



SAP Sustainability / ESG Steering & Reporting

Manage your Green Line like your Top- & Bottom-Line

Central Texas Chapter Meeting

April 6, 2023

John W Martin, National Practice Lead - Sustainability



Sustainability is more relevant than ever

Companies need to act on sustainability now

Customers

79%

of buyers are changing preferences based on sustainability

Source: Capgemini

Investors

50%

of all professionally managed assets will be ESG-mandated by 2025

Source: Deloitte

Employees

90%

of employees implied that a company's ESG efforts enhances job satisfaction

Source: Business Green

Regulators

>600

voluntary & regulatory ESG standards / frameworks currently exist

Source: WEF

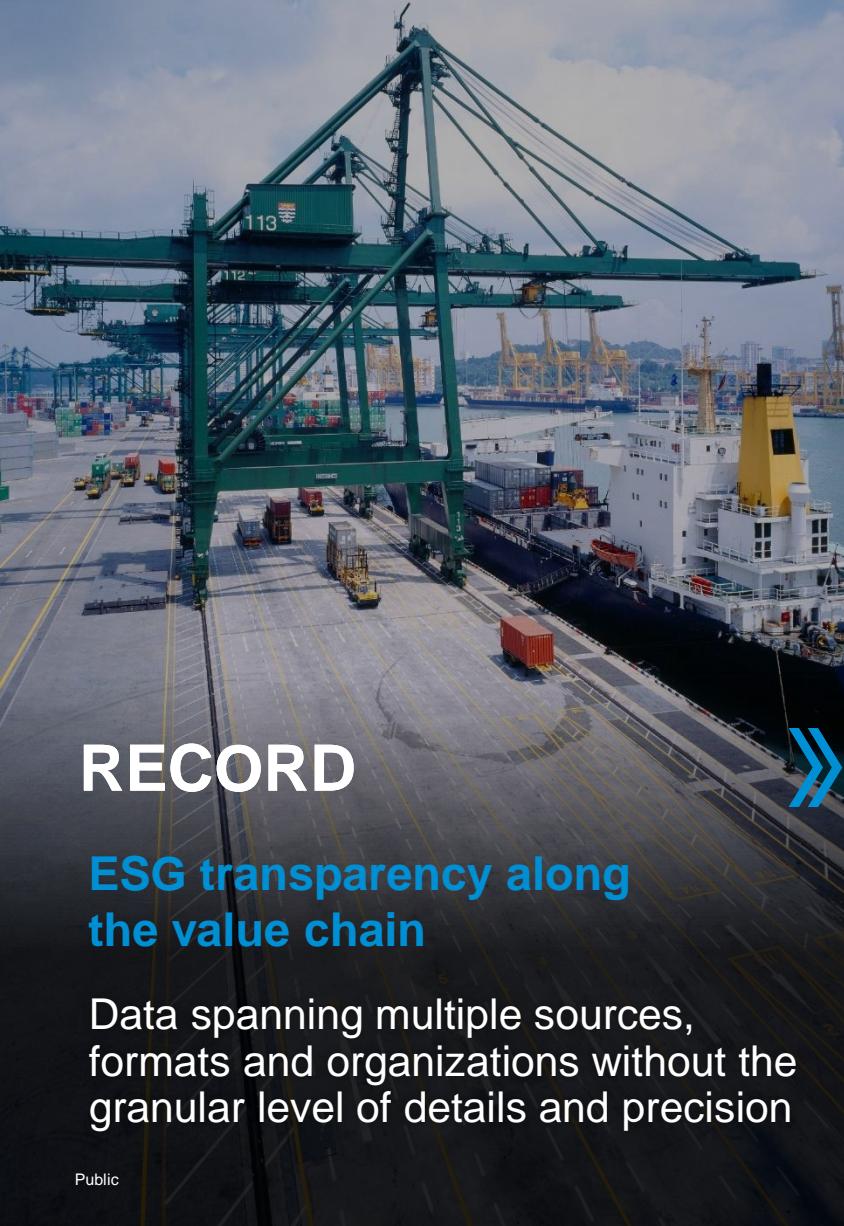
Companies

70%

of EBITDA could be at stake from sustainability challenges

Source: WEF

The ESG expectations are continually growing



RECORD

**ESG transparency along
the value chain**

Data spanning multiple sources,
formats and organizations without the
granular level of details and precision



REPORT

**New and increasing ESG
reporting requirements**

Multiple frameworks and standards
to report against and fulfilling the
respective requirements



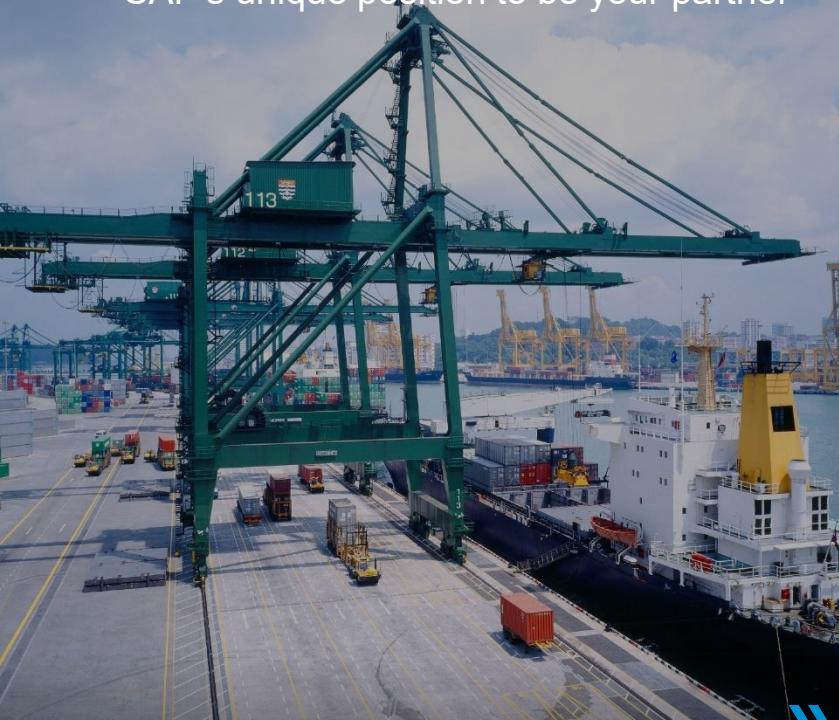
ACT

**Sustainability touches all
business processes**

Sustainability strategy and initiatives
disjoint from corporate strategy,
business models and processes

ESG transparency is the first step in solving these challenges

SAP's unique position to be your partner



RECORD

**Move from averages to actuals
with data across the value chain**

88% of the World's Supply Chains
networked through SAP



REPORT

**Incorporate relevant frameworks
with built-in audit & assurance**

>600 ESG frameworks & standards
simplified on extensible data foundation



ACT

**Embed sustainability into your
business DNA**

50 years of market leadership
in enterprise processes & applications



Enabling Customer Imperatives

Business transformation

Supply chain resilience

Sustainability outcomes

Data, Data, Data

SOXification of ESG

- Automation
- Assurance
- Auditability
- Attestation

Embed ESG data in Business Processes

Our approach to drive sustainability impact

Holistic Steering and Reporting

Complexity of voluntary & regulatory frameworks

Zero Emissions with Climate Action

Scope 1,2,3 transparency on **company** and **product level**

Harmonized, granular & regulatory compliant **calculation logic**

Zero Waste with Circular Economy

Data & insights on **material flow and traceability**

Data & insights on **material recovery and reuse**

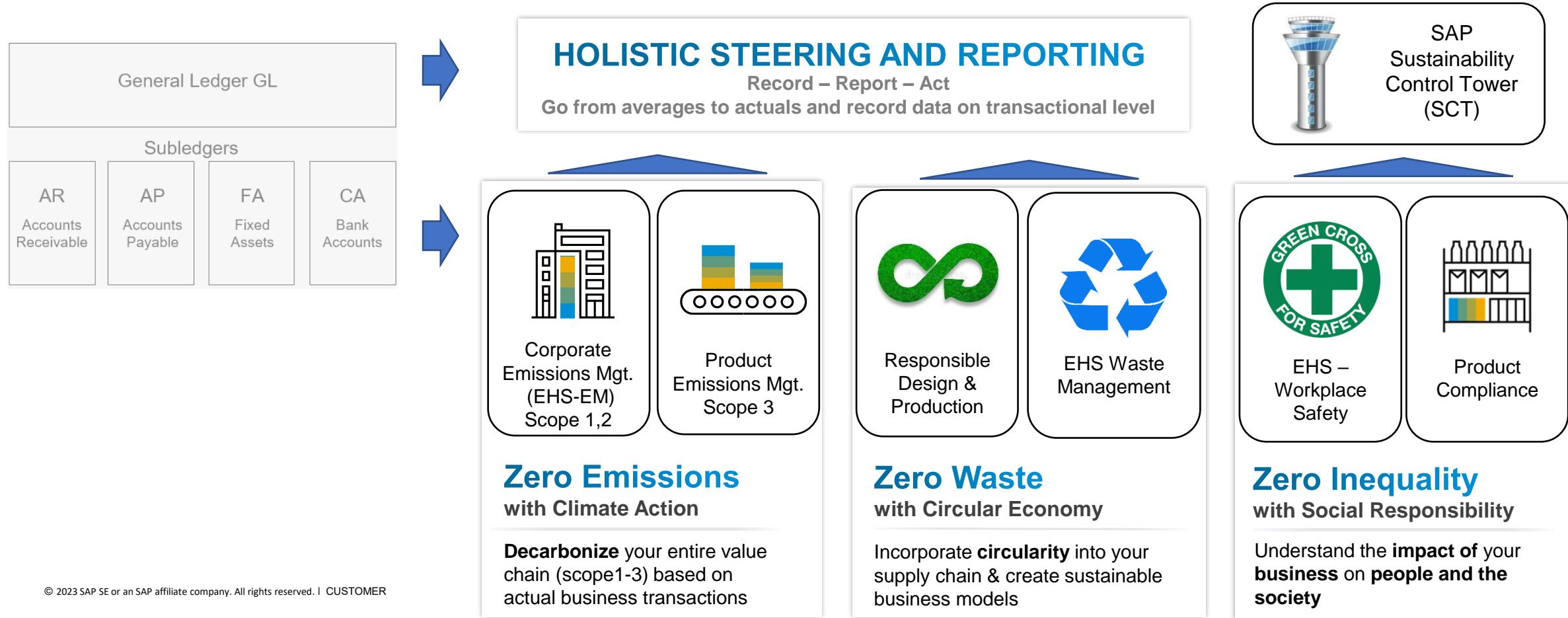
Zero Inequality with Social Responsibility

Transparency on **supply chain risks**

Workers safety data tracking & insights

SAP as an enabler

Our offering – SAP Cloud for Sustainable Enterprises



Our offering – SAP Cloud for Sustainable Enterprises

Business Network

for carbon data sharing

Industry Capabilities

to solve your specific challenges

Partner Ecosystem

geared towards sustainability

HOLISTIC STEERING AND REPORTING

Record – Report – Act to go from averages to actuals and record data on transactional level

Zero Emissions

with Climate Action

Decarbonize your entire value chain (scope1-3)
based on actual business transactions

Zero Waste

with Circular Economy

Incorporate **circularity** into your supply chain
& create sustainable business models

Zero Inequality

with Social Responsibility

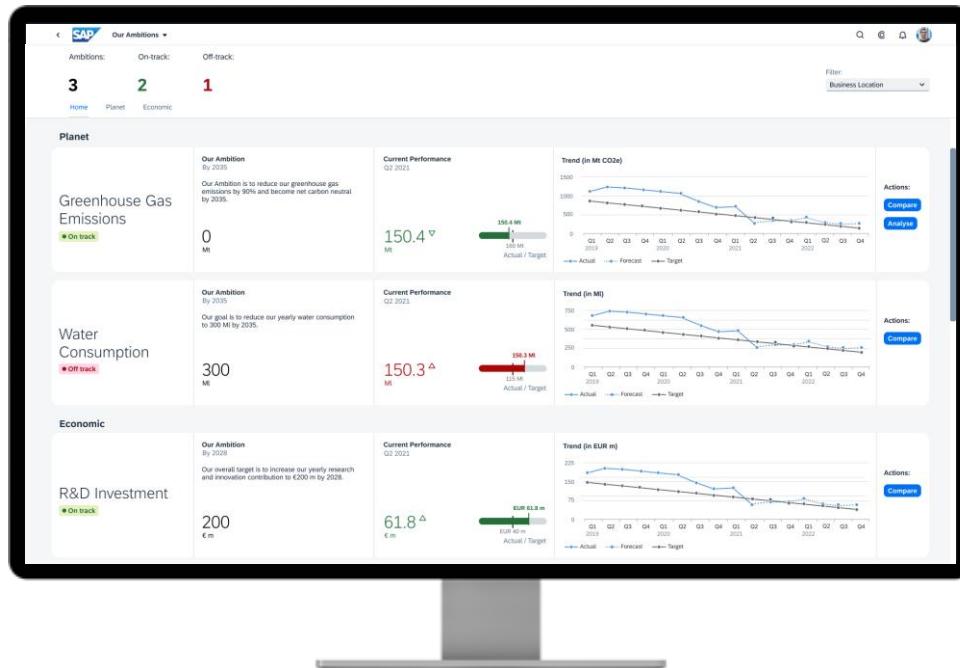
Understand the **impact** of your **business**
on **people and the society**

SAP S/4HANA, Customer relationship management, Human capital management, Spend Management and Business Network

Business Technology Platform

Holistic Sustainability/ESG Steering & Reporting

Integrate ESG performance for strategic decision-making and comply with regulatory reporting



Standard semantic frameworks supported



Record: Actuals instead of averages

Measure ESG factors with out-of-the-box integration with SAP systems for faster time to value & granular data visibility based on actual data, not averages

Report: Audit-ready ESG metrics

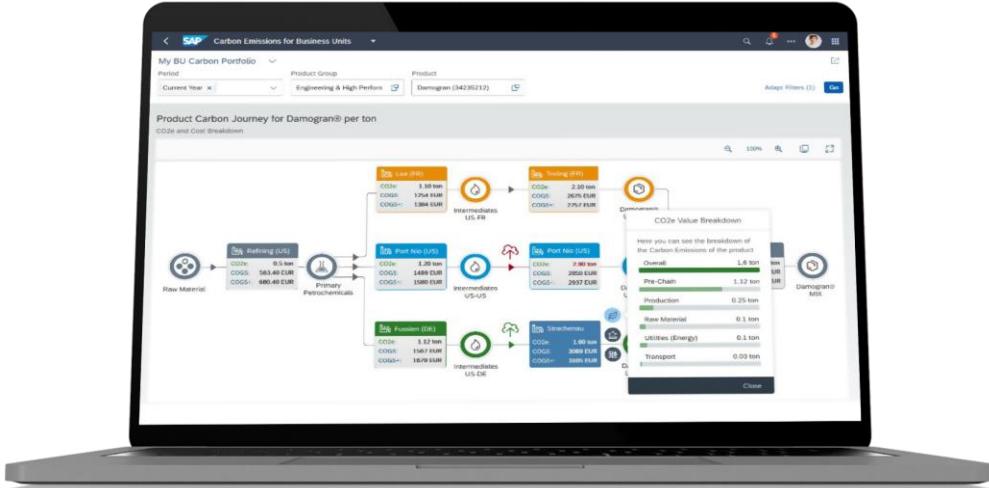
Report regulatory compliant ESG metrics covering common frameworks (e.g., GRI) based on an open & extensible solution with the largest ESG ecosystem

Act: ESG embedded business processes

Act by planning your future with actionable insights, forecasts and setting targets as well as tracking initiatives & changing business processes

Zero Emissions with Climate Action

Integrate emissions data across the entire value chain to manage and reduce your carbon footprint



Climate Action example

Arpa

[Read full story](#)

E2E emission management

- Decarbonize the value chain with corporate & product emissions management (scope 1-3) based on calculated and real data

Inbuilt integration

- Integration and reuse of existing business data from S/4HANA and other ERP systems

Efficient calculation & reporting

Standardized & fast data acquisition, calculations and reporting

Elevated decision making

Real-time, actionable insights into footprint scores and emission reduction

Zero Waste with Circular Economy

Unlock Circular Economy to eliminate waste, deliver resilient supply chain & enable regenerative business models



Circular Economy example



[Read full story](#) ➔

Design for circularity

Switch to sustainable alternatives based on upstream and downstream insights

Resource use optimization

Understand impact of extended producer responsibility obligations, fees and taxes

Business model innovation

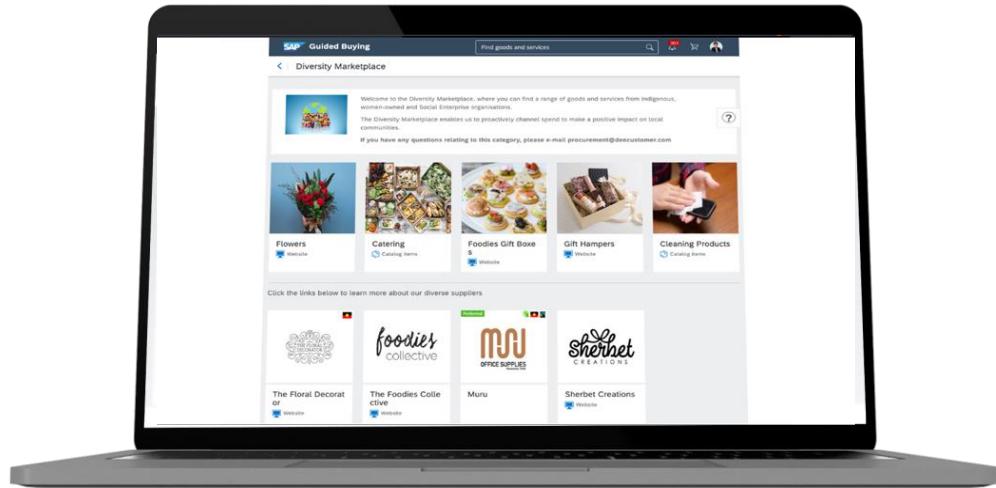
Industry Cloud solutions supporting takeback, re-use and rental models

Enablement of sustainable commerce

Extend sourcing solutions to connect markets for re-use & residual waste materials

Zero Inequality with Social Responsibility

Manage your business impact on workforce, suppliers and community efficiently



Social responsibility example

MARY KAY®

[Read full story](#) ↗

Equality and human rights

Foster Diversity, Equity & Inclusion culture and provide supply chain transparency to protect human rights and reduce inequalities

Health, safety and well-being

Create a strong culture of workforce health & safety and ensure product compliance throughout its lifecycle

Learning, skills & capabilities development

Provide equitable learning access and connect people to opportunities

The Big Challenge – Data, Data, Data...

What data is relevant for ESG Management and where does it come from across the business value chain?

26%

of companies point to the lack of data as the main difficulty in effectively managing holistic sustainability performance. Majority of climate impact of business, for instance, comes from Scope 3 emissions in the extended supply chain.



Anything new can seem complex...



The Big Challenge – Data, Data, Data...

...until we apply a methodology



How to deal with the difficulty of accessing relevant data to measure ESG performance, carry out climate risk assessments for the business, and ensure the automation, auditability, assurance and attestation of ESG data reported.

Six steps to transitioning to investor-grade, tech-enabled ESG reporting

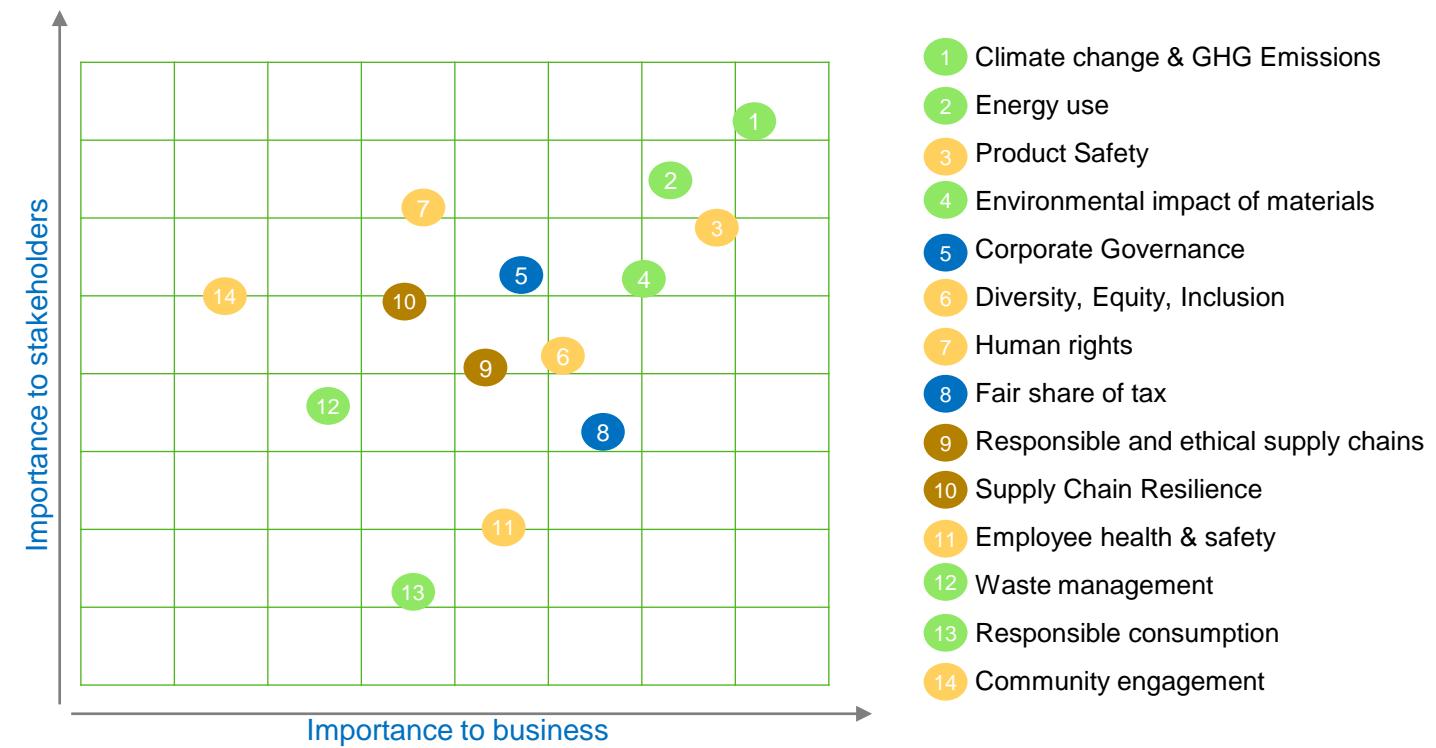


The Big Challenge – Priorities and supporting Data

How to deal with the difficulty of accessing relevant data to measure ESG performance, carry out climate risk assessments for the business, and ensure the automation, auditability, assurance and attestation of ESG data reported.

Preparation

- Study and prepare the materiality matrix
- Determine your strategy and which indicators are most relevant to stakeholders
- Choose appropriate reporting taxonomies - standards, frameworks and metrics



The Big Challenge – Data, Data, Data...

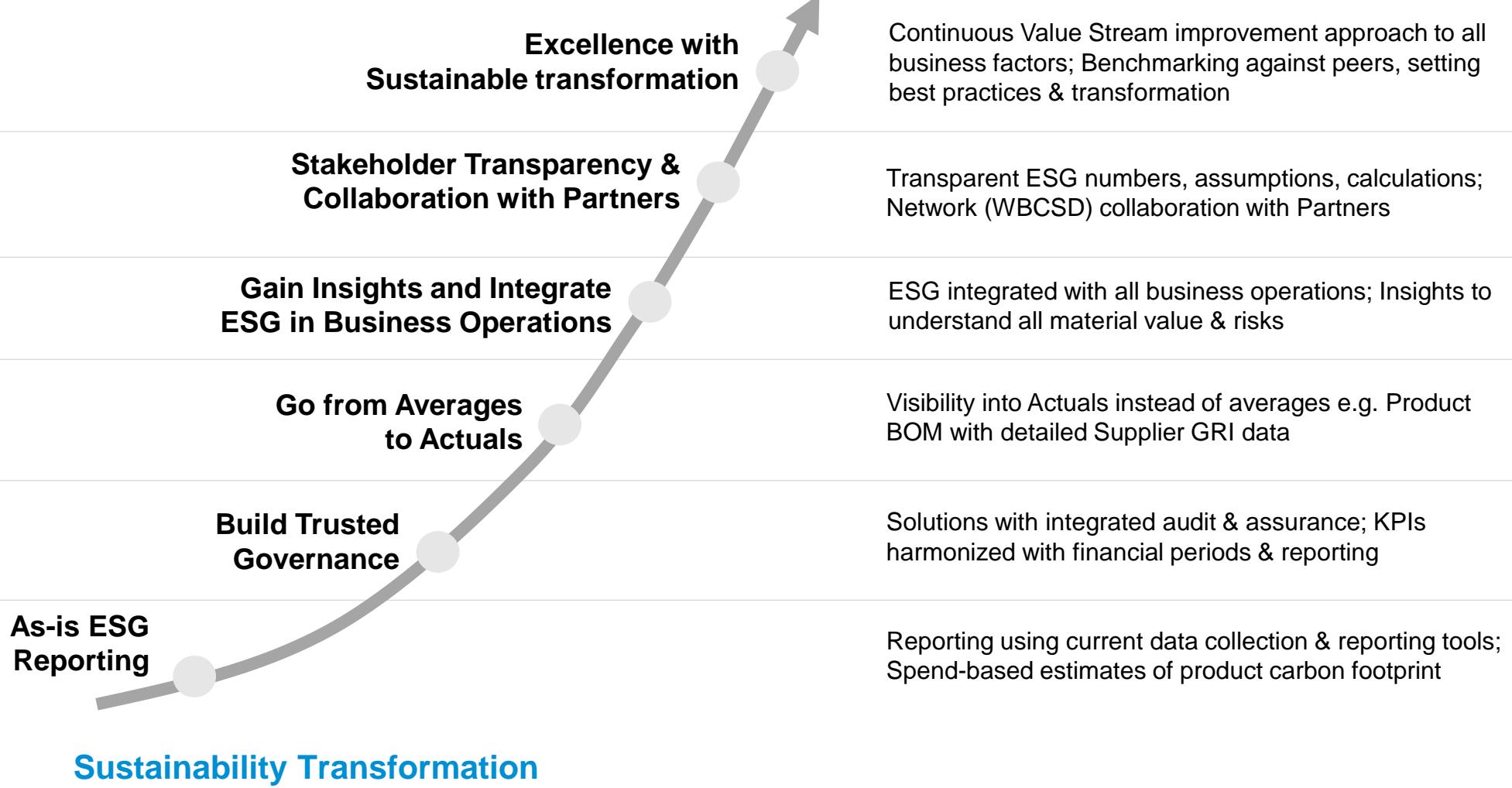
How to deal with the difficulty of accessing relevant data to measure ESG performance, carry out climate risk assessments for the business, and ensure the automation, auditability, assurance and attestation of ESG data reported.

Intelligent Enterprises are Sustainable Enterprises

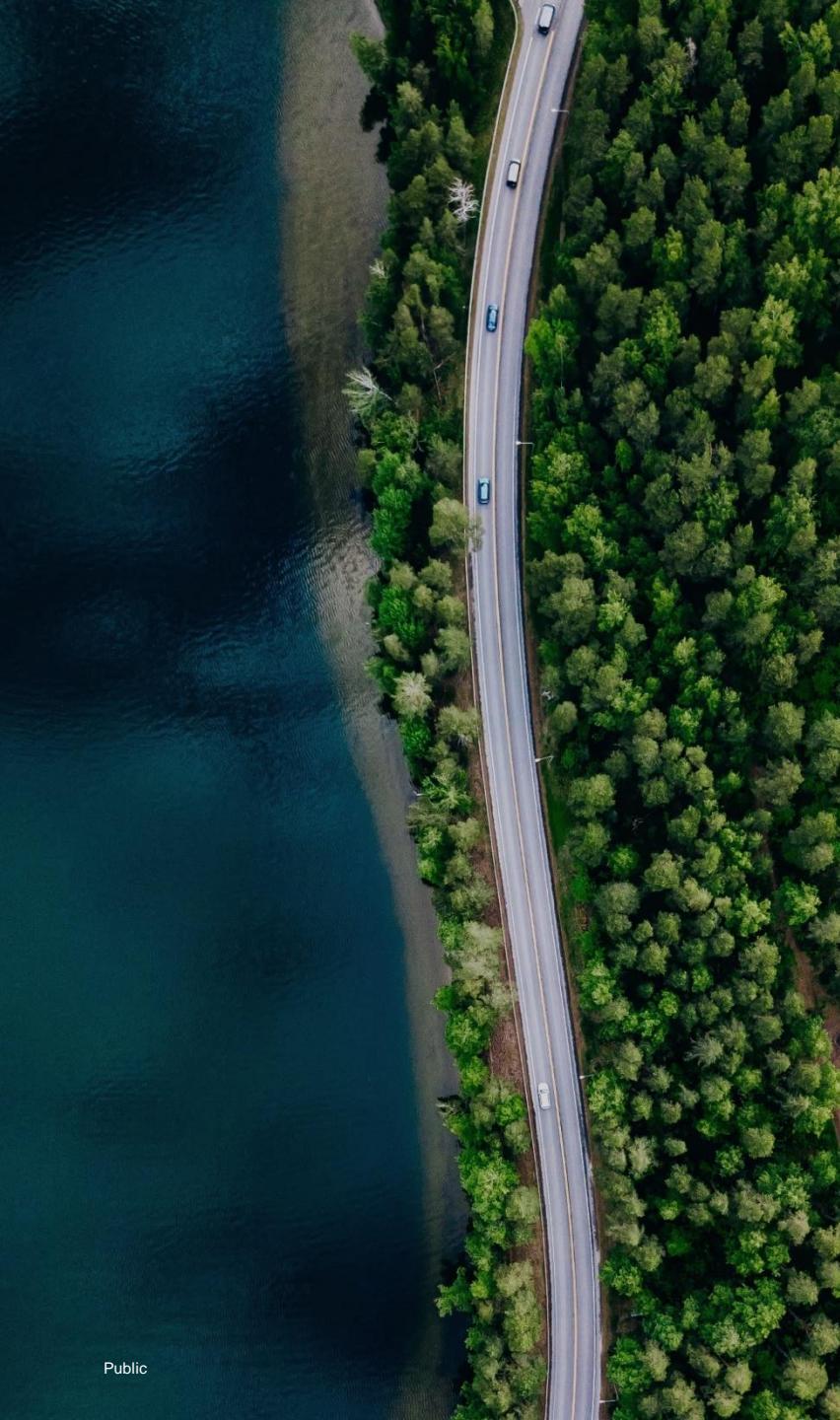


SAP unlocks your sustainability transformation

Business Value



Capabilities



Sustainability is a team sport

Global Strategic Service Partners & Alliances

accenture **BearingPoint.** **Deloitte.** **IBM.**



The SAP® PartnerEdge® Ecosystem

Thought leadership partners & impact networks



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A part of the SAP Cloud for Sustainable Enterprises

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for carbon data sharing

Industry Capabilities

to solve your specific challenges

Partner Ecosystem

geared towards sustainability

Holistic Steering and Reporting – SAP Sustainability Control Tower

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SAP S/4HANA, Customer relationship management, Human capital management, Spend Management and Business Network

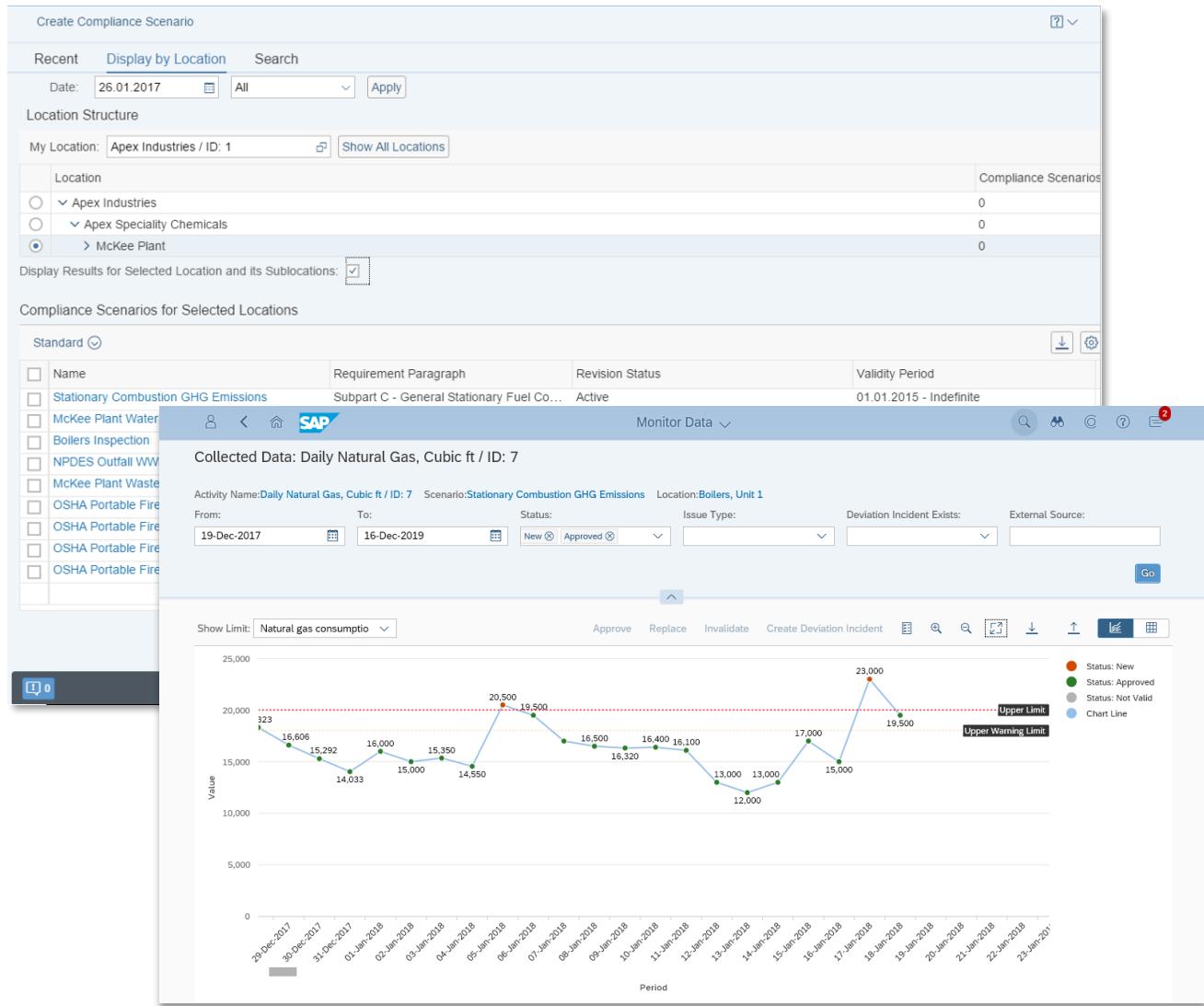
SAP Business Technology Platform

SAP as an enabler

Our offering – SAP Cloud for Sustainable Enterprises



EHS Environment Management



Objective

Track all aspects of environmental impact from the corporate level down to operations with a flexible and auditable process for calculating emissions and generation of waste.

Capabilities

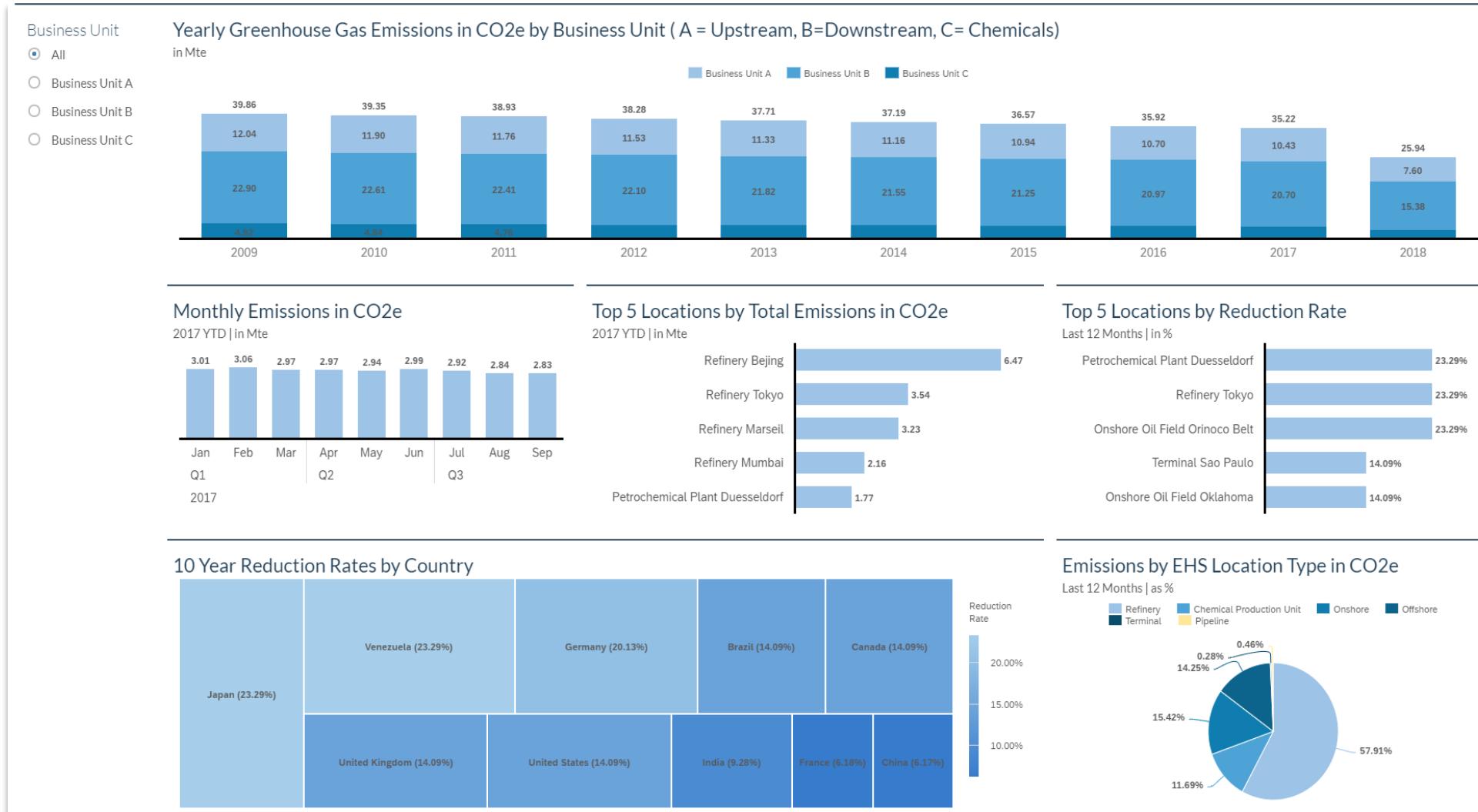
- Many options for collecting data and sampling to be used for compliance tracking and emission calculations
- Cradle-to-grave waste management integrated to logistics and transportation processes
- Built-in equations and content driving a flexible and auditable calculator for hazardous air pollutant and greenhouse gas emissions inventories
- Repository and task monitoring for all regulatory, permit, and policy-based compliance requirements
- Emissions forecasting tools
- Realtime and analytical tools and support for ESG and sustainability reporting

Benefit

- Reduced risk of non-compliance and penalties
- Reduced effort to calculate emission totals
- Ensure continuity of license to operate
- Improved calculation accuracy and transparency

EHS Environment Management

Communicate Emissions results to all stakeholders



SAP® Product Footprint Management

Calculate product footprints periodically and at scale across the entire product lifecycle

The screenshot shows the SAP Monitor Footprints interface for product CocBea100, Cocoa Beans. It displays various data points such as Period (Jul 2021), Status (Calculation Successful), Result Type (Calculation Run), and Impact Category (Climate Change (GHG)). The interface includes sections for Previous Inventory, Product Inflows, Product Outflows, and Current Inventory, each providing detailed data like Total Quantity, Total Footprint, and Footprint per Unit. Below this, there's a Calculation Details section for Product Inflows and Product Outflows, listing suppliers, sending plants, quantities, and footprints.

In a Nutshell

With SAP Product Footprint Management customers gain insights on the environmental impacts of their products across the entire lifecycle for disclosure and internal product & process optimization. The solution reuses existing business data and combines it with environmental factors to calculate the footprints of the products periodically and at scale. The calculated footprints are integrated back into the end-to-end processes.

Benefits

Objective

SAP Product Footprint Management is an SAP Cloud-native application to calculate product footprints periodically and at scale considering the entire product lifecycle.



Extend SAP S/4HANA end-to-end business processes by embedding product footprint information



Reduce effort & cost of calculating, analyzing and reporting product footprints



Gain insights into product carbon footprints to enable actions to optimize



Reuse business data, structure & logic from SAP S/4HANA

Technology:

- SAP Business Technology Platform
- Live Connected to: SAP S/4 HANA Cloud and SAP S/4HANA

More Information

[Product Footprint Management | Sustainability \(sap.com\)](#)

Product Footprint Management (PFM)

Laptop Example

illustrative and simplified



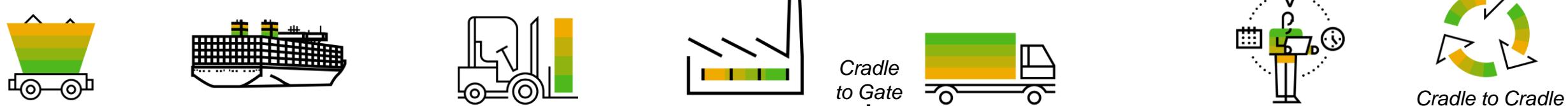
What is the
environmental impact
of a **laptop** considering the
entire **product lifecycle**?



Global Warming Potential
measured in kg CO₂-equivalents
→ **Product Carbon Footprint**

1 Laptop | 3 years usage | take back by manufacturer = **675 kg*** CO₂e per Laptop

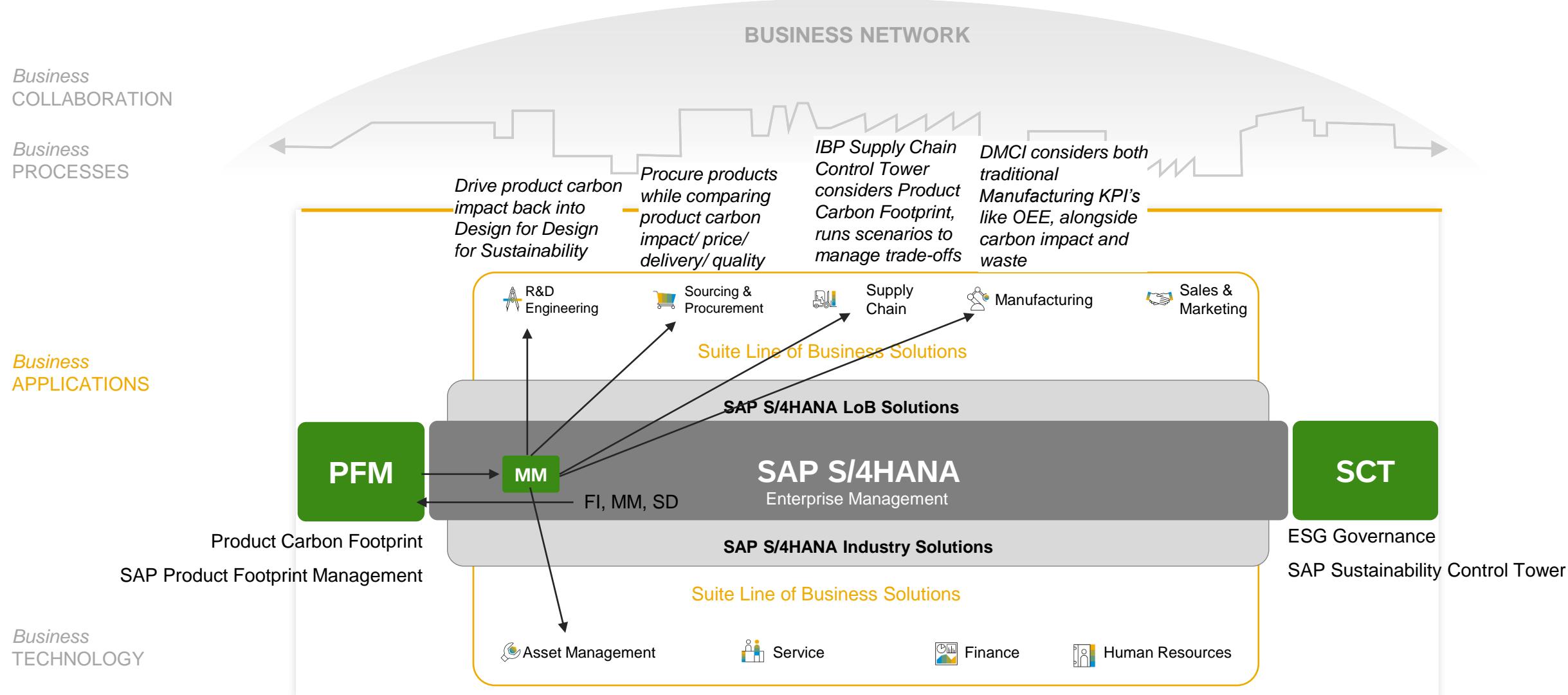
*this value is just for illustration – not calculated or based on a LCA Study



Material Acquisition	Inbound Transport	Storage	Production	Transport	Product Use	End of Use
300 kg CO ₂ e ...caused by the production of the raw materials: Aluminum Plastics ABC Cooper LCD Glass Raw Earth metals	+ 10 kg CO ₂ e ...caused by the transport of the raw materials to the plant: Ship Truck Airplane	+ 10 kg CO ₂ e ...caused by the storage of the materials in the warehouse: Cooling / Heating Transport Waste ...	+ 200 kg CO ₂ e ...caused by the machines / assets to manufacture the laptop: Energy Consumption Direct Emissions Cooling / Heating Production Tools Waste treatment ...	+ 10 kg CO ₂ e ...caused by the transport of the Laptops to the customer / Stores: Ship Truck Airplane	+ 150 kg CO ₂ e (after 3 Years) ...caused by the use of the finished products by the customer: Energy Consumption Tools Waste	+ -5 kg CO ₂ e ...caused by the end of life treatment by the recycling company: Energy Consumption Waste Recycling Direct Emissions

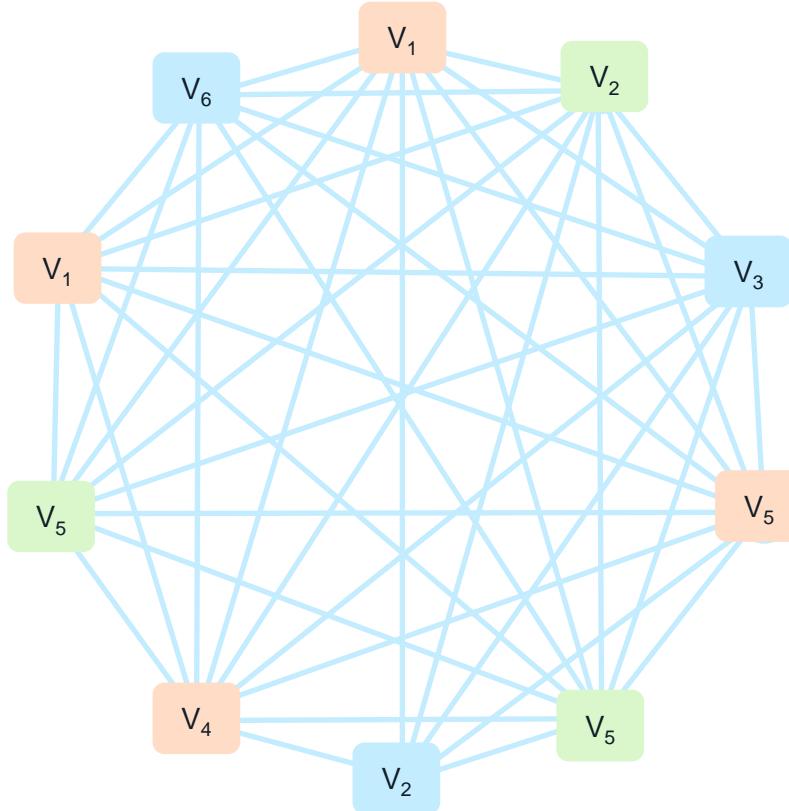
Act – Actuals of Product Carbon Footprint – Scope1,2 & 3

SAP Product Footprint Management (PFM) calculate accurate Product Carbon Footprint, saves to MM



Carbon Data Exchange

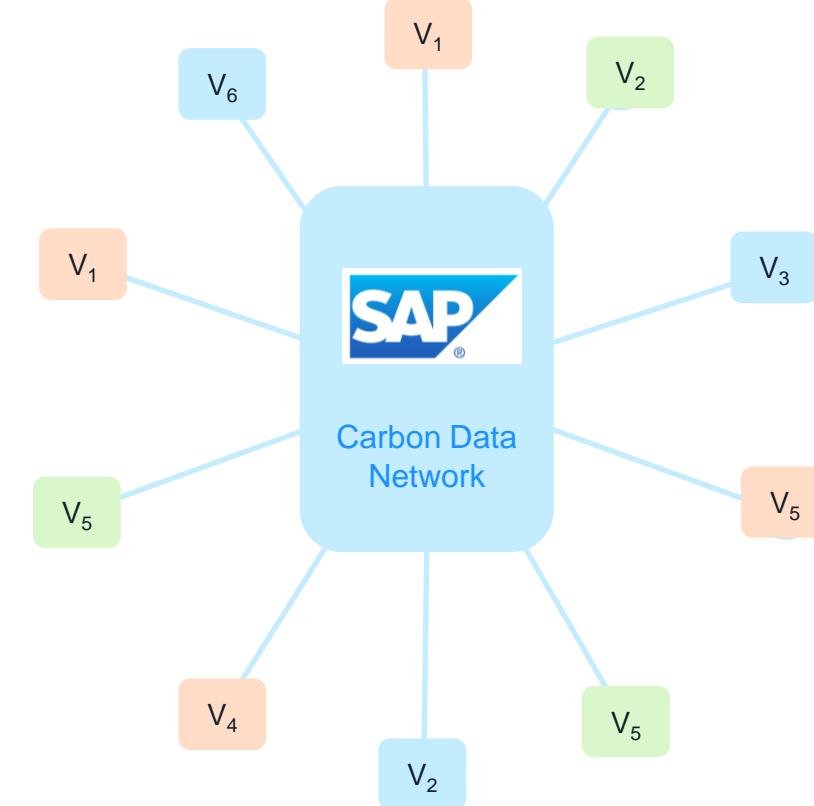
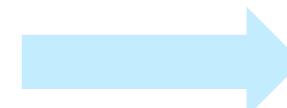
Reducing impact requires sharing sustainability data - but sharing via proprietary interfaces is inefficient & costly - standardized interoperability is needed



Point-to-point integrations
between proprietary solutions



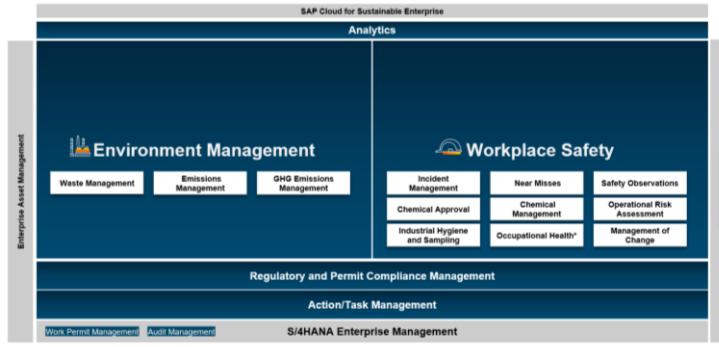
Pathfinder Project:
Standard Format for digital
exchange of carbon data



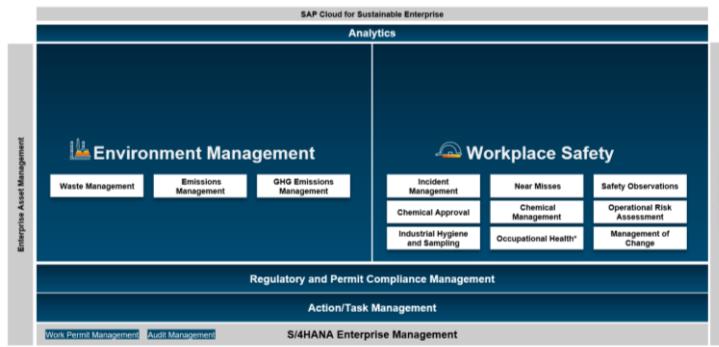
Standardized, collaborative
interoperability solution

SAP EHS for ESG disclosures and sustainability reporting

SAP EHS



SAP PFM



Data Feeds

Forecasts

Analytics

GRI



Energy consumption (renewable and non-renewable)	302-1
GHG Emissions, Scope 1	305-1
GHG Emissions, Scope 2	305-2
GHG Emissions, Scope 3	305-3
Water consumption	303-1
Water volume, recycled and reused	303-3
Waste consumption	306-3
Waste volume, hazardous and non-hazardous	306-4
Non-compliance with environmental laws and regulations	307-1
Incidents, Near Misses (Occupational disease rate)	403-2

UN SDGs



ESG and Regulatory Disclosures

GHG Protocol

US EPA CFR 40 Part 98

CDP

TCFD

Australian National Greenhouse Accounts

European Residual Mixes 2020

eGRID

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to solve your specific challenges

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Holistic Steering and Reporting – SAP Sustainability Control Tower

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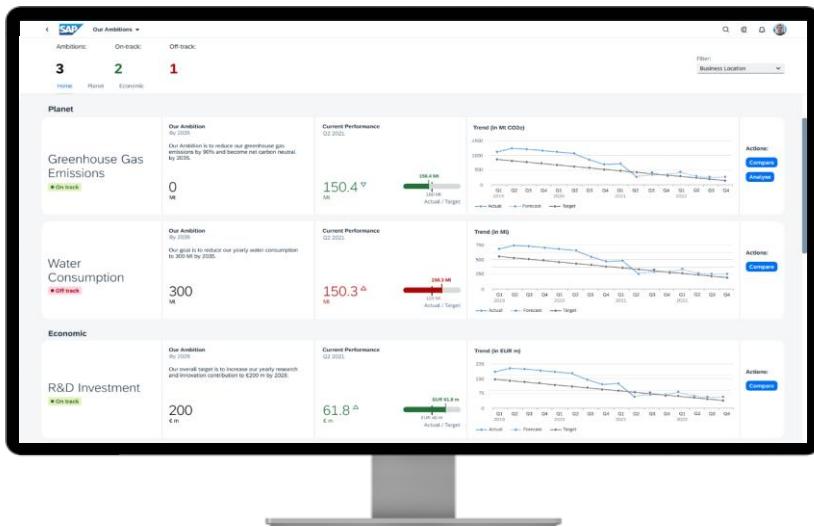
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SAP S/4HANA, Customer relationship management, Human capital management, Spend Management and Business Network

SAP Business Technology Platform

SAP Sustainability Control Tower

Automated, auditable, compliant reporting with actual data & insights to embed sustainability into business processes



Record: Actuals instead of averages

Record ESG factors with out-of-the-box integration with SAP systems for faster time to value & granular data visibility based on actual data, not averages

Report: Audit-ready ESG metrics

Report regulatory compliant ESG metrics covering common frameworks based on an open & extensible solution with the largest ESG ecosystem

Act: ESG embedded in business processes

Act by planning your future with actionable insights, forecasts and setting targets; track initiatives & optimize business processes to make an impact



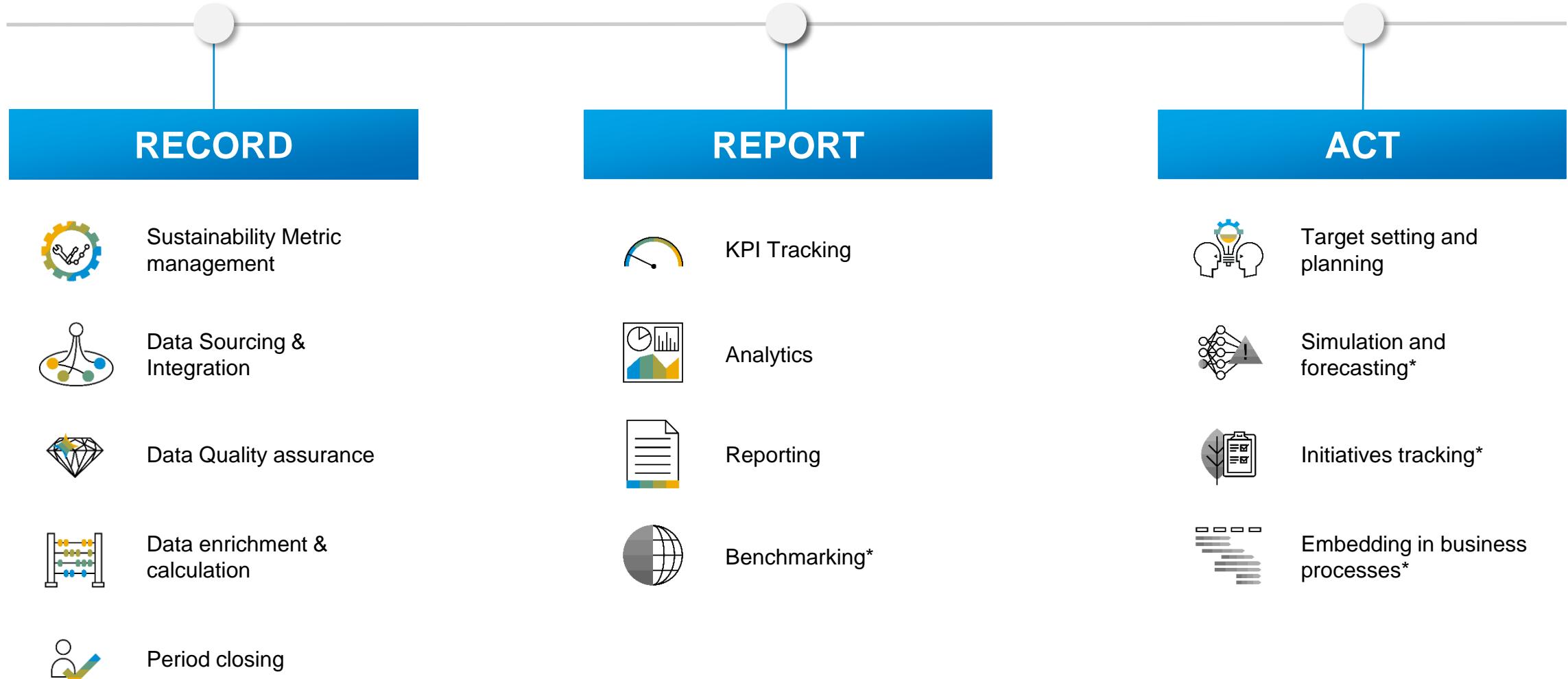
TASK FORCE ON
CLIMATE-RELATED
FINANCIAL DISCLOSURES



Strong, agile data foundation, which enables our customers to address multiple frameworks, standards and region specific regulations and requirements

Solution Capabilities | OVERVIEW

Providing integrated end to end capabilities for holistic steering and reporting



Ambitions

On Track

Off Track

11

3

4

All On Track Off Track Add Ambition

Governance ▾ Economic ▾ Social ▾ Environmental ▾



Environmental

Our Ambition

By 2025

Reduce CO2 emissions by 75%

200.0 t

Current Performance

By Nov/2022

745.1 t

Compare

Actual/Target

Trend (in t)



Our Ambition

By 2025

Reduce CO2 emissions by 75%

2.4K t

Current Performance

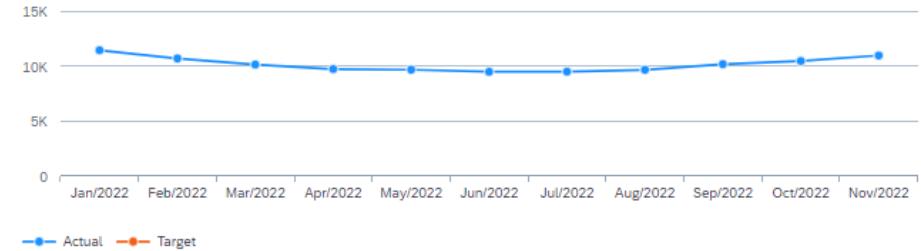
By Nov/2022

11.0K t

Compare

Actual/Target

Trend (in t)



Ambitions

On Track

Off Track

11

3

4

All On Track Off Track Add Ambition

Governance

Economic

Social

Environmental



...

Our Ambition
By 2025
Reduce CO2 emissions by 75%.

Current Performance
By Nov/2022

Compare

Trend (in t)**Total GHG Emissions**

Off Track

2.5K t

11.7K t

t 12K

t 11K

Actual/Target

Our Ambition
By 2025
Reduce Water Consumption by 10%

Current Performance
By Nov/2022

Compare

Trend (in ML)**Water Consumption**

Off Track

40.0 ML

40.1 MI

MI 40.09

MI 37.76

Actual/Target

Our Ambition
By 2025

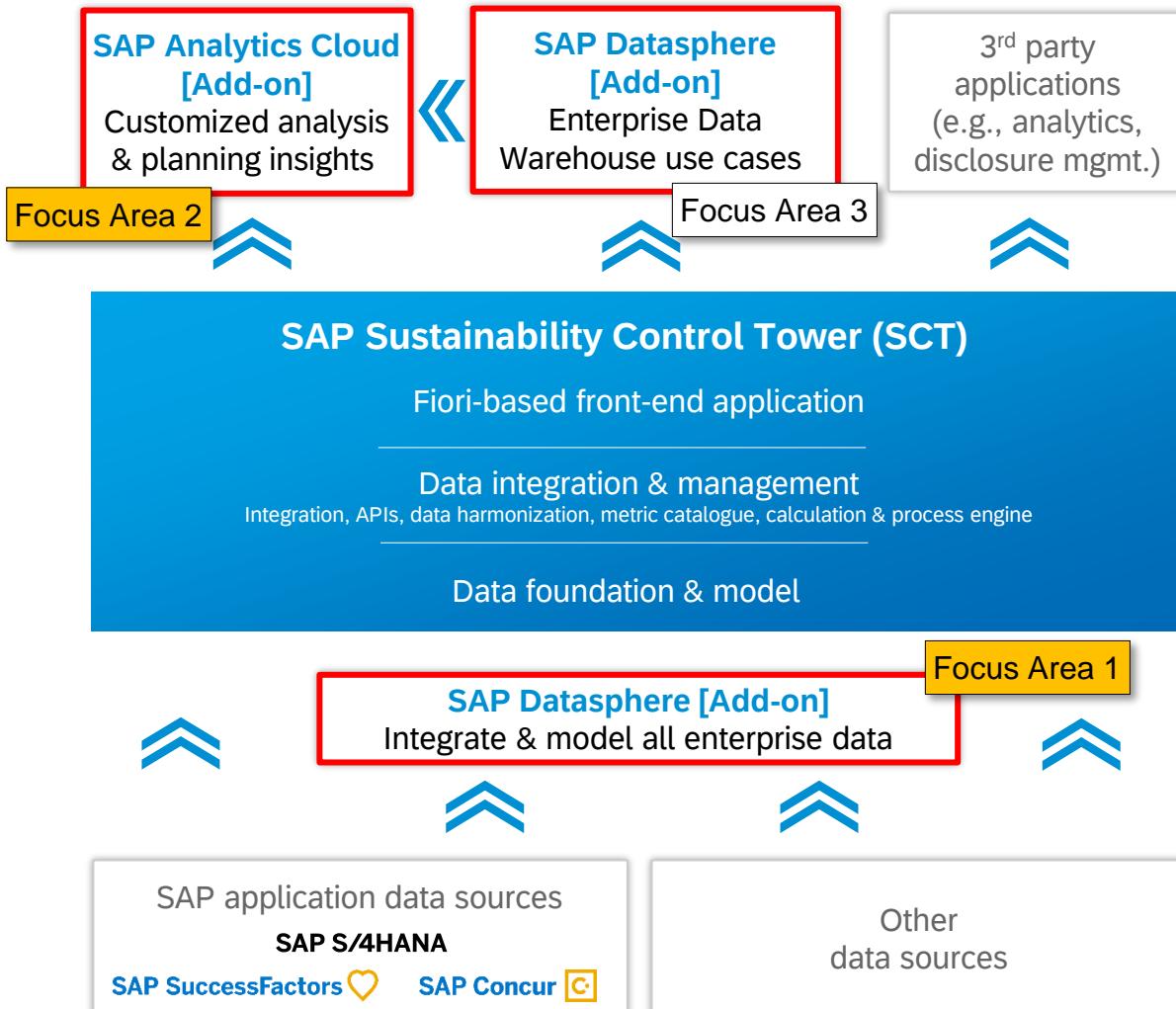
Current Performance
By Nov/2022

Compare

Trend (in MI)**Water Withdrawal**

On Track

Additional focus topics: Datasphere and SAC integration



SAP Datasphere Integration Approach

1. Sustainability data replicated from Datasphere to SCT structures, via SCT PULL
2. Datasphere will enable productive integrations; SCT promotes replication

SAC Live Connectivity Approach

1. Goal: Connect Enterprise SAC to SAP managed multi tenancy HANA Cloud systems
2. Proposed approach: use extended HANA Live connectivity to connect HANA Cloud via OEM Integration service deployed in BTP
3. Next steps: SCT to validate proposed approach

Transform into a sustainable future with SAP

Enable Holistic Sustainability Steering & Reporting with SCT and other embedded Solutions

Record

Move from averages to actuals with data across the entire value chain

Report

ESG KPIs for most relevant frameworks with built-in audit & assurance

Act

Embed sustainability into your business DNA & drive transformation

Adopt the right mix of sustainability solutions from SAP to...

Enable compliant ESG reporting

Gain transparency & insights on ESG

Improve ESG performance

Improve Business performance

Ensure assurance & auditability of ESG

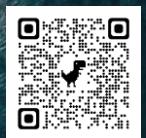
Track and achieve ESG targets/goals



Thank you.

Contact information:

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National Practice Lead-Sustainability
NA Solution Advisory
john.w.martin@sap.com



Learn more about SAP's strategy to embed Sustainability into your business DNA. Scan the QR code to visit the SAP Sustainability website on SAP.com