



Comply with upcoming regulations, ensure auditability and steer your business towards net-zero with the help of a double-entry bookkeeping system for CO2e

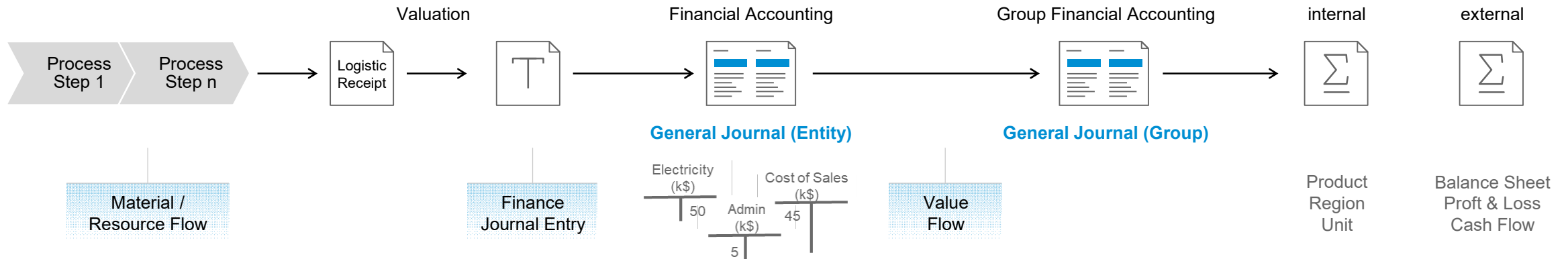
Bastian Distler, SAP
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Public

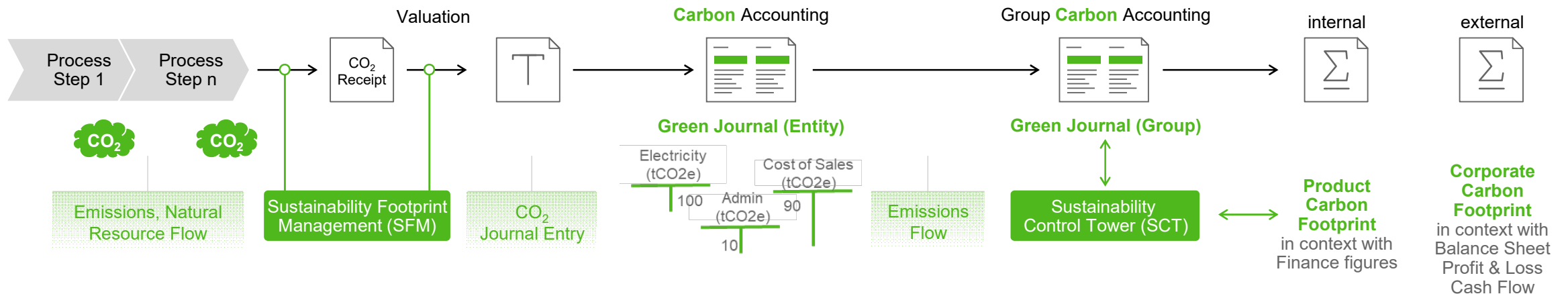


Finance Accounting as blueprint for Carbon Accounting

Finance Accounting Practices based on Document Principle and General Journal



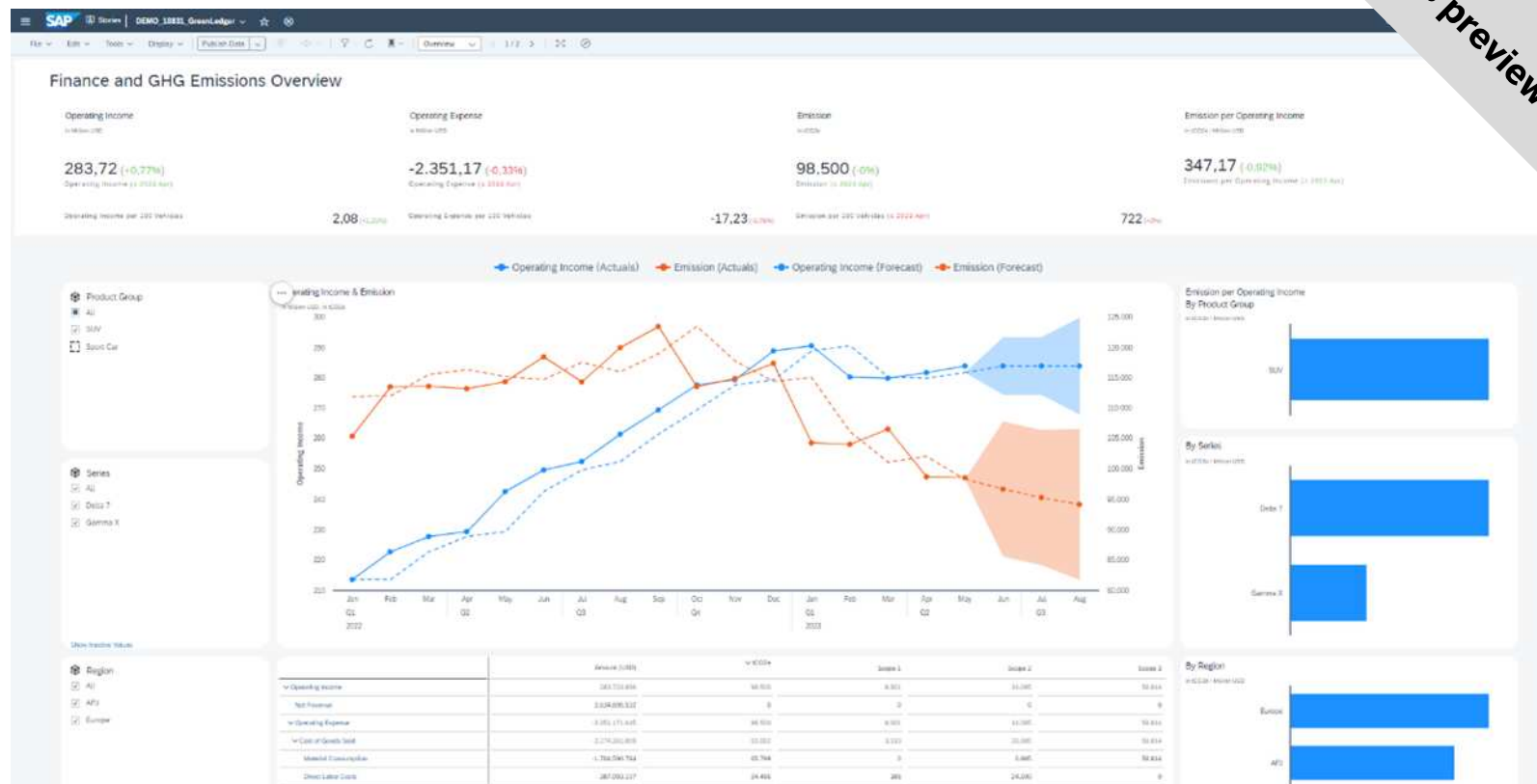
Sustainability Accounting Practices based on Document Principle and Green Journal



Green Ledger can help...

...to answer questions like:

- Which business area, cost center, profit center, segment, product group, sales organization, distribution channel (...) emits most greenhouse gases per € revenue you earn there?
- What are the main drivers for emissions in the company?
- What is the financial impact of choosing different suppliers or investing in “greener” machines or processes?
- What would be the financial impact of a carbon tax?
- Which cost centers, profit centers exceed their carbon budgets?



Comply with upcoming reporting standards (ISSB, SEC, EFRAG)
Ensure audit-proof accounting for Greenhouse Gas quantities in finance quality



Steer business towards a decarbonized economy by understanding and analyzing environmental and financial performance in a connected manner



Simulate financial impact of carbon taxes, prices of emission certificates and emission reduction measures



Leverage the power of linking finance and emission data

Drill down by financial dimensions



SAP Carbon Accounting Hub Analytical Dashboard

File Edit Tools Display CO2e-Flow Statement < 3/4 >

Profit Center Group (All)	Segment (Consumer Products)	Company Code (1000 Germany)	Fiscal Period (1-12, 2024)
Scope 2 Calculation Method (Location Based)	Unit of Carbon (Tonnes of CO2e)	Fiscal Year Variant (K4)	Currency (EUR Group Currency)

YTD GHG Emission in tCO2e 10,356,000 Gross Location-based +2.36%, Δ Last year%	YTD Scope 1 - Direct Emissions in tCO2e 120,000 Gross Emissions -5.86%, Δ Last year%	YTD Scope 2 - Purchased energy Emissions in tCO2e 468,000 Gross Location-based -6.47%, Δ Last year%	YTD Scope 3 - Indirect Value Chain Emissions in tCO2e 9,876,000 Gross Indirect +7.46%, Δ Last year%	YTD CO2e transferred to customers in tCO2e 10,452,000 Gross Emissions -6.85%, Δ Last year%
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CO2e-Flow Statement

in kg CO2e

Time > 2024

CO2-Flow Position	GHG Category	
Opening CO2e	> Total	10,000
CO2e acquired from suppliers	∨ Total	10,344,000
	∨ Scope 2 - Purchased Energy	468,000
	Scope 2 - Purchased Electricity	467,000
	Scope 2 - Purchased Heat	1,000
	∨ Scope 3 - Indirect Value Chain Emissions	9,876,000
	Scope 3.1 - Purchased goods and services	8,892,000
	Scope 3.4 - Upstream transportation and distribution	720,000
	Scope 3.6 - Business travel	264,000
CO2e directly produced through operations	∨ Total	120,000
	∨ Scope 1 - Direct emissions	120,000
	Scope 1 - Stationary combustion	119,500
	Scope 1 - Mobile combustion	500
CO2e transferred to customers	> Total	-10,452,000
Closing CO2e	> Total	22,000
Change in CO2e during period	> Total	12,000

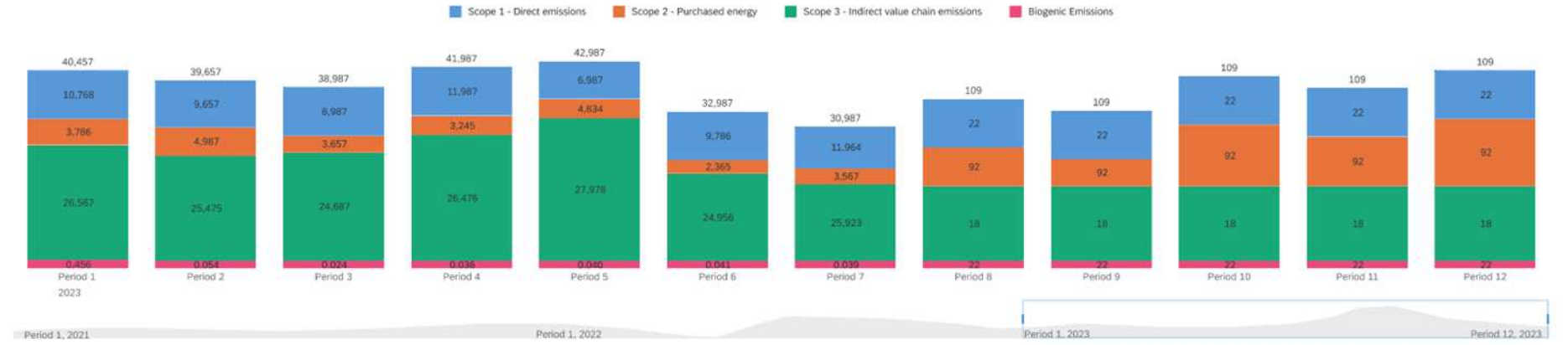
File Edit Tools Display **GHG Emissions Overview** < 1 / 4 >

Profit Center Group (All) Segment (All) Company Code (All)
 Scope 2 Calculation Method (Location Based) Unit of Carbon (Tonnes of CO2e) Fiscal Year Variant (K4)

YTD GHG Emission in tCO2e 485,664 Gross Location-based +2.36% Δ Last year%	YTD Scope 1 - Direct Emissions in tCO2e 126,019 Gross Emissions -5.86% Δ Last year%	YTD Scope 2 - Purchased energy Emissions in tCO2e 36,222 Gross Location-based -6.47% Δ Last year%	YTD Scope 3 - Indirect Value Chain Emissions in tCO2e 323,423 Gross Indirect +7.46% Δ Last year%	YTD Biogenic Emissions in tCO2e 0,456 Gross Emissions -6.85% Δ Last year%
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GHG Emissions Overview

GHG Emissions by Scope and Fiscal Period
in tCO2e

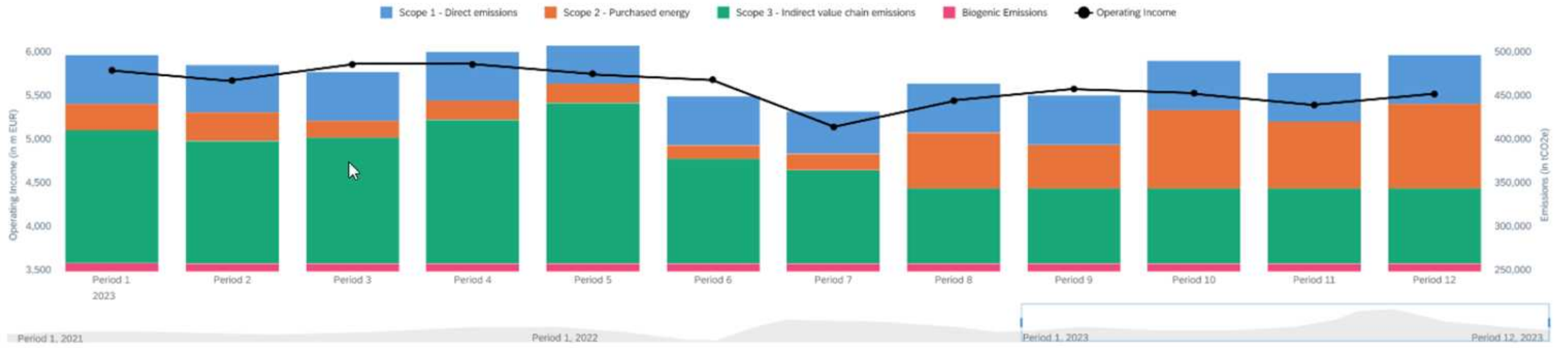


GHG Category	Fiscal Period	Year 2023							
		Total	P01 (Period 1)	P02 (Period 2)	P03 (Period 3)	P04 (Period 4)	P05 (Period 5)	P06 (Period 6)	P07 (Period 7)
Total		485,664	40,457	39,657	38,987	41,987	42,987	32,987	30,987
Scope 1 - Direct emissions		126,019	10,768	9,657	8,987	11,987	6,987	9,786	11,964
Scope 1 - Stationary combustion		35,876	2,987	3,876	3,876	4,987	1,098	2,876	4,546
Scope 1 - Mobile combustion		34,876	3,987	2,769	4,768	3,879	2,987	3,987	2,564
Scope 1 - Process emissions		36,256	4,876	4,098	2,987	2,987	3,768	1,786	3,765
Scope 1 - Fugitive emissions		32,857	2,987	2,876	3,878	4,987	1,567	2,456	3,768
Scope 2 - Purchased energy		36,222	3,786	4,987	3,657	3,245	4,834	2,365	3,567
Scope 2 - Purchased electricity		8,467	1,789	1,254	1,867	1,867	1,756	0,645	1,756
Scope 2 - Purchased steam		7,456	0,678	1,876	0,576	0,465	1,243	0,476	0,243
Scope 2 - Purchased heat		9,356	1,476	1,365	1,687	0,778	0,365	0,465	0,756
Scope 2 - Purchased cooling		4,968	0,365	1,645	1,756	1,867	1,745	0,623	1,465
Scope 3 - Indirect value chain emissions		323,423	26,567	25,475	24,687	26,476	27,978	24,956	25,923
Biogenic Emissions		0,456	0,038	0,054	0,024	0,036	0,040	0,041	0,039

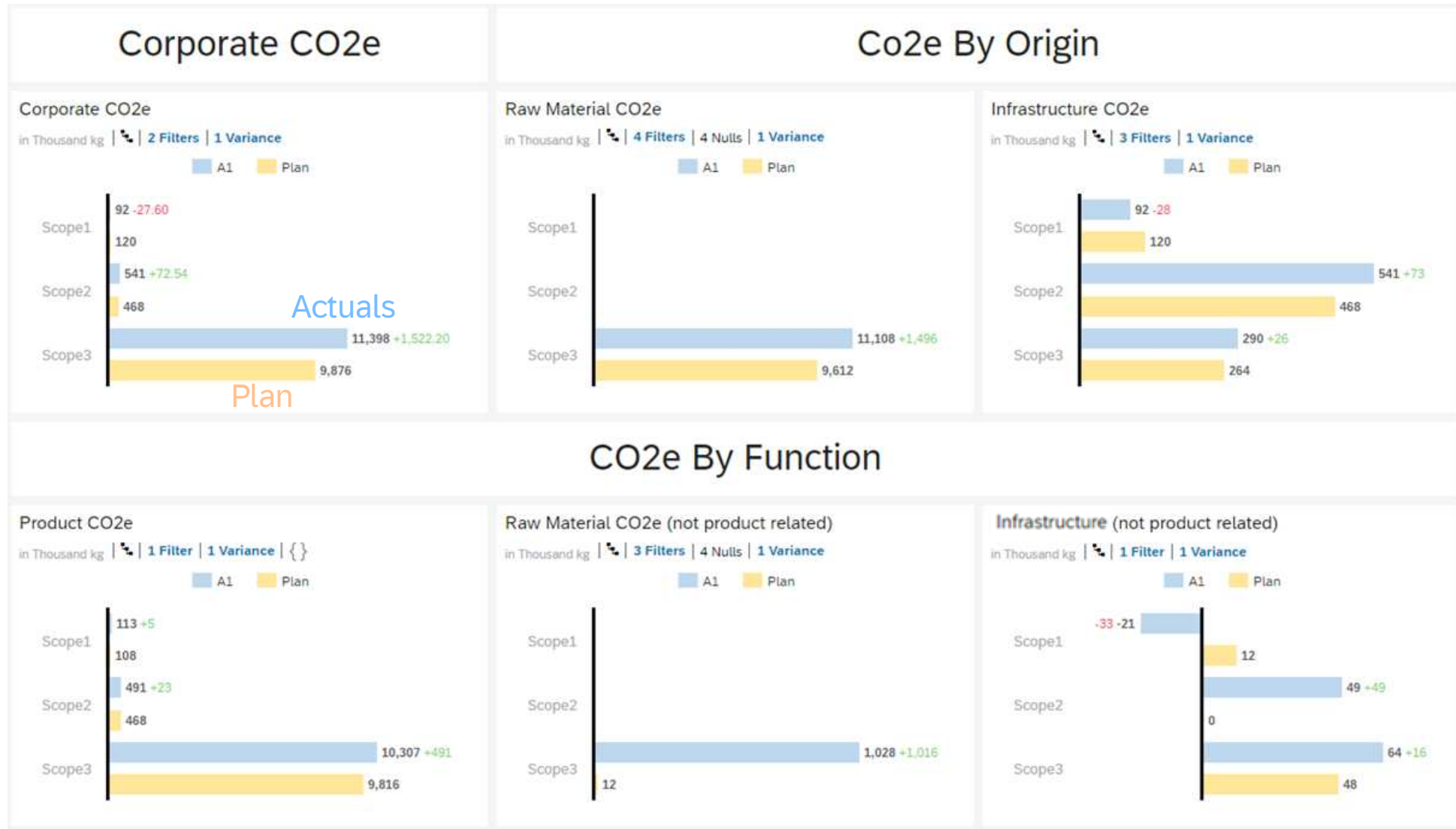
Profit Center Group (All)	Segment (All)	Company Code (All)
Scope 2 Calculation Method (Location Based)	Unit of Carbon (Tonnes of CO2e)	Fiscal Year Variant (K4)
		Currency (EUR Group Currency)

YTD Operating Income in m EUR 5,876 +3.48%, Δ Last year%	YTD Profit in m EUR 5,876 +3.48%, Δ Last year%	YTD Revenue in m EUR 5,765 +2.87%, Δ Last year%	YTD GHG Emission in tCO2e 485,664 Gross Location-based +2.36%, Δ Last year%	YTD Emissions Intensity on Operating Income in tCO2e / EUR 1,24 Gross Emissions +3.26%, Δ Last year%	YTD Emissions Intensity on Profit in tCO2e / EUR 1,14 Gross Emissions +1.43%, Δ Last year%	YTD Emissions Intensity on Revenue in tCO2e / EUR 0,90 Gross Emissions +3.87%, Δ Last year%
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GHG Emissions by Scope with a view of Operating Income
 in m EUR, tCO2e



CO2e Plan-Actual Comparison



Variance Analysis for Raw Material and Infrastructure CO2e

Raw Materials

in kg | 1 Filter

■ Increase ■ Decrease ■ Total



Infrastructure

in kg | 1 Filter

■ Increase ■ Decrease ■ Total



Raw Materials

in kg | 2 Filters | 2 Hidden | 1 Filter

Time > 2025

Measures	Plan	Sales Quantity Variance	Consumption/Stock Variance	Pollution Variance	Actual
GHG Category					
▼ Total	9,612,000	480,000	6,000	1,009,800	11,107,800
▼ Scope 3	9,612,000	480,000	6,000	1,009,800	11,107,800
Scope 3.01 - Purchased goo...	8,892,000	444,000	6,000	934,200	10,276,200
Scope 3.04 - Upstream tran...	720,000	36,000	0	75,600	831,600

Infrastructure

in kg | 3 Filters | GHG Category

Time > 2025

Measures	Plan_	Sales Quantity Variance_	Consumption/Stock Variance_	PollutionVariance_	Actual_
GHG Category					
▼ Total	852,000	39,600	-16,200	47,940	923,340
▼ Scope 1	120,000	5,400	-5,400	-27,600	92,400
Scope 1 - Stationary combustion	120,000	5,400	-5,400	-27,600	92,400
▼ Scope 2	468,000	23,400	0	49,140	540,540
Scope 2 - Purchased electricity	468,000	23,400	0	49,140	540,540
▼ Scope 3	264,000	10,800	-10,800	26,400	290,400
Scope 3.06 - Business travel	264,000	10,800	-10,800	26,400	290,400

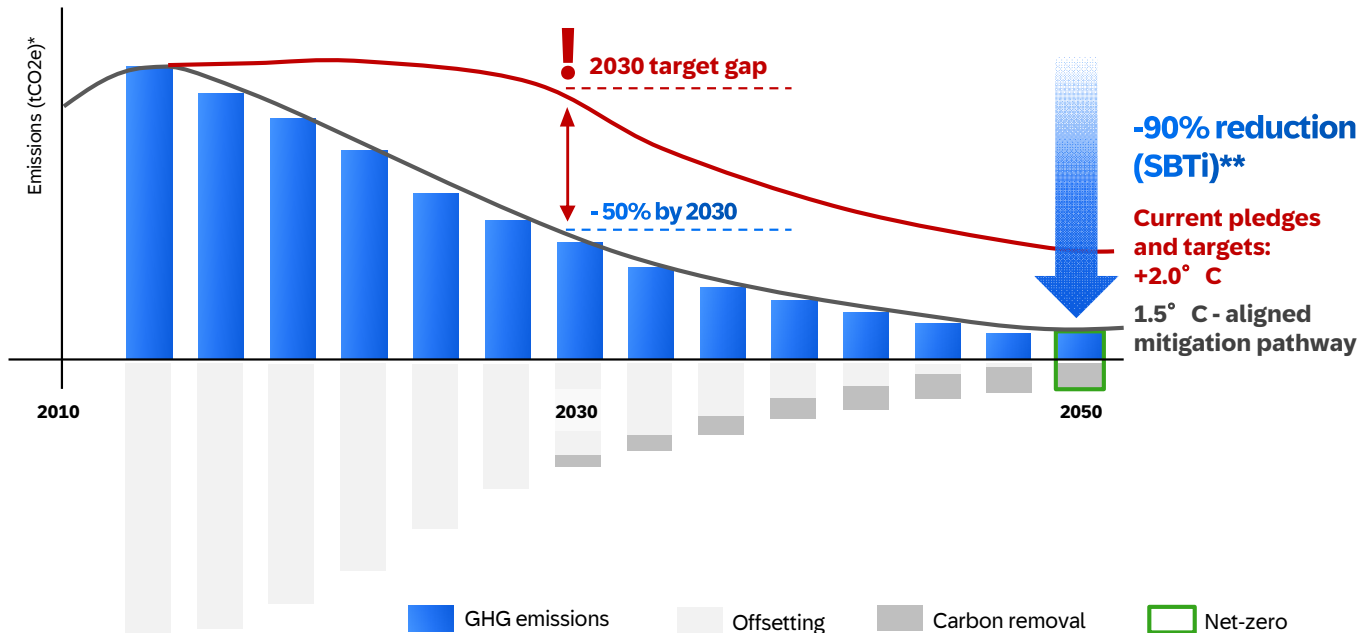
CO2e Plan-Actual Comparison

		Time > 2025	
		Version	
		A1	Plan
Cost Center	GHG Category		
Totals		923,340	852,000
Build. & Maint (US)	∨ Total	198,000	180,000
	∨ Scope 1	66,000	60,000
	Scope 1 - Stationary combustion	66,000	60,000
	∨ Scope 3	132,000	120,000
	Scope 3.06 - Business travel	132,000	120,000
Financials (US)	> Total	26,400	24,000
IT Services-(US)	> Total	158,400	180,000
Plant & Maint (US)	∨ Total	540,540	468,000
	∨ Scope 2	540,540	468,000
	Scope 2 - Purchased electricity	540,540	468,000

Act: Reduction measures are imperative for net-zero targets

Effective and feasible reductions must be adopted fast for resilient businesses

Net-zero target requires all business areas to reduce emissions



*Simplified presentation

**Most companies will require deep decarbonization of at least 90% to reach net-zero under the SBTi standard

WHY SAP?

We can embed carbon in every business decision for you

Create reduction strategy scenarios with emissions data analyzed at the business transaction level

Integrate carbon data into daily business decisions e.g. in controlling, or procurement

Thank you.

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