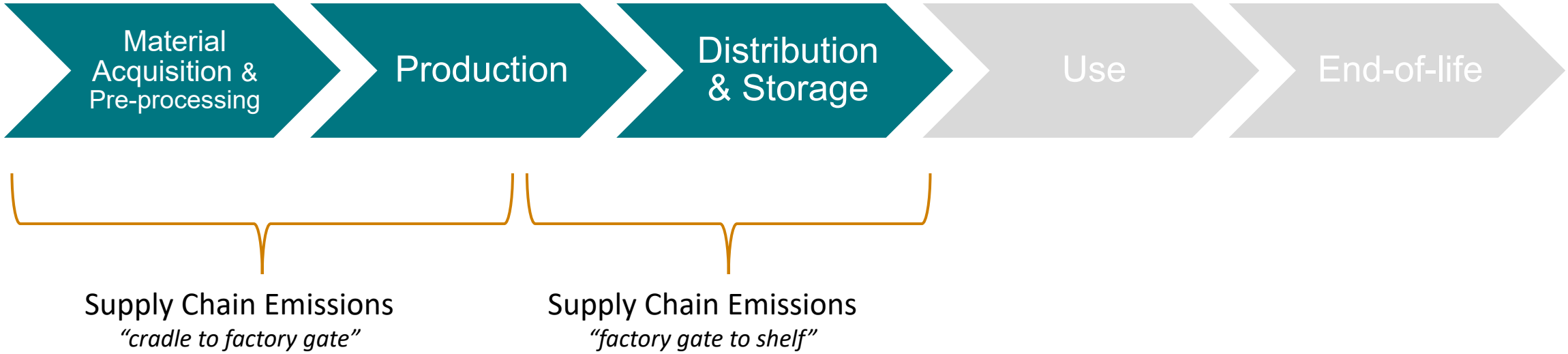
Purchased Goods and Services



Overview of GHG Protocol Scopes and Emissions Across the Value Chain (USEPA)

EMISSIONS ACCOUNTING AND REPORTING

Purchased Goods and Services

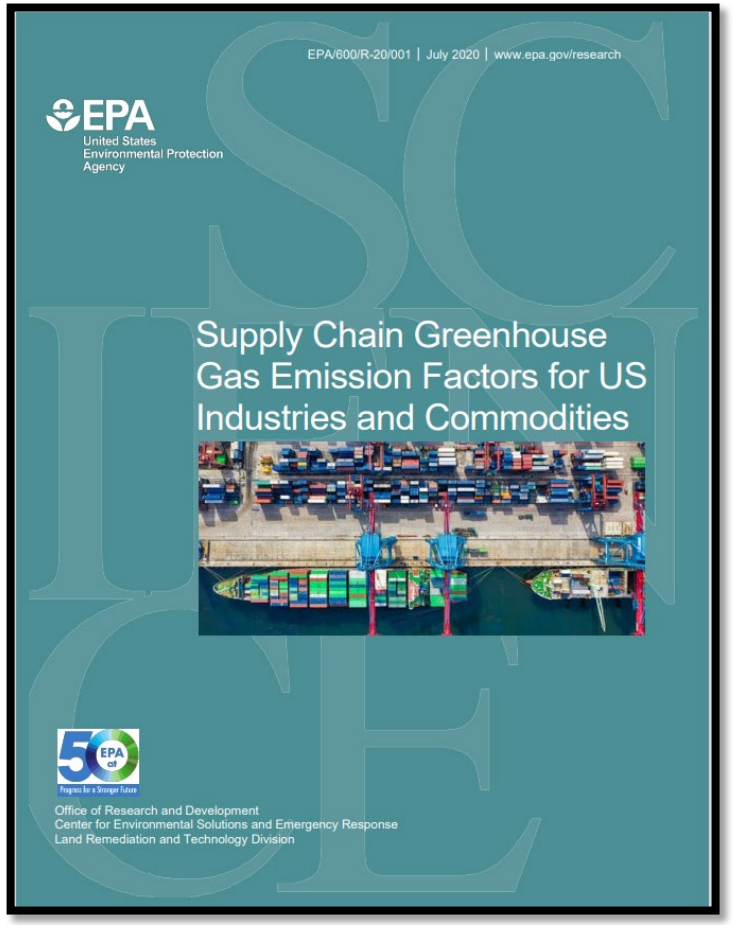


$$\text{Emissions} = \sum(Value\ of\ purchased\ good\ or\ service\ (\$)\ x\ Emission\ factor\ (kg\frac{CO2e}{\$})$$

EMISSIONS ACCOUNTING AND REPORTING

Supply Chain Emissions Factors

- Final factors are available in the Supply Chain Emission Factors for US Industries and Commodities dataset.
- These factors are intended for quantifying emissions from purchased goods and services using the spend-based method defined in the Greenhouse Gas Protocol Technical Guidance for Calculating Scope 3 Emissions



REPORT LINK: Supply Chain Greenhouse Gas Emission Factors for US Industries and Commodities | Science Inventory | US EPA

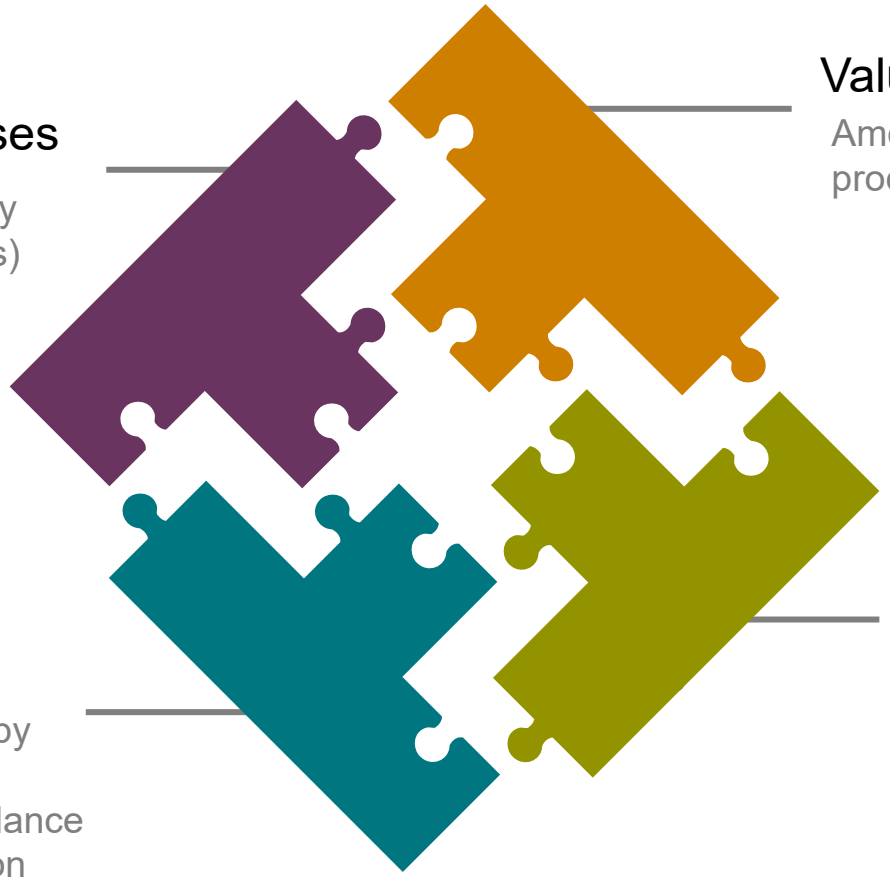
Data Requirements – Supply Chain Emissions Analysis

Industry and Commodity databases

U.S. Bureau of Economic Analysis Industry and Commodity codes (input-output tables) and U.S. EPA Environmentally-extended input-output (EEIO) databases

Global Warming Potential

Based on the most recent report by the Intergovernmental Panel on Climate Change (IPCC) in accordance with U.S. Environmental Protection Agency guidance



Value of Purchased Goods and Services

Amount spent on purchased goods or services, by product type, using market values (e.g., dollars)

Emissions Factors

Cradle-to-gate emission factors of the purchased goods or services per unit of economic value (e.g., kg CO2e/$)

PURCHASED GOODS AND SERVICES

Example GHG Emissions Calculation

- Electrical Company spends $1 Million in fiscal year 2021 at Wire, Inc.
- Wire, Inc. produces electrical wire and switchgear products
  - U.S. Bureau of Economic Analysis has assigned Industry Code 335 to “Electrical equipment and components”
  - U.S. Environmental Protection Agency has established an emissions factor of 0.232 kg CO_{2e}/$ for Industry Code 335

2021 Purchases	Emissions Factor	Total Emissions
$1,000,000 *Data Source: ERP system*	0.232 kg CO_{2e}/$ *Data Source: USEPA Supply Chain Greenhouse Gas Emissions Factors*	232 Metric tons CO_{2e}