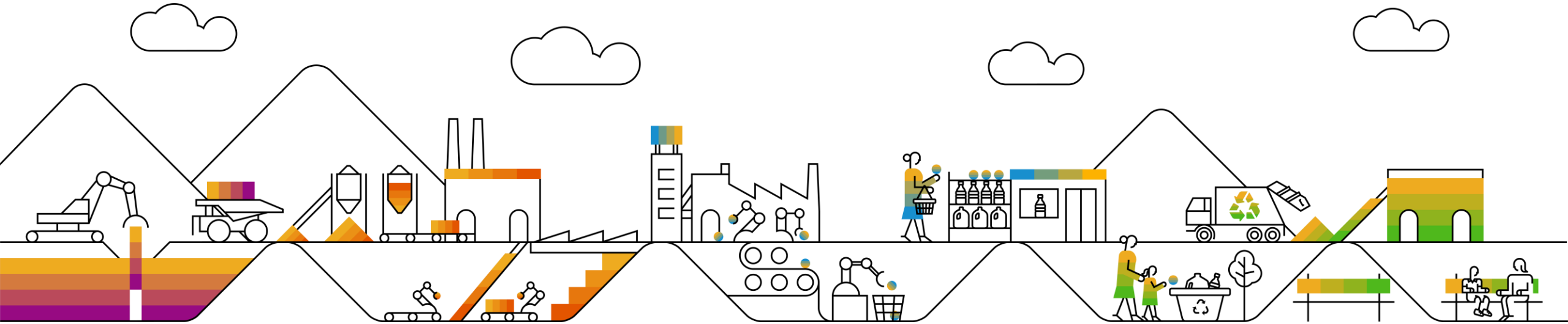


SAP Profitability and Performance Management

Value Chain Sustainability Management Content – Details

THE BEST RUN SAP

In a Nutshell …
The Challenge

”

It’s time to transform.

Companies have to collectively drive an inspirational agenda for business, and ensure that the transformation in support of sustainability is at the core of business’ response to tackling the roots of the climate emergency, nature loss and growing inequalities.

*Conclusions from a keynote session at GreenBiz21**

”

Extreme weather is ranked **#1 global risk** by likelihood**

80% of global CEO’s start to **implement sustainability** into their operations***

81% of respondents see the need for businesses to **increase** their **efforts to protect the environment****

* World Business Council for Sustainable Development, https://www.wbcsd.org/Overview/News-Insights/General/News/Time-to-transform-Watch-the-GreenBiz21-keynote-on-how-business-must-lead-the-transformation-the-world-needs
** World Economic Forum, „The Global Risks Report 2021“, http://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf
*** KPMG, „The Time has come – The KPMG Survey of Sustainability Reporting 2020“, https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf
**** Deloitte, „2021 Climate Check: Business’ Views on Environmental Sustainability“, https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Risk/gx-deloitte-global-climate-check-report-march-2021.pdf

Value Chain Sustainability Content Significance

By measuring, managing and disclosing their sustainability performance, businesses can mitigate risks, sustain profitable growth, and react effectively to the rapidly changing world.

Value Chain Sustainability Management of SAP Profitability and Performance Management enables companies to:

- **measure and manage** the sustainability performance of a company's own operations (corporate side), including EU Taxonomy assessment, as well as the impacts across the whole value chain,
- and **access GHG emissions** of products along their life cycle,
- while **staying aligned with** generally accepted international **sustainability frameworks.**

As a result, companies can make informed decisions to leverage positive impacts and mitigate the negative ones with regards to their own operations as well as operations of their suppliers and customers down to the product and service levels.

Value Chain Sustainability Management Overview

Corporate Sustainability ESG Reporting

Track, analyze, and report environmental, and socio-economic data to help drive sustainability:

- with respect to environmental, social and governance aspects (**ESG**) and in line with the Greenhouse Gas (**GHG**) Protocol
- in line with the Stakeholder Capitalism Metrics (**SCM**) of the World Economic Forum (**WEF**)
- in line with the reporting disclosures laid out in the Global Reporting Initiative (**GRI**) standards
- referencing the UN Sustainable Development Goals (**SDG**s)

Value Chain Sustainability Management

Measure and optimize the environmental and socio-economic impact of a company, upstream and downstream.

Product Carbon Footprint

Measure and optimize the environmental sustainability of products (product carbon footprint) and services down to production step, resource and activity level.

EU Taxonomy Assessment

Provide a strategic overview of EU Taxonomy alignment assessment results for turnover, CapEx and Opex at a company level.

Sustainability Data Frontend

Show and maintain input data related to sustainability and help business partners reduce and compensate their footprint by offering customized offset portfolios and projects.

Corporate Sustainability ESG Reporting

Environmental, Social and Governance

Objective

- Measurement, management and disclosure of corporate sustainability performance.

Capabilities

- Scope 1, 2 and 3 carbon emissions in line with the GHG Protocol.
- Reference to GRI indicators and UN SDGs.
- Reference to the core metrics from the Stakeholder Capitalism Metrics Report by the World Economic Forum
- Client and server side simulation and scenario analysis to assess sustainability impact.

Benefit

- Transparency of corporate environmental, social, governance (ESG) and economic performance.

Supporting Applications

SAP S/4 HANA
SAP ERP
SAP Analytics Cloud

EU Taxonomy Assessment at Company Level

EU TAXONOMY

EU Taxonomy Assessment – Company Level

Objective

- Assessment of EU Taxonomy alignment for Turnover, capital expenditure (CapEx) and operational expenditure (OpEx).

Capabilities

- EU Taxonomy alignment verification of the economic activities across different sectors.
- EU Taxonomy assessment of eligible activities, based on various screening tests regarding: making substantial contribution to one of the six environmental objectives, causing no significant harm (DNSH) to any of the remaining environmnetal objectives, meeting minimum safeguards.
- Calculation results for the three KPIs: Turnover, CapEx and OpEx based on the Text of the draft EU Taxonomy article 8 Delegated Act.
- Reporting disclosure template for Turnover, CapEx and OpEx in accordance with Annex II of the Text of the draft EU Taxonomy article 8 Delegated Act.

Benefit

- Strategic overview of taxonomy eligible, non-eligible, aligned and not-aligned Turnover, CapEx and OpEx, with required level of granularity (per economic activity).

Supporting Applications

SAP S/4 HANA
SAP ERP
SAP Analytics Cloud

Value Chain Sustainability Management

Our Value Chain Sustainability Focus

Objective

- Measurement, management and disclosure of sustainability performance across the whole value chain.

Capabilities

- Calculations based on environmentally and socially extended Input-Output model.
- Impact valuation (and monetization) of environmental, social and economic performance indicators.
- Client and server side simulation and scenario analysis for carbon footprint across the supply chain (for example: change in energy generation efficiency, change in recycling share).

Benefit

- Understanding of social, environmental and economic impacts across the whole supply chain (from procurement at the supplier end, through production at various plants to the product delivery to the customers).
- Strategic overview of how changes within the value chain affect the impacts across socio-economic and environmental dimensions.

Supporting Applications

SAP S/4 HANA
SAP ERP
SAP Analytics Cloud

Product Carbon Footprint

Product Carbon Footprint Focus

Objective

- Providing insights into Product Carbon Footprint (PCF) and overall assessment of the green house gas emission (GHG) associated with products along their life cycle.

Capabilities

- Focus on CO_2 emissions and further environmental KPIs (e.g. water consumption, hazardous waste, waste residual, air pollution, water discharge, land use) during different product life cycle stages.
- Scope 1, 2 and 3 carbon emissions in line with the GHG Protocol.
- Product Carbon Footprint impact in the production process by material type, offshore plants as well as across the whole product portfolio.
- Calculations based on a combination of Input-Output Analysis and Life Cycle Assessment.

Benefit

- The report gives transparency about potentials for product efficiency.
- The report provides a basis for the purchase decision which take into account sustainability factors.

Supporting Applications

SAP S/4 HANA
SAP ERP
SAP Analytics Cloud

Sustainability Frontend

Sustainability Source Data Acquisition Frontend

Objective

- Demonstrate and maintain sustainability-related input data.
- Manipulate the data in the frontend tab and visualize it there as well as across all other tabs of the report.

Capabilities

- Review and update of electricity and natural gas consumption data.
- Review and update of travel consumption and fuel consumption data.
- Review and update of social and governance-related data.
- Review and update of sustainability-related baseline and targets.
- Select carbon offsetting projects.

Benefit

- Identification and evaluation of potential energy savings.
- Costs optimization, CO_2 emissions reduction.
- Carbon footprint reduction and compensation through a selection of customized offset projects and portfolios.

Supporting Applications

SAP S/4 HANA
SAP ERP
SAP Analytics Cloud

Environment Overview

General | Edit | Search

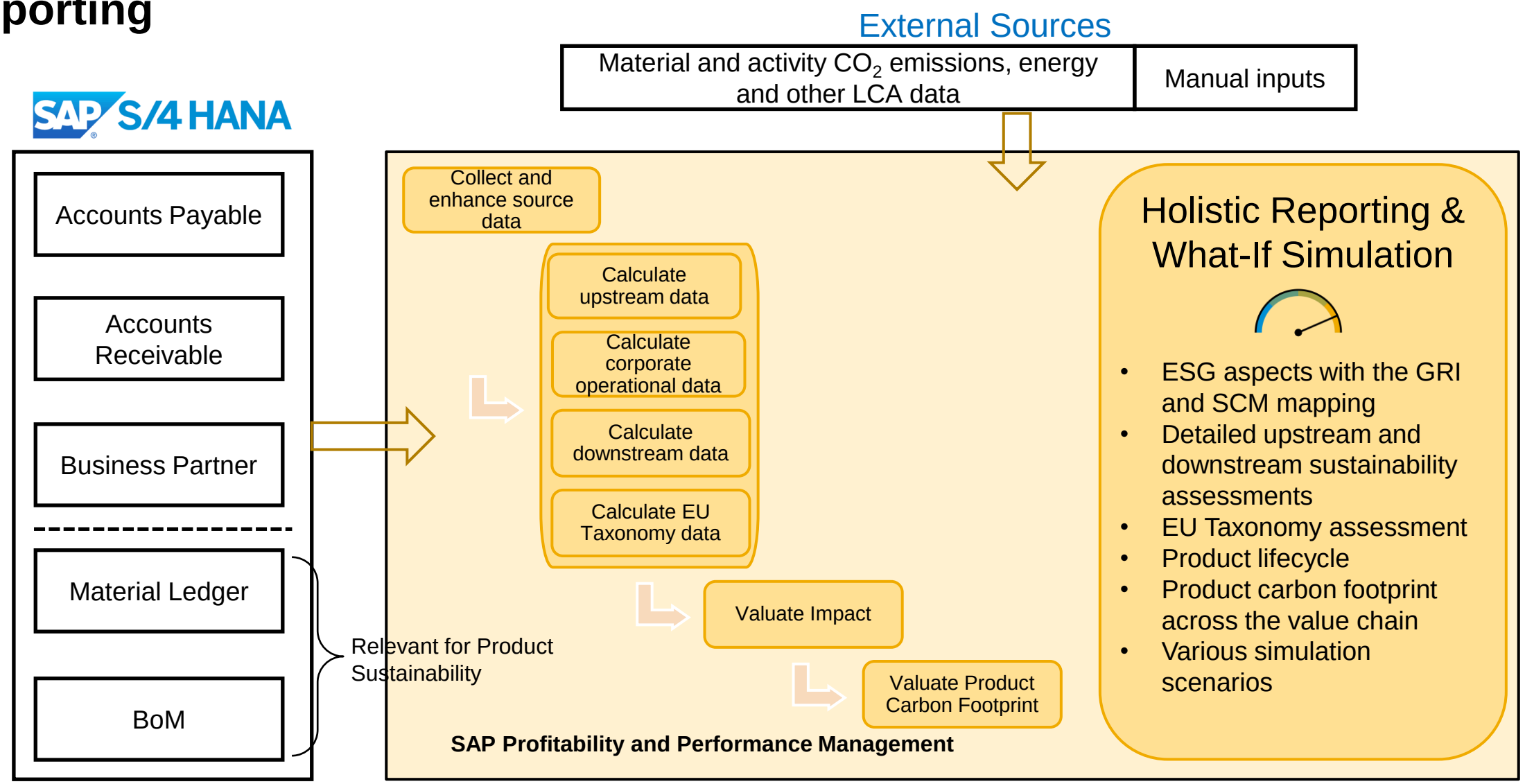
Go to: MODELING | PROCESS

Main > Sample Content > Cross-Industry

Environment Description	Environment			
Process Mining on S/4 HANA	SXM			
Agile Plan and Forecast Modeling	SXF	001	1	3
Allocation Hub	SXH		0	4
Corporate Budgeting and Planning	SXB	0003	0	4
Corporate Sustainability Management	SXD	0001	2	3
Financing and Investment Sustainability Management	SXV	0004	1	10
IT Cost Management	SX	0012	0	8
Liquidity Management powered by Process Mining		0003	23	2
Operational Transfer Pricing	SXG	0014	0	0
PCM to PaPM Activity Based Costing	SXR	0003	0	2
Product and Service Costing	SXO	0001	0	5
Profitability and Cost Management	SXP	0012	0	3
Simple Cost Allocation Management	SXS	0005	1	2
Tax Calculation and Reporting	SXT	0007	0	5
Value Chain Sustainability Management	SXC	0013	2	27

This is a predefined cross-industry environment, as a collection of related use cases, processes or applications

Value Chain Sustainability Management: Data Sources, Processing and Reporting



Model

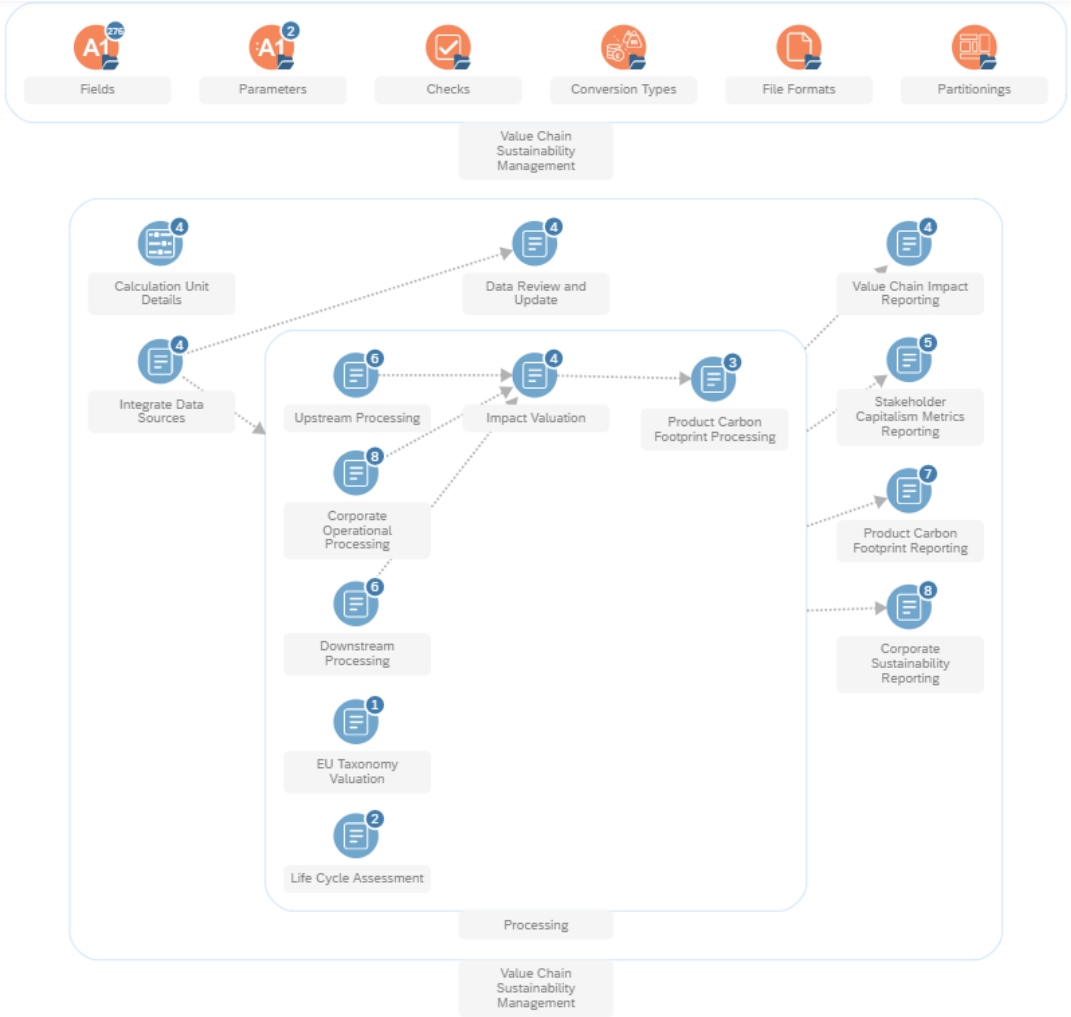
Uses most trusted data
Connects to financial accounting data as the primary source.

Based on proven top-down models
Uses best practices macro-economic Input-Output Analysis, such as Leontief to achieve reliable results.

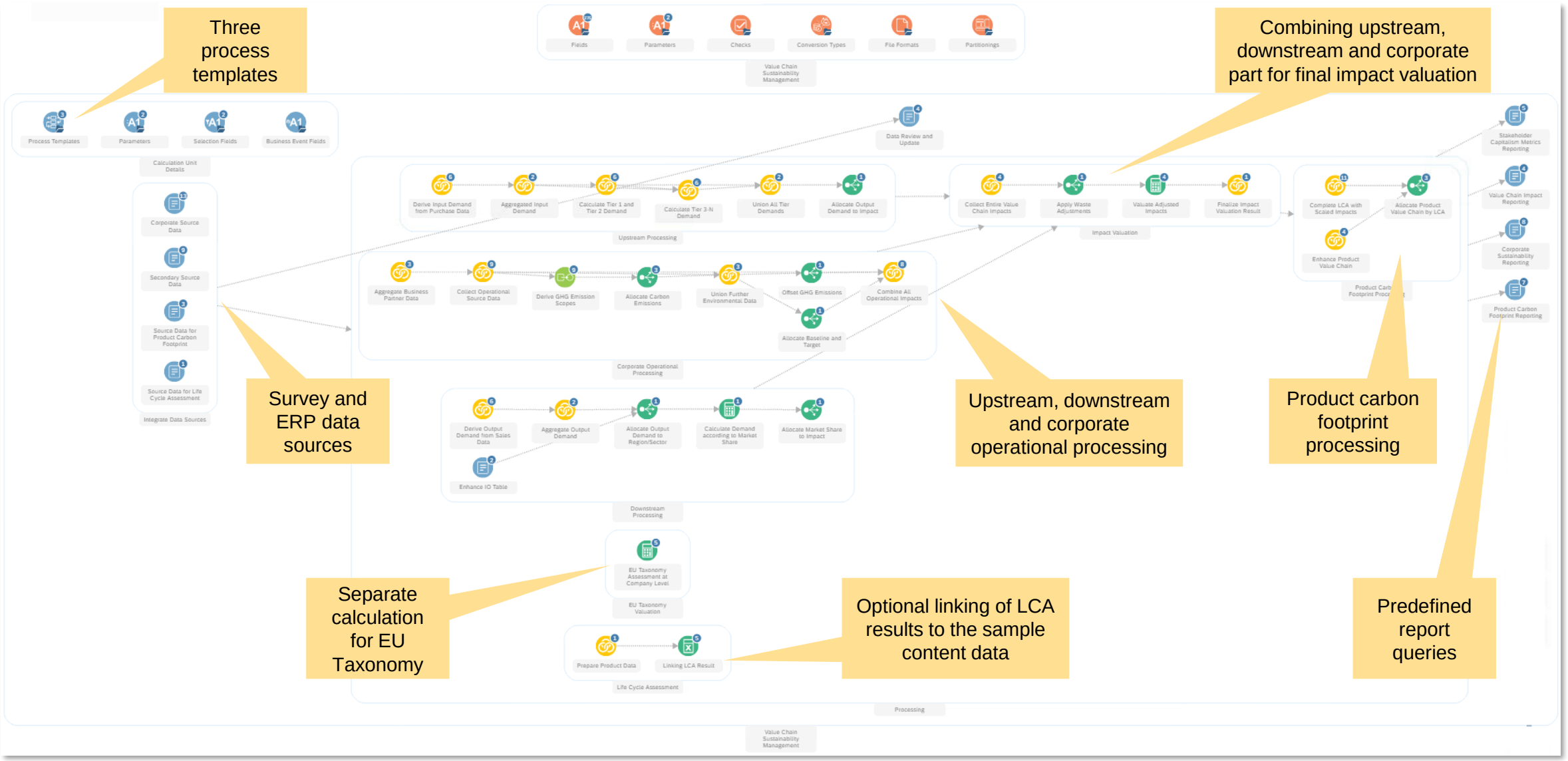
Optionally include bottom-up models
Calculate consolidated carbon footprints by product based on high-speed allocations.

Built-in Traceability
Calculates on granular level throughout the whole process.

Ready to benchmark
Allows to compare the impact against the benchmark in the region and sector.



Calculation Model Explained

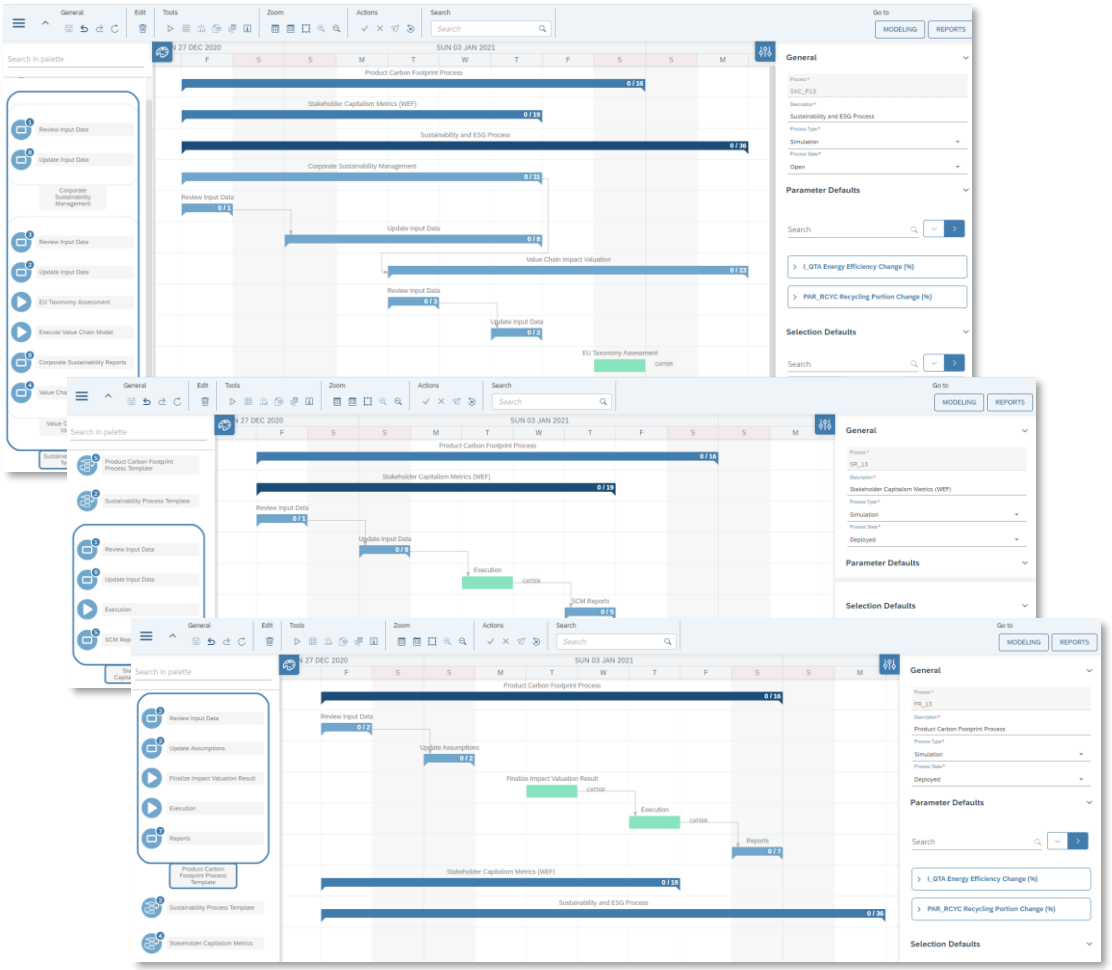


Process Orchestration and Workflow

Predefined Process Templates
Predefined process templates for sustainability and ESG management, Product Carbon Footprint management and Stakeholder Capitalism Metrics reporting orchestrate the periodic sustainability performance valuation and management processes. They comprise all activities with their dependencies and can be easily adapted if needed.

Workflow
A four-eyes principle workflow can be used to further structure the review process with submissions and approvals.

Traceability and Auditability
The execution of all activities is logged and permanently available for evaluations and audits.



Report Management: Environmental, Social and Governance

SAP Profitability and Performance Management: **Value Chain Sustainability Management**

Environmental, Social and Governance

The report aims to provide transparent, in-depth insights into company's sustainability performance with respect to environmental, social and governance aspects (ESG). It offers a well-structured method to improve the organization's commitment to sustainable development and social responsibility in a way that can be demonstrated to both internal and external stakeholders. All attributes cited below are calculated on the fly by the Profitability and Performance Management robust value chain sustainability model following the principles of simplicity, practicability and scalability and are represented by an appropriate visualization style for assisting stakeholders to identify and gain clear understanding of all benefits and costs of business to society. The report integrates reporting disclosures laid out in the Global Reporting Initiative (GRI) Standards and demonstrates how companies can measure and disclose their contribution to the Sustainable Development Goals (SDGs). As such, the report, to a certain extent, is also aligned with the core set of Stakeholder Capitalism Metrics and disclosures developed by the International Business Council (IBC) of the World Economic Forum (WEF).

Governance and Economic Performance

While creating profit, company can sustainable manage its operations in such a way as to enhance national economic growth and contribute to national economic wealth but also explore economic impact along global supply chains and increase competitiveness whilst ensuring environmental protection and promoting social responsibility, including consumer interest.

Master and Economic Performance Data

Company	Fiscal Year	Revenue, USD	Operating Profit, USD
Sunshine	2020	729,16 m	317,82 m

Sustainability Governance

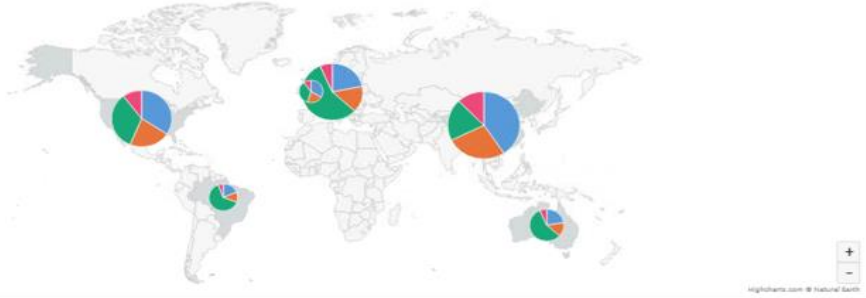
Our strategies
The Sustainability Board is a committee of our company is responsible of ensuring ESG integration across all business units and core processes. The Sustainability Board oversees the company's policies and programs and related risks to the company that concern regulatory, public policy and corporate social responsibility matters, including progress against the company's sustainability goals. The Sustainability Board reviews, at least annually, all shareowner proposals, public policy advocacy efforts, political contributions and charitable contributions to ensure alignment with company policy. The Sustainability Board reports regularly to the full Board on these matters. The Sustainability Board also receives monthly updates on priority sustainability issues, including information on actions and progress toward goals. Annually, the Sustainability Board conducts a self-evaluation, which it presents to the full Board.

GRI 201: Economic Performance

The following charts offers insight into company's contribution to the gross domestic product (GDP) of the country it operates through company direct profit across sectors and shows any potential macro-economic cost or benefit that might result from the impact of company's activities on a country's balance of payments.

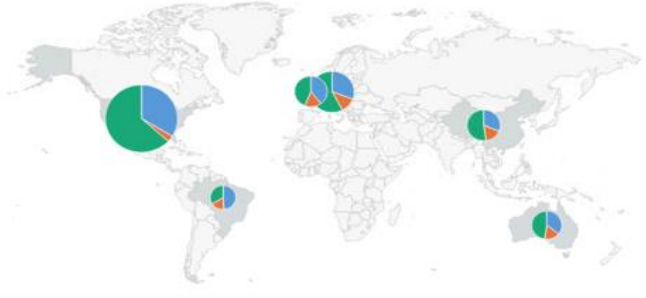
GRI 201 - Profit and Cost by Region, USD

The map below shows the operating profit, profit after tax, operating cost and profit taxes by country. Drill down to see more details on business unit and business area levels.



GRI 201 - Revenue, Export and GVA by Region, USD

The map below shows the exports, revenue and gross value added by country. Drill down to see more details on business unit and business area levels.



Report Management: EU Taxonomy Assessment - Company Level

SAP Profitability and Performance Management: **Value Chain Sustainability Management**

EU TAXONOMY

EU Taxonomy Assessment - Company Level

The EU Taxonomy is a classification system aim
sustainable activities and projects, and therefor
requirements across a broad range of industry s

1. Forestry
2. Environmental protection and restoratio
3. Manufacturing
4. Energy
5. Water supply, sewerage, waste manage
6. Transport
7. Construction and real estate activities
8. Information and communication
9. Professional, scientific and technical ac
10. Financial and insurance activities
11. Education
12. Human health and social work activiti
13. Arts, entertainment and recreation

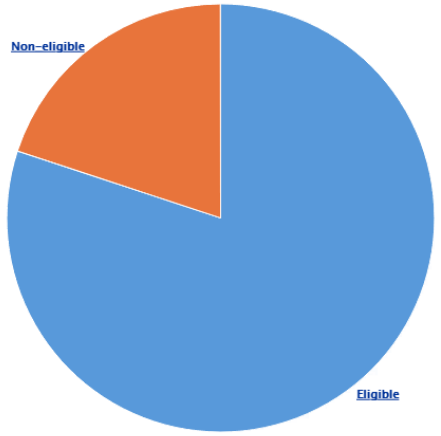
The EU Taxonomy Regulation was published in
which includes, inter alia, updates on the EU Ta
act for the remaining objectives will be publishe

According to the taxonomy regulation, an econ

EU Taxonomy Assessment for Turnover

Taxonomy Eligibility and Alignment of Turnover by Activity, (%)

The chart below demonstrates the share of taxonomy eligible and non-eligible turnover. You can drill down to view taxonomy aligned and not-aligned turnover by pressing on eligible turnover. The denominator of the taxonomy eligible and non-eligible turnover calculation in the drill down option is the total turnover. You can also see a detailed breakdown of types of activities which are included in each category.



Reporting of Taxonomy-aligned Turnover

The sheet shows the proportion of turnover from products or services associated with Taxonomy-aligned economic activities - disclosure covering year 2020. It also demonstrates the percentage of turnover which is eligible but not-aligned, as well as not-eligible turnover. The sheet is prepared in accordance with the template provided in Annex II of the Text of the draft EU Taxonomy article 8 Delegated Act.

	A	C	D	E	F	G	H	I	J	K	L	M
1	Reporting of Taxonomy-aligned Turnover											
2					Substantial Contribution criteria						Do N	
3	Economic activities	NACE Codes	Absolute Turnover, M€	Proportion of Turnover, %	Climate change mitigation, %	Climate change adaptation, %	Water and marine resources, %	Circular economy, %	Pollution, %	Biodiversity and ecosystems, %	Climate change mitigation (Y/N)	Climate change adaptatio (Y/N)
4	A. TAXONOMY ELIGIBLE ACTIVITIES											
5	A.1. Environmentally sustainable activities (Taxonomy-aligned)											
6	Manufacture of low carbon technologies	C22	24.1	3.3%	100%	0%	0%	0%	0%	0%	NA	N
7	Manufacture of low carbon technologies	C22	17.4	2.4%	0%	100%	0%	0%	0%	0%	Y	NA
8	Manufacture of fertilizers and nitrogen compounds	C20.15	49.2	6.7%	100%	0%	0%	0%	0%	0%	NA	Y
9	Manufacture of fertilizers and nitrogen compounds	C20.15	3.0	0.4%	0%	100%	0%	0%	0%	0%	NA	NA
10	Manufacture of hydrogen	C20.11	27.1	3.7%	0%	100%	0%	0%	0%	0%	Y	NA
11	Manufacture of other inorganic basic chemicals - Manufacture of carbon black	C20.13	5.2	0.7%	100%	0%	0%	0%	0%	0%	NA	NA
12	Manufacture of other inorganic basic chemicals - Manufacture of carbon black	C20.13	6.2	0.9%	0%	100%	0%	0%	0%	0%	Y	NA
14	Manufacture of other organic basic chemicals	C20.14	43.1	5.9%	0%	100%	0%	0%	0%	0%	Y	NA
15	Manufacture of other inorganic basic chemicals - Manufacture of disodium carbonate	C20.14	54.0	7.4%	100%	0%	0%	0%	0%	0%	NA	Y

Taxonomy-aligned Turnover Report

Report Management: Value Chain Sustainability

SAP Profitability and Performance Management: **Value Chain Sustainability Management**

Our Value Chain Sustainability Focus

Our value chain sustainability report aims to provide transparent and comprehensive information about environmental, economic, socially responsible conduct through our value chain. This report shows impact valuation (and monetization) of environmental and social performance indicators, EU Taxonomy assessment of business activities, and can be used as a well-structured method to sustainable development from procurement at the supplier end, to production at various plants to the product delivery to the customers.

KPIs Dashboard

With the purpose of covering the whole value chain, all KPIs are evaluated at the level of Upstream, Downstream and Own-operation in this report. The Upstream level is further split into Tier 1 and Tier 2-n by taking into account the Leontief Input-Output model. Two aspects are measured in this report: profitability side and environmental-social side. Additionally, the greenhouse gas (GHG) effects are separately listed in the product level report. The following table shows all important KPIs to be considered. All money related KPIs are converted into US dollar.

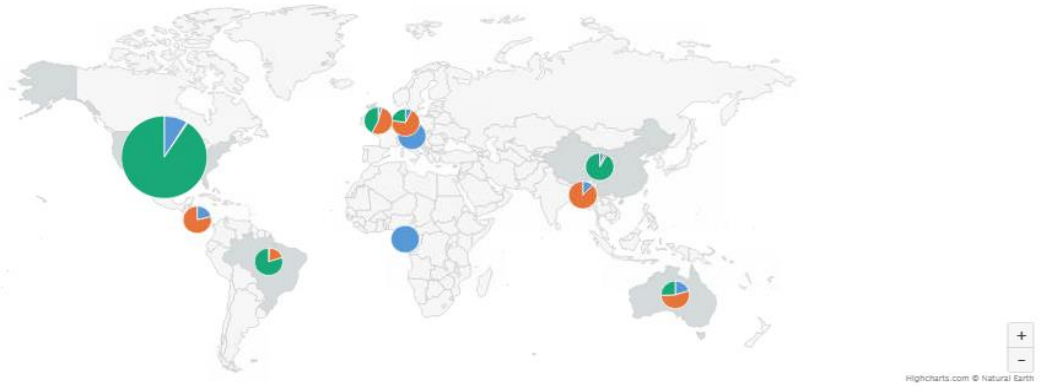
Gross Value Added (USD)	Profit Taxes (USD)	Value Chain Employment (FTE)	Water Consumption and Pollution (tons)	GHG Emission (tons CO2e)	Total Waste (tons)
2.167,83 m	319,03 m	28.588	1,49 m	6.027,44 k	374,69 k

Global Impacts Overview

Environmental, social responsible, and economic conduct must always to be considered by organizations. The pie charts on Geographic settings below provide overall impact and profit-and-loss results at the country-sector level by making use of the Leontief Input-Output model and 3-phase value chain evaluation. This helps to explore details of GDP and economic impact in different dimensions while getting a view of the big picture.

Worldwide Overall Impact in USD

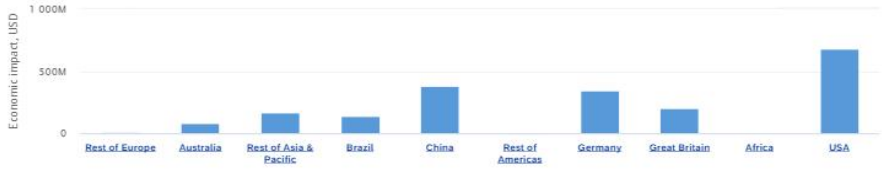
The geo map shows the overall monetized impact across countries broken down by levels (upstream, operations, downstream). To get more insights on overall impact, drill down to the tier, sector and effect level.



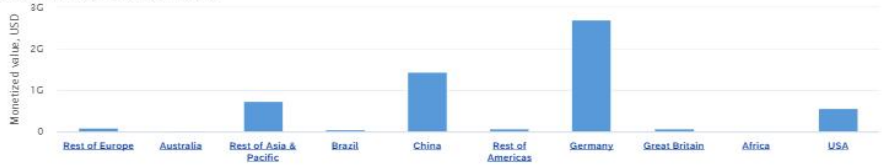
Monetized Impact in USD

The bar charts below show the economic impact as well as monetized environmental and social impact of the company. To get more insights on the impact, drill down to the sector and effect level.

Economic Impact



Environmental and Social Impact



Report Management: Carbon Footprint Simulation

SAP Profitability and Performance Management: **Value Chain Sustainability Management**

Simulation for Carbon Footprint of Value Chain

The carbon emissions along the whole value chain of a company are dependent on various factors, which may be subject to rapid change. Some effects are beyond a company's influence but there are many ways in which the company can reduce the carbon footprint of its business activities. With the what-if simulation companies gain the capability to get a strategic overview of how changes related to the value chain affect their carbon footprint.

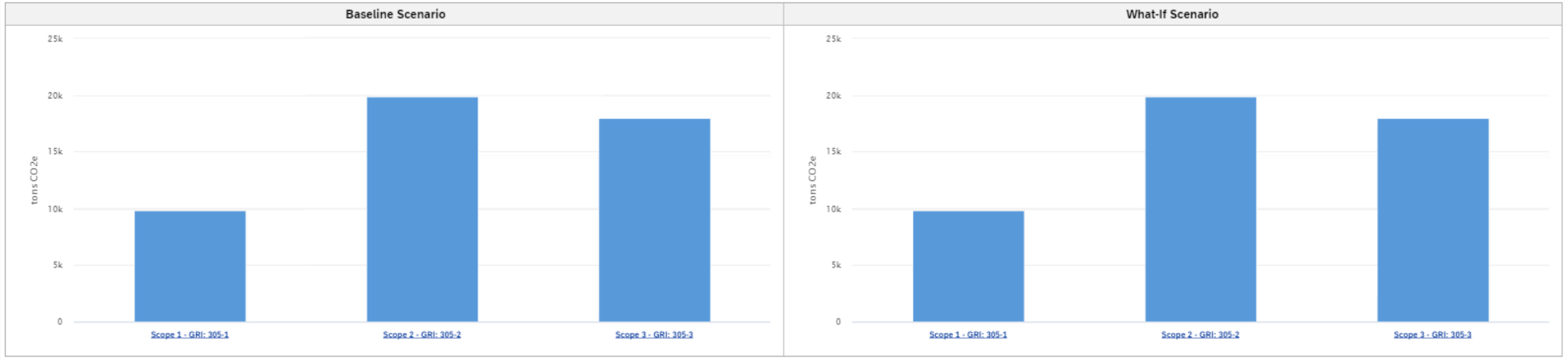
What-if Scenario for Change in Energy Generation Efficiency

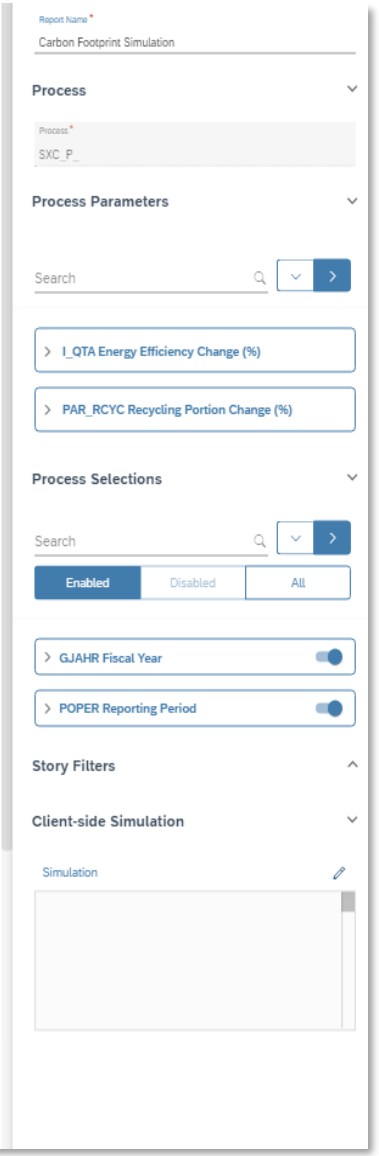
Fuel combustion by now is a main source to generate energies and it's also one of the main sources of Carbon emissions by human activities. CO_2 emissions from fuel combustion are affected by a range of drivers, for instance, the energy generation efficiency is linked to the GHG emissions in a linear way, meaning that a change in the energy efficiency will have the following impact:

- **Increasing the energy generation efficiency:** it will reduce the consumption of fuel resources, therefore decrease the GHG emissions by a scalar factor.
- **Decreasing the energy efficiency:** it will increase the consumption of fuel resources, therefore increase the GHG emissions by a scalar factor.

To analyze the Simulations for carbon footprint, use the charts below, where the GHG emissions in tons CO2e are shown.

Note
To use the Carbon Footprint What-If simulation for a change in the energy generation efficiency, first expand the property panel on the right side: There is a parameter "Energy Efficiency Change (%)" available.
1. Drag the handle on the slider range to set a numeric value for this parameter. When your desired value is beyond the slider range, you can also directly type a value in the input box under the handle.
2. Click on "Apply" Button on the bottom of property panel to confirm your configuration.
3. Click on "Simulate" Button of "Tools" group on the top menu.
Now the simulation is initialized. As soon as a green message shows that the simulation is done, the right chart of What-If scenario will be updated accordingly. Then the simulation's effect can be verified by comparing the right chart to the left one of Baseline scenario.





Report Management: Sustainability Data Frontend

SAP Profitability and Performance Management: **Value Chain Sustainability Management**

Sustainability Source Data Acquisition Frontend

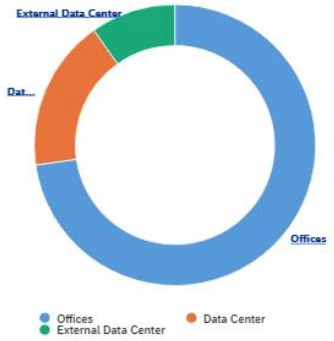
Update Facilities Consumption Data

Climate risks awareness and rising energy costs lead to well-thought and rational building's energy consumption. An elaborate management of facility energy consumption will ultimately help to identify and evaluate the building's energy savings potential and optimizes:

- Transparency of energy costs
- Developing professional energy saving measures
- Reduction of CO2 emissions
- Energy efficiency, eco-friendliness and sustainability are key factors for winning new customers.

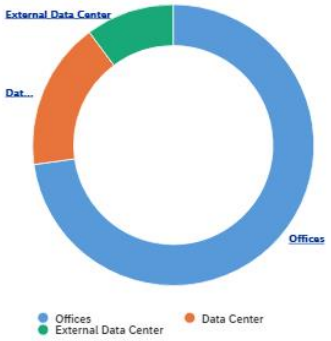
Electricity Consumption in KWh

The chart shows the distribution of electricity consumption among object types.



Natural Gas Consumption in m3

The chart shows the distribution of natural gas consumption among object types.



Review and Update Facilities Consumption Data

You can maintain the facility energy consumption data in the sheet below - change, delete, insert or make necessary calculations, and see the results of the changes on the fly.

	AREAU	CONSUMPTION	GJAHR	POPER	ZPOPER	RBUKRS	RBUSUT	RBUSA
22	8422	2189720	2020	014	2020-12-31	SUN_CHN	PM	FAC
23	8422	1684400	2020	014	2020-12-31	SUN_CHN	PM	FAC
24	8731	2270060	2020	014	2020-12-31	SUN_CHN	SA	FAC
25	8731	1746200	2020	014	2020-12-31	SUN_CHN	SA	FAC
28	5103	1250235	2020	014	2020-12-31	SUN_GBR	MA	FAC
29	5103	969570	2020	014	2020-12-31	SUN_GBR	MA	FAC
30	4346	1064770	2020	014	2020-12-31	SUN_GBR	RD	FAC
31	4346	825740	2020	014	2020-12-31	SUN_GBR	RD	FAC
32	7076	1733620	2020	014	2020-12-31	SUN_GBR	SA	FAC
33	7076	1344440	2020	014	2020-12-31	SUN_GBR	SA	FAC
34	7274	1818500	2020	014	2020-12-31	SUN_GER	AD	FAC
35	7274	1309320	2020	014	2020-12-31	SUN_GER	AD	FAC
36	9778	2444500	2020	014	2020-12-31	SUN_GER	CS	FAC
37	9778	1760040	2020	014	2020-12-31	SUN_GER	CS	FAC
38	3385	846250	2020	014	2020-12-31	SUN_GER	FI	FAC
39	3385	609300	2020	014	2020-12-31	SUN_GER	FI	FAC
42	4473	1083360.6	2020	014	2020-12-31	SUN_USA	FI	FAC
43	4473	785324.61	2020	014	2020-12-31	SUN_USA	FI	FAC

Sheet1

Report Management: Product Carbon Footprint

SAP Profitability and Performance Management - **Value Chain Sustainability Management**

Product Carbon Footprint Focus

The following report offers insights into Product Carbon Footprint (PCF), while giving an overall assessment on greenhouse gas (GHG) emissions associated with products along their life cycle. Our PCF covers the total greenhouse gas emissions generated by a product over the different life cycle stages, and manages with effective KPIs throughout the value chain. This involves an end-to-end analysis of the product or service. This report enables organizations to demonstrate their environmental responsibility, stand out from the competition and show existing and potential customers' proof of their commitment. Meanwhile, it also helps organizations to reducing the impact of its daily operations on the environment with carbon footprint analysis by meeting the standards.

KPI Dashboard for Product Life Cycle

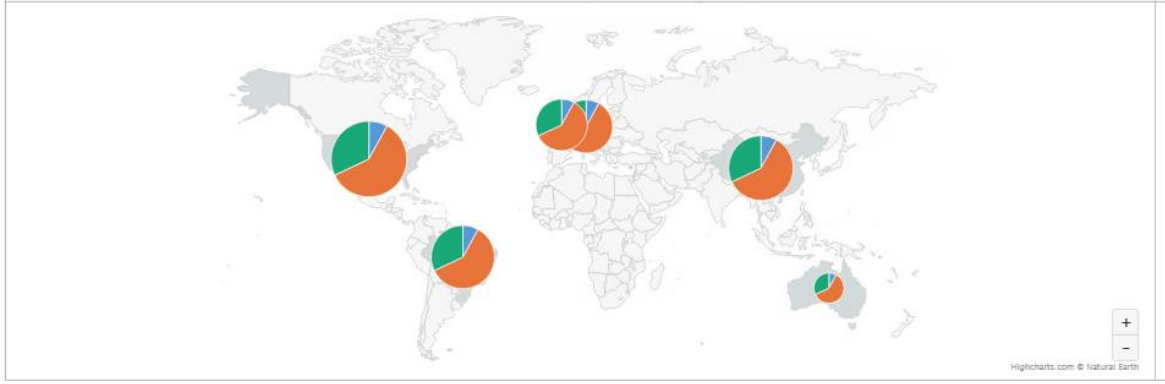
A carbon footprint at product level is a special application of the life cycle methodology that specifically focuses on GHG emissions. In order to track the emissions through manufacturing of precursors, a comprehensive sustainability assessment of the entire product life cycle with properly defined GHG emission scopes is created along the complete value chain. To help delineate direct and indirect GHG emission sources, three scopes, namely scope 1, 2 and 3, are defined for GHG accounting and reporting purposes. Scope 1 covers direct emissions from owned or controlled sources, whereas Scope 2 and 3 are both indirect emissions. Specifically, Scope 2 emission covers the generation of purchased energy, and Scope 3 emission includes all other indirect emissions that occur in a company's value chain. Relevant KPIs below are calculated in a way that all environmental, economic and social criteria are considered to be included. All money related KPIs are converted into US dollar amount.

GHG Emission (tons CO2E)	Water Consumption (tons)	Total Waste (tons)	Production (PC)	Material Consumption (USD / PC)	Carbon Intensity (tons / PC)
2.566,42	3.643,44	352,48	104.580	2.848,61	0,025

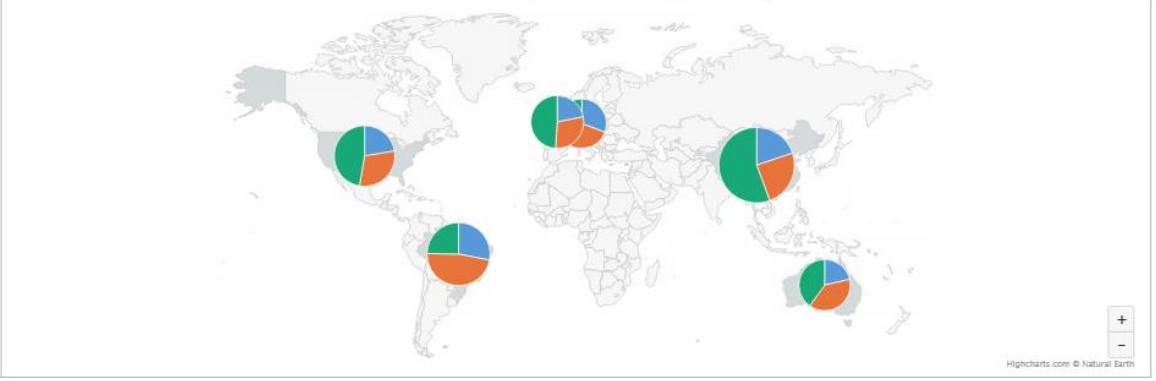
Product Environmental Impact Overview

A product has various environmental impacts throughout its life cycle (from cradle to grave). For instance, the production consumes water and produces wastes. In particular under the pressure of climate change, Product Carbon Footprint (PCF) becomes a focus when talking about a product's environmental impacts. PCF is commonly defined as the total amount of all greenhouse gas (GHG) emissions released throughout the life cycle of a product, from the extraction of its raw materials to end-of-life. Usually, It can be expressed in carbon dioxide equivalents (CO2e). Taking the life cycle analysis into account, the pie charts on Geographic settings below take a wide view of worldwide Product environmental impact as well as PCF by countries at the sector level.

Product Environmental Impact Worldwide (in tons)



Product Carbon Footprint across Sectors (in tons CO2e)



Carbon Footprint Simulation

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Simulation for Carbon Footprint

The carbon emissions along a product's life cycle are dependent on various factors, which may be subject to rapid change. Some effects are beyond a company's influence but there are many ways in which a business can reduce the carbon footprint of its products. With the what-if simulation a company can get a quick overview of how changes related to the products' life cycle affect their carbon footprint.

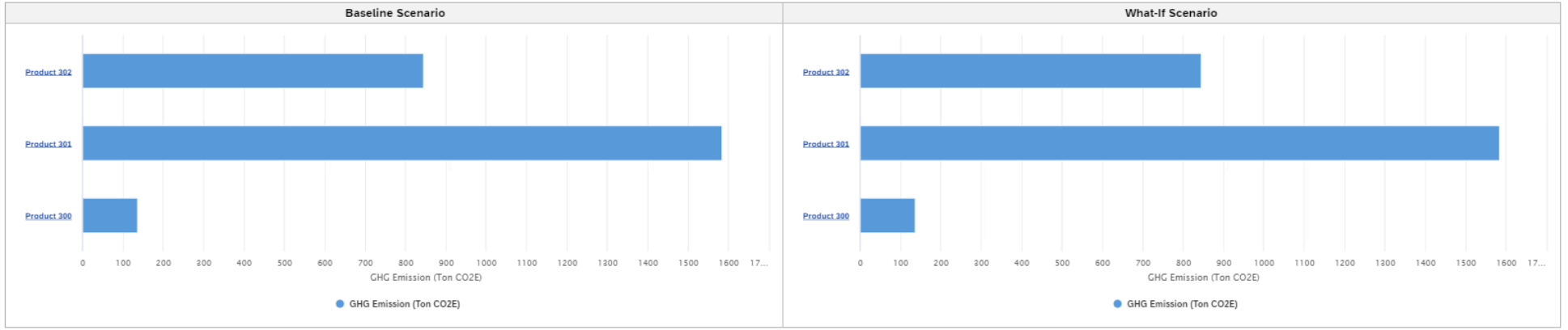
What-if Scenario for Change in Energy Generation Efficiency

Fuel combustion by now is a main source to generate energies and it's also one of the main sources of Carbon emissions by human activities. CO2 emissions from fuel combustion are affected by a range of drivers, for instance, the energy generation efficiency is linked to the GHG emissions in a reciprocal way, meaning that a change in the energy generation efficiency will have the following impact:

- **Increasing the energy generation efficiency:** it will reduce the consumption of fuel resources, therefore decrease the GHG emissions by a scalar factor.
- **Decreasing the energy generation efficiency:** it will increase the consumption of fuel resources, therefore increase the GHG emissions by a scalar factor.

To analyze the Simulations for carbon footprint, use the charts below, where the products' GHG emissions in tons CO2e are shown.

Note
To use the Carbon Footprint What-If simulation for a change in the energy generation efficiency, first expand the property panel on the right side: There is a parameter "Energy Efficiency Change (%)" available.
1. Drag the handle on the slider range to set a numeric value for this parameter. When your desired value is beyond the slider range, you can also directly type a value in the input box under the handle.
2. Click on "Apply" Button on the bottom of property panel to confirm your configuration.
3. Click on "Simulate" Button of "Tools" group on the top menu.
Now the simulation is initialized. As soon as a green message shows that the simulation is done, the right chart of What-If scenario will be updated accordingly. Then the simulation's effect can be verified by comparing the right chart to the left one of Baseline scenario.



Report Name *
Carbon Footprint Simulation

Process

Process *
SXC_F_

Process Parameters

Search

I_QTA Energy Efficiency Change (%)

PAR_RCYC Recycling Portion Change (%)

Process Selections

Search

Enabled | Disabled | All

GJAHR Fiscal Year

POPER Reporting Period

Story Filters

Client-side Simulation

Simulation

Stakeholder Capitalism Metrics Framework

Stakeholder Capitalism Metrics: Principles of Governance

The vital part of any corporation is its governance. It sets the values, goals, directions and is the first authority responsible for achievement of environmental, economic and social goals and regulations. The core metrics of the Principles of Governance Pillar include:

- Setting purpose
- Governance body composition
- Material issues impacting stakeholders
- Anti-corruption
- Potential Ethics Advice and Reporting Mechanisms
- Integrating Risk and Opportunity into Business Purposes

KPI Dashboard

Women in the highest governance bodies	
Headcount	%
103	29,80

Setting Purpose

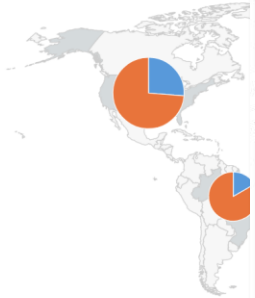
Sunshine Sustainable Impact 2030 is our strategic approach to driving sustainable growth and e
which we aim to create value to all our stakeholders:
1. Green business/product line and investment
2. Energy, Climate and the Environment
3. Employees
4. Local communities
Our strategy referenced in this 2020 Annual Report and our 2021 Proxy Statement articulates h

Governance Body Composition

Corporate governance is a matter of utmost importance for us. We have strong governance syst
commitments. In compliance with this best practice provision, the Board of Management and Su

Women/ Men in

The chart below shows the distribution of women and men in the highest governance bodie
has launched gender balance initiatives targeted to support more women in leadership, ma
proportion of women in leadership position globally.



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Stakeholder Capitalism Metrics: Prosperity

It's critical for businesses to show how their strategic plans and corporate practices lead to long-term value creation, profit growth, and resilience, as well as the wider economy's ability to promote economic prosperity and social stability. The core metrics of the Prosperity Pillar include:

- Absolute number and rate of employment
- Economic contribution
- Financial investment contribution
- Total R&D expenses
- Total tax paid

KPI Dashboard

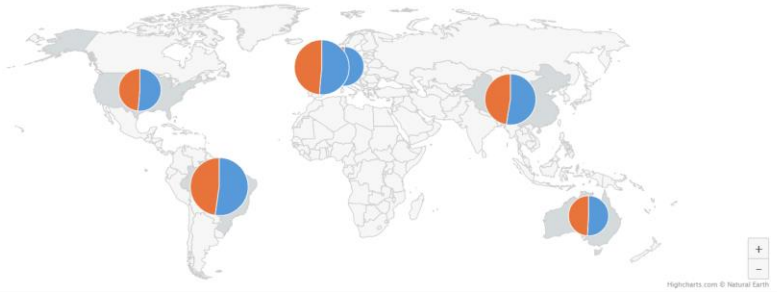
Employee Hires Female		Employee Hires Male		Employee Turnover, %		Direct economic value, USD	
FTE	%	Headcount	%	Female	Male	generated	distributed
954	51,71	889	48,29	43,90	56,10	729.162 k	-803.668 k

Absolute Number and Rate of Employment

The chart below summarizes the total number and rate of new employee hires as well as employee turnover in 2020, by different age groups and gender. The rate excludes employees who are on a parental leave or a long-term leave due to illness, as well as employees who are transitioning to the non-working phase of partial retirement. Due to the COVID-19 pandemic, turnover was relatively low compared to past years. While external research has found that more women are leaving the labor force than men, this hasn't been reflected in the company.

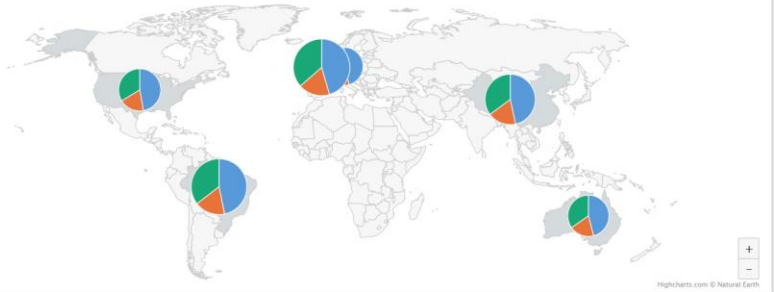
Employee Hires Male/ Female, FTE

The map below shows the distribution of male and female employee hires by country. Drill down to the location and business unit level.

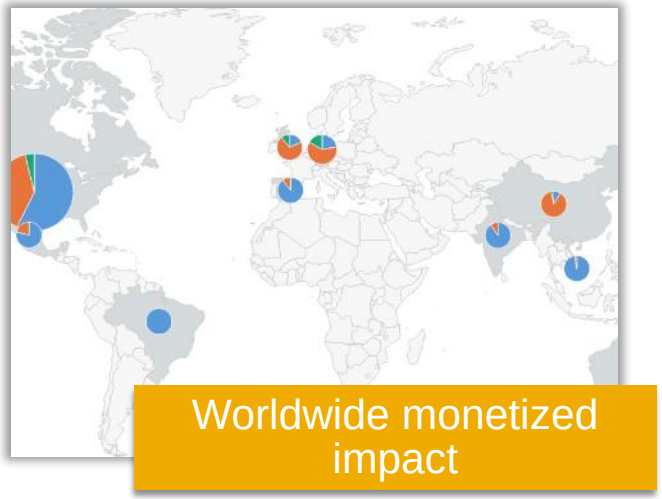


Employee Hires by Age Clusters, FTE

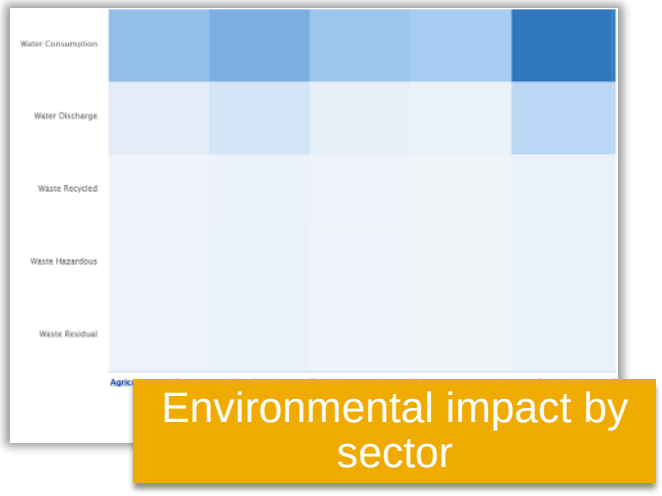
The map below shows the distribution of employee hires by age clusters of employees and country. Drill down to the location and business unit level.



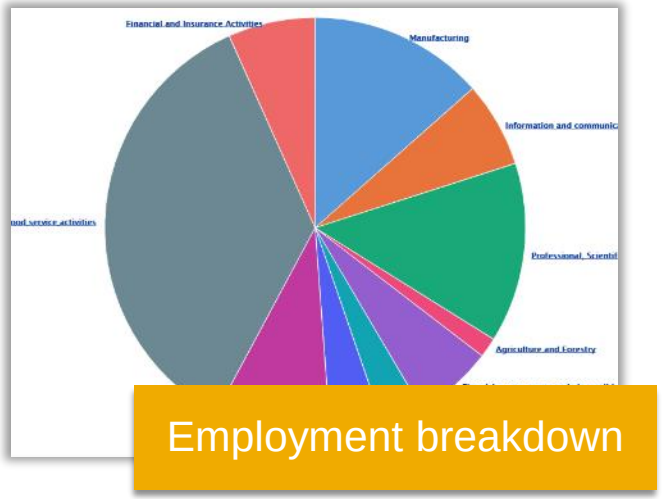
Ad-Hoc Reporting



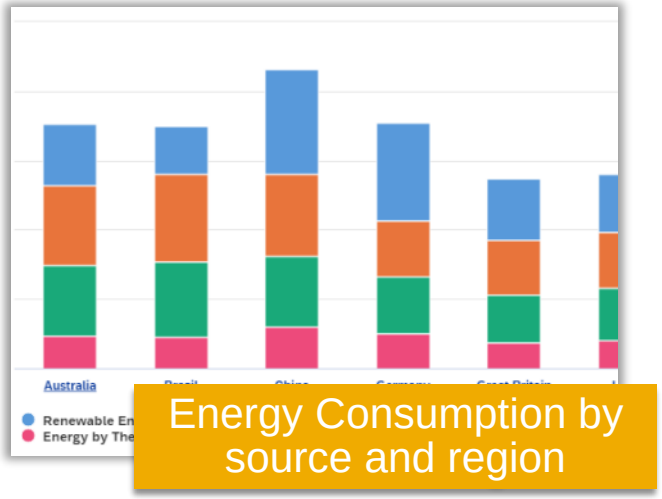
Worldwide monetized impact



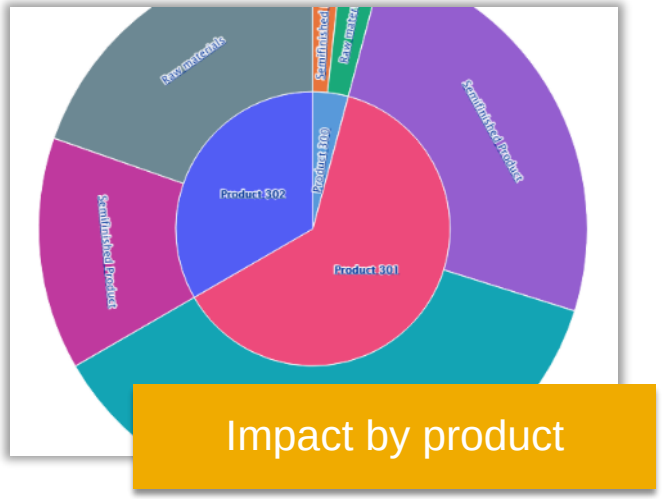
Environmental impact by sector



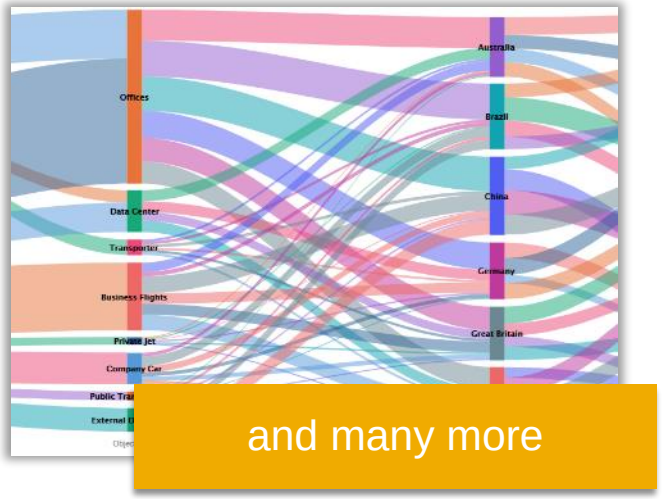
Employment breakdown



Energy Consumption by source and region



Impact by product



and many more