CDMP Introduction
Carbon Data Management Platform

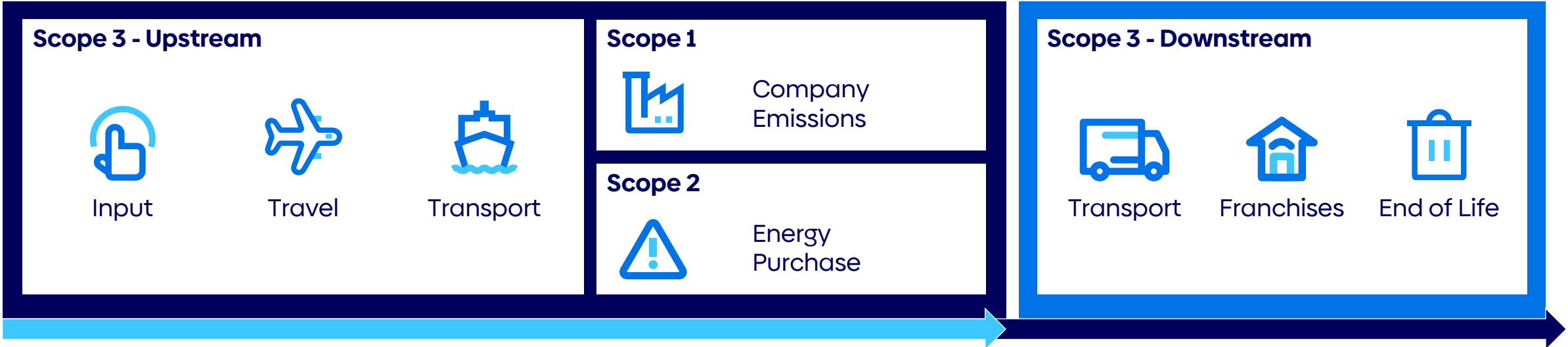Aga Sitarska
agnieszka.sitarska@atos.net

AtoS

A Carbon Data Management Platform (CDMP)

Empowering Your Sustainability Journey

The new platform helps companies measure, track, and report their greenhouse gas emissions across their operations and supply chain.

Database Options: Ecoinvent, IPCC, ADEME, GaBi, and Simapro—selected based on demand, regional relevance, and specific case requirements.


Scope 3 - Upstream

Input   Travel   Transport

Scope 1

Company Emissions

Scope 2

Energy Purchase

Scope 3 - Downstream

Transport   Franchises   End of Life

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CCF and PCF products

A digital platform integrating the expertise of our consulting services, use tools to reduce or manage carbon emissions more effectively

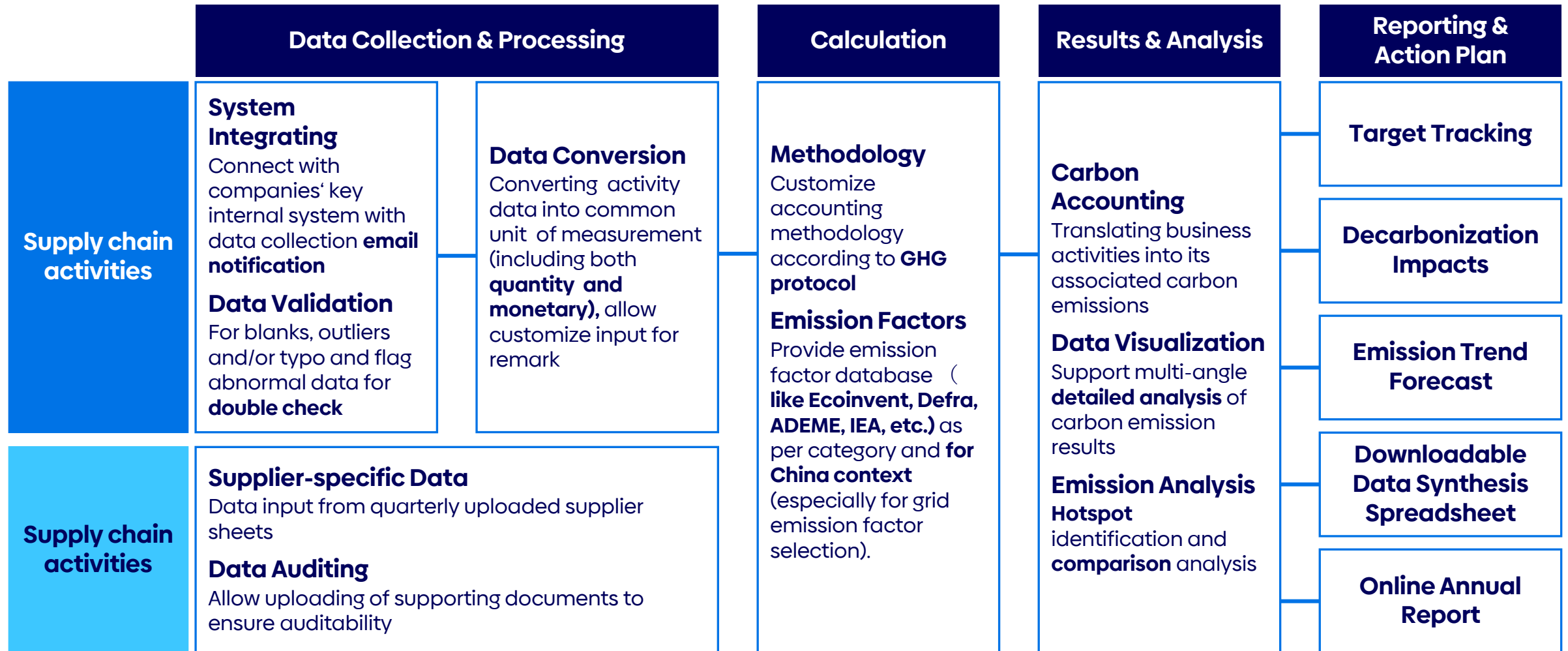## CDMP – Company's carbon emissions

PCF – Product's carbon emissions
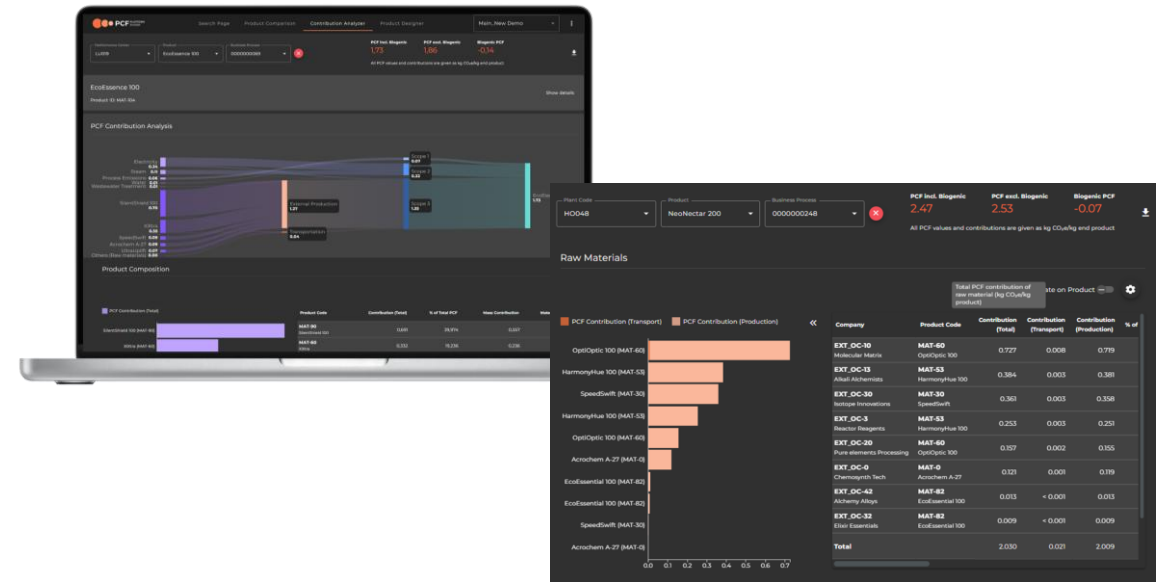
- Providing a systematic and repeatable mechanism to calculate the carbon footprint
- Customized carbon inventory accounting list based on client's real business
- Designated environment database according to client needs
- Offering a tangible roadmap and action plan for short- and long-term carbon emission reduction
- Highly scalable and flexible with future iterations and future expansion

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User Journey

	Data Collection & Processing		Calculation	Results & Analysis	Reporting & Action Plan
Supply chain activities	**System Integrating** Connect with companies' key internal system with data collection **email notification** **Data Validation** For blanks, outliers and/or typo and flag abnormal data for **double check**	**Data Conversion** Converting activity data into common unit of measurement (including both **quantity and monetary),** allow customize input for remark	**Methodology** Customize accounting methodology according to **GHG protocol** **Emission Factors** Provide emission factor database （ **like Ecoinvent, Defra, ADEME, IEA, etc.)** as per category and **for China context** (especially for grid emission factor selection).	**Carbon Accounting** Translating business activities into its associated carbon emissions **Data Visualization** Support multi-angle **detailed analysis** of carbon emission results **Emission Analysis Hotspot** identification and **comparison** analysis	**Target Tracking**
					Decarbonization Impacts
					Emission Trend Forecast
Supply chain activities	**Supplier-specific Data** Data input from quarterly uploaded supplier sheets **Data Auditing** Allow uploading of supporting documents to ensure auditability				**Downloadable Data Synthesis Spreadsheet**
					Online Annual Report

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License Type
Customized access based on user groups

| Explorer License (Visitor)	Contributor License (Vendor)	Analyst License (Manager)	Strategist License (Admin)
• Access to basic product demonstrations and a free trial. • View carbon emission visualizations (demo mode). • Restricted from inputting data or customizing modules.	• Measure carbon emissions across Scope 1, 2, and 3. • Upload supplier data through **integrated templates.** • Receive automated **email reminders** for data submissions. • **Customize** carbon disclosures for vendors. • **Validate** and flag data for accuracy before submission.	Includes everything in Contributor, plus: • Share emission data with customers, investors, and other stakeholders. • Generate **real-time** carbon emission reports, including annual summaries. • Download comprehensive **data sheets** for further analysis. • Quantify reduction actions and run **scenario-based modeling** for future planning.	Includes everything in Analyst, plus: • Access advanced emissions analytics with **hotspot identification** and customizable visibility (e.g., by site, brand, or category). • **Track progress** on emissions reduction goals for Scope 1, 2, and 3, and monitor climate targets. • Perform **comparative analysis** of emissions data across baseline, previous (N-1), and target years. • Develop carbon emission **forecasts** and create long-term **sustainable development plans.**

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A snapshot of the key features

Administration
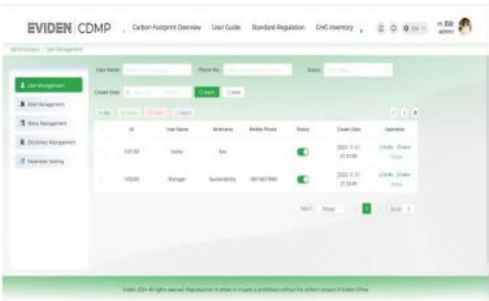
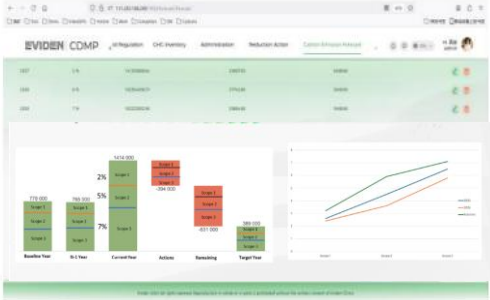**User Guide**

Overview Dashboard
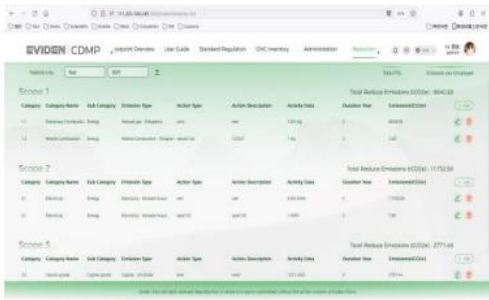

Carbon Accounting
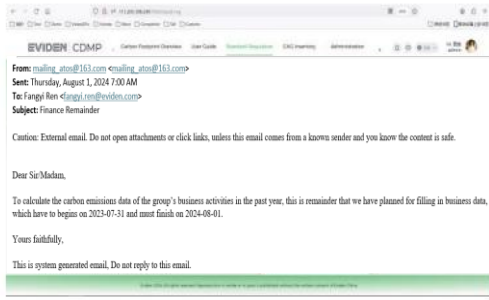

Carbon Disclosure
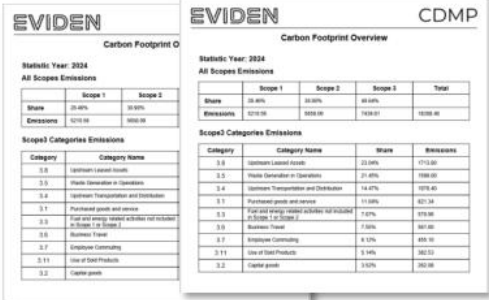
Hot Spot Analysis

Decarbonization Impact

Data Collection

This platform is based on GHG Protocol and life cycle impact assessment, linking your activities to greenhouse gas (GHG) emissions through the entire value chain, with reference to the SDGs, ISO, PAS2050 and SBTi to provide sustainable solutions for your carbon neutrality

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Digital Carbon Management Platform: Smarter, Faster, Greener

Seamless integration and precise carbon accounting track, analyze, and reduce emissions with confidence

Effortlessly import, export, and synchronize data across existing enterprise systems for streamlined carbon accounting.	**Seamless Data Integration**

Accurate & Transparent Carbon Accounting	Track both upstream and downstream emissions with a robust, industry-specific methodology and data base, ensuring precision and credibility.

Simplify data collection, validation, carbon calculations, hotspot identification, and reduction forecasting—reducing manual effort & errors.	**Automated & Efficient Workflow**

Data-Driven Insights & Compliance	Leverage advanced analytics to assess reduction strategies, predict future emissions, and ensure security and regulatory alignment.

Adapt the platform to evolving business needs with modular features, system integrations, and AI-powered enhancements.	**Scalability & Customization**

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Linking Digital with Sustainability through DATA

Beyond Compliance, enable Faster, Safer, More Efficient Sustainability outcomes

Reduce carbon emissions

Optimize resources

Enable new working models

Make supply chains more traceable

Increase energy, water, fuel efficiency

Data collection and modelling

Digital Business   ∞   Sustainable Business

Drive positive progress by:

- Connect & Communicate
- Monitor & Track

- Analyze & Optimize
- Predict & Automate

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Data Collection

Scope 1 Direct GHG emissions	**Fossil fuels Consumption (Natural Gas, LPG, etc.)** Main Sources: boilers used to heat buildings, gas furnaces, and gas-fired combined heat and power (CHP) plants
Scope 2 Indirect GHG emissions	**Purchased Energy (Electricity, Heat, Cooling & Steam)** Main Sources: all the energy the company buys to keep its factories lights and temperature control system running
Scope 3 Indirect GHG emissions	**Upstream Transportation and Distribution Mileage** Main Sources: Road Transport, Air transport, Rail Transport, Marine Transport **Waste Treatment** Main Sources: Disposal In Landfill, Incineration Waste Amount, Composted Waste Amount, Recycled Material **Business Travel & Employee Commuting Mileage** Main Sources: Air/Rail/Bus/Private Cars **Upstream Leased Assets** Main Sources: lessor's energy consumption **Downstream Transportation and Distribution Mileage** Main Sources: Road Transport, Air transport, Rail Transport, Marine Transport **Energy consumption of Sold Products** Main Sources: energy consumption and waste treatment through sold products' process, usage and end-of-life **Downstream Leased Assets** Main Sources: lessor's energy consumption **Franchises and Investments** Main Sources: emissions from the operation of franchises and associated with investments not included in scope 1 or scope 2

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Data Collection

$$\text{Emission} = \text{Emission Factor} \times \text{Activity Level}$$
$$= \text{Emission Factor Value} \times \text{Entry Value}$$

Scope 1	Sub Category	Emission Sources	Entry Value	Raw Data Unit	Emission Factor Value	Emission Factor Unit
Stationary combustion	energy	Fossil fuels e.g. natural gas	0	kg/t/liter/galon/m3	2	kgCO2e/kg
Mobile Combustion	energy	Fossil fuels consumed by Vehicles	0	kg/t/liter/galon/m3	2	kgCO2e/kg
Process Emissions	energy	Fossil fuels	0	kg/t/liter/galon/m3	2	kgCO2e/kg
Fugitive Emissions	energy	e.g. Extinguisher filler leaks	0	kg/t/liter/galon/m3	2	kgCO2e/kg
Total						

Scope 2	Sub Category	Emission Sources	Entry Value	Raw Data Unit	Emission Factor Value	Emission Factor Unit
Electricity	energy	Electricity used for production	0	kWh	2	kgCO2/kWh
Steam	energy	Steam used for production	0	GJ	2	kgCO2/GJ
Heat	energy	Heating installations	0	GJ	2	kgCO2/GJ
Cooling	energy	Cooling installations	0	kg/kWh	2	kgCO2e/kg
Total						

Scope 3 Upstream

Scope 3	Sub Category	Emission Sources	Entry Value	Raw Data Unit	Emission Factor Value	Emission Factor Unit
Purchased goods and service	non-energy		0			
—purchased goods	non-energy	Quantities of good purchased	0	kg/t	——	kg CO2e/kg
—purchased services	non-energy	Quantities of service purchased	0	kg/t	——	kg CO2e/kg
Capital goods	capital	Quantities of capital goods	0	kg/t	——	kg CO2e/kg
Fuel and energy related activities not included in Scope 1 or Scope 2	energy	Fossil fuels	0	kg/t/liter/galon/m3	2	kg CO2e/kg
Upstream Transportation and Distribution	transportation		0			
—road transport	transportation	Truck&Cars capacity	0	t·mile/km	——	kg CO2/t·mile
—marine transport	transportation	Vessel capacity	0	t·mile/km	——	kg CO2/t·mile
—air transport	transportation	Aircraft capacity	0	t·mile/km	——	kg CO2/t·mile
—rail transport	transportation	Rail capacity	0	t·mile/km	——	kg CO2/t·mile
Waste Generation in Operations	waste		0			
—disposal in a landfill	waste	Biochar	0	kg/t	2	kg CO2e/kg
—recovery for recycling	waste	Biochar	0	kg/t	2	kg CO2e/kg
—incineration	waste	Biochar	0	kg/t	2	kg CO2e/kg
—composting	waste	Biochar	0	kg/t	2	kg CO2e/kg
—waste-to-energy (WTE) or energy-from-waste (EfW)	waste	Biochar	0	kg/t	2	kg CO2e/kg
—wastewater treatment	waste	Biochar	0	kg/t	2	kg CO2e/kg
Business Travel	transportation		0			
—air travel	transportation	Aircraft capacity	0	passenger·mile/km	——	kgCO2/passenger·mile
—rail travel	transportation	Rail capacity	0	passenger·mile/km	——	kgCO2/passenger·mile
—bus travel	transportation	Bus capacity	0	passenger·mile/km	——	kgCO2/passenger·mile
—automobile travel	transportation	Automobile capacity	0	person	——	kg CO2/passenger
—other modes of travel	transportation	Others	0	person	——	kg CO2/passenger
Employee Commuting	transportation		0			
—bus travel	transportation	Bus capacity	0	passenger·mile/km	——	kgCO2/passenger·mile
—automobile travel	transportation	Automobile capacity	0	passenger·mile/km	——	kgCO2/passenger·mile
—other modes of travel	transportation	Others	0	person	——	kg CO2/passenger
Upstream Leased Assets	energy		0			
—lessor's total fuel use	energy	e.g. natural gas	0	m3	——	kg CO2e/m3
—lessor's total electricity use	energy	electricity	0	kWh	——	kgCO2/kWh
—lessor's fugitive emissions	energy	e.g., from refrigerants	0	kg/t	2	kgCO2e/kg
—lessor's process emissions	energy	if applicable	0	kg/t	2	kgCO2e/kg

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Data Collection
Scope 3 Downstream

$$\text{Emission} = \text{Emission Factor} \times \text{Activity Level}$$
$$= \text{Emission Factor Value} \times \text{Entry Value}$$

Scope 3	Sub Category	Emission Sources	Entry Value	Raw Data Unit	Emission Factor Value	Emission Factor Unit
Downstream Transportation and Distribution	transportation		0			
—road transport	transportation	Truck&Cars capacity	0	t·mile/km	——	kg CO2/t·mile
—marine transport	transportation	Vessel capacity	0	t·mile/km	——	kg CO2/t·mile
—air transport	transportation	Aircraft capacity	0	t·mile/km	——	kg CO2/t·mile
—rail transport	transportation	Rail capacity	0	t·mile/km	——	kg CO2/t·mile
Process of Sold Products	capital		0			
—energy consumption	energy	Fossil fuels	0	kg/t	2	kg CO2e/kg
—waste generation	waste	Biochar	0	kg/t	2	kg CO2e/kg
Use of Sold Products	energy		0			
—products that directly consume energy (fuels or electricity) during use	energy	Fossil fuels	0	kg/t	2	kg CO2e/kg
—products that indirectly consume energy (fuels or electricity) during use	energy	Fossil fuels	0	kg/t	2	kg CO2e/kg
End-of-Life Treatment of Sold Products	waste		0			
—landfill	waste	Biochar	0	kg/t	2	kg CO2e/kg
—recycled	waste	Biochar	0	kg/t	2	kg CO2e/kg
—incineration	waste	Biochar	0	kg/t	2	kg CO2e/kg
Downstream Leased Assets	capital		0			
—lessor's total fuel use	energy	e.g. natural gas	0	m3	——	kg CO2e/m3
—lessor's total electricity use	energy	electricity	0	kWh	——	kgCO2/kWh
—lessor's fugitive emissions	energy	e.g., from refrigerants	0	kg/t	2	kgCO2e/kg
—lessor's process emissions	energy	if applicable	0	kg/t	2	kgCO2e/kg
Franchises	franchises	energy consumption	0	kg/t	2	kgCO2e/kg
Investments	investments		0			
— equity investments	investments		0	$/¥/€	——	kg CO2e/ revenue
— debt investments	investments		0	$/¥/€	——	kg CO2e/ revenue
— project finance	investments		0	$/¥/€	——	kg CO2e/ revenue
— managed investments and client services	investments		0	$/¥/€	——	kg CO2e/ revenue
Total						

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Comparison with/without Digital Platform

Advance carbon emission calculation in a practical, transparent and trustworthy way

BEFORE

- Time-consuming, manual data input
- Data availability, accuracy, and comparability
- Error-prone, models not standardized
- Limited integration/collaboration
- Limited reporting and visualization

Calling a Service Desk = long wait times + tedious explanations. Filling out portal forms = generic, irrelevant questions + delayed responses. Issues are often poorly explained or documented, leading to endless back-and-forth clarifications.

AFTER

- Swift data handling: **import/export** batches.
- Accurate: **Scope 3 focus**, robust methodology.
- **Seamless** integration: streamline calculations.
- Reliable **decarbonization** forecasting.
- **Cost and time efficient** yearly calculations.

A solution to free our clients from exhausting manual works and make carbon footprint data valuable. A comprehensive carbon emission consultation with potential digital tool to fulfill the compliance and disclose needs.

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Carbon Reduction Enabler

Using advanced digital technologies to reduce carbon emission that enables us achieve sustainability targets more efficiently

Energy Efficiency Portal

EcoCloud Design

Logistics Optimization

Using AI for smart route planning to reduce fuel/energy consumption

Energy Efficiency

Monitoring energy usage with IoT sensors

Green Design

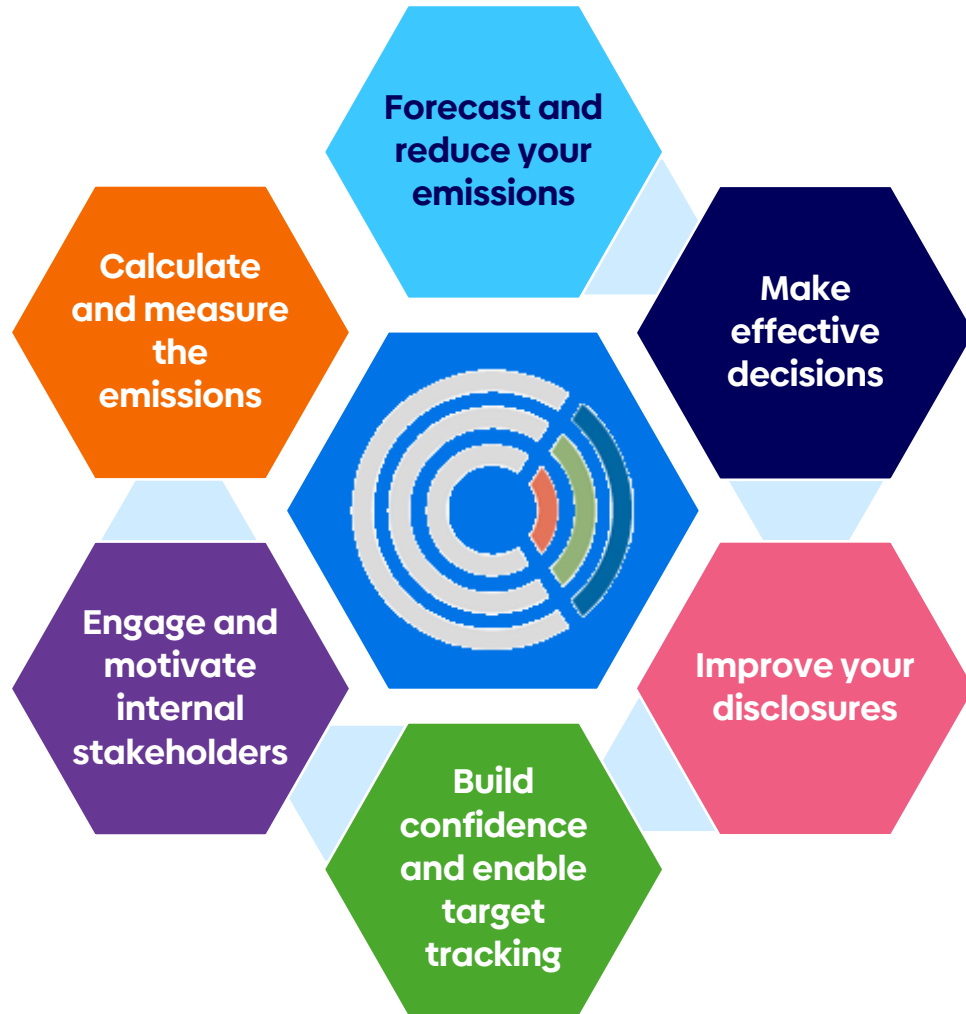Applying AI to optimize the use of raw materials in product design

Use Phase Reduction

Real-Time Monitoring and Feedback

Green app

Supply Chain

Green procurement platform

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Solutions to overcome those challenges

Streamlined Data Collection & Reporting: Ensures accuracy, consistency, and transparency.

Enhanced Supplier Collaboration: Tools for training, support, and seamless communication.

Data-Driven Insights: Actionable data to guide carbon reduction strategies.

Continuous Compliance: Regular updates to align with evolving regulations.

Customization & Integration: Leverage other digital solutions to enhance platform capabilities

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Thank you!

For more information please contact:
Agnieszka Sitarska
Client Partner Life Sciences Switzerland
Agnieszka.Sitarska@atos.net

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