



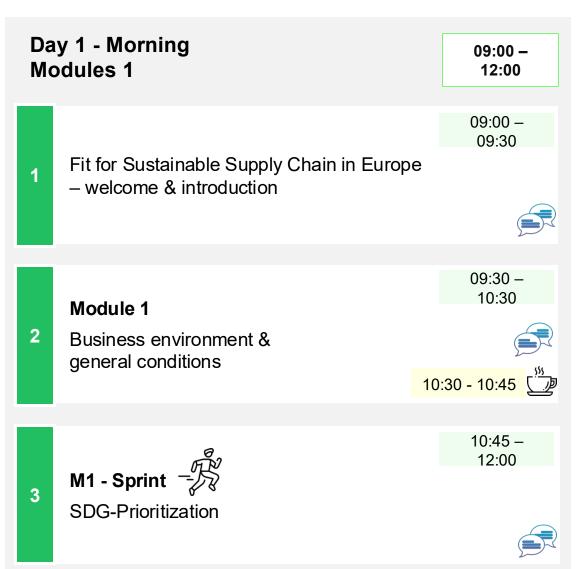


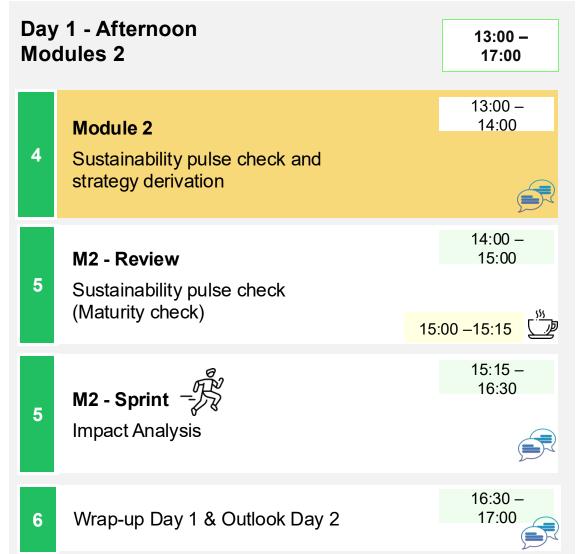
# Fit for Sustainable Supply Chain in Europe

A holistic and practical approach to how purchasing can systematically integrate sustainability into its strategies and practices.

### Fit for Sustainable Supply Chain in Europe













**IPG Masterclass** 

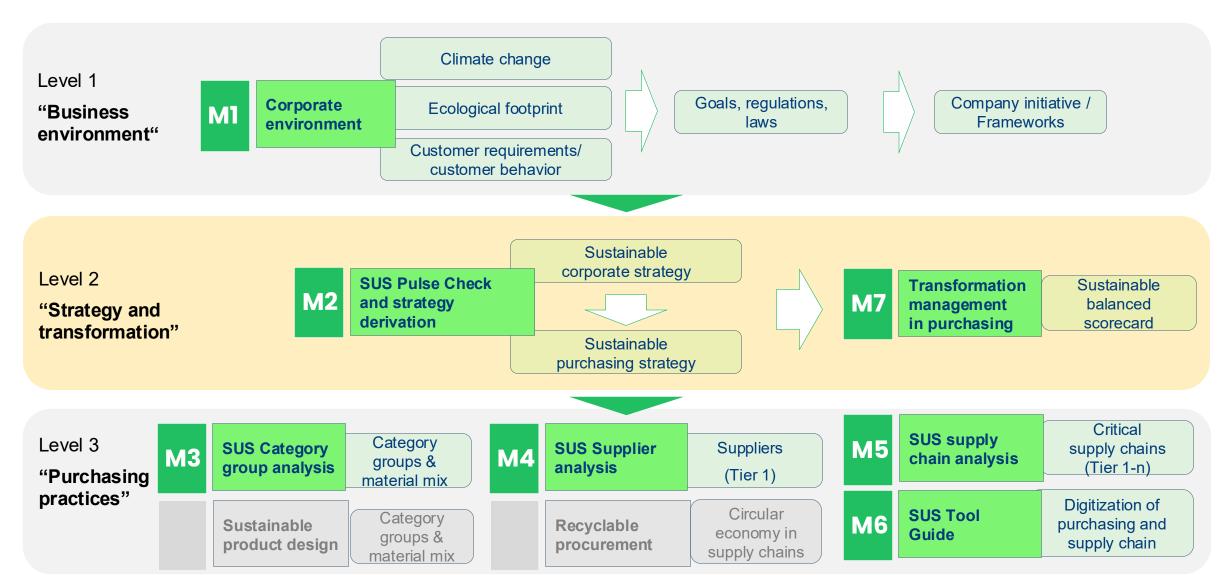


# Sustainable Procurement

# M2 – SUS Pulse Check and Strategy Derivation

**IPG PARTNERS GROUP** 

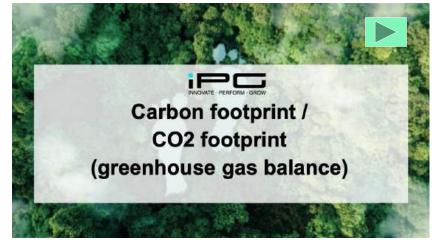
# Module interfaces | IPG's sustainable procurement excellence training systematically addresses important interfaces between corporate level and purchasing practices



### Fit for Sustainable Supply Chain in Europe















procurement - overview



# Future check | The average level of maturity is highest in strategic purchasing and lowest in sustainable purchasing

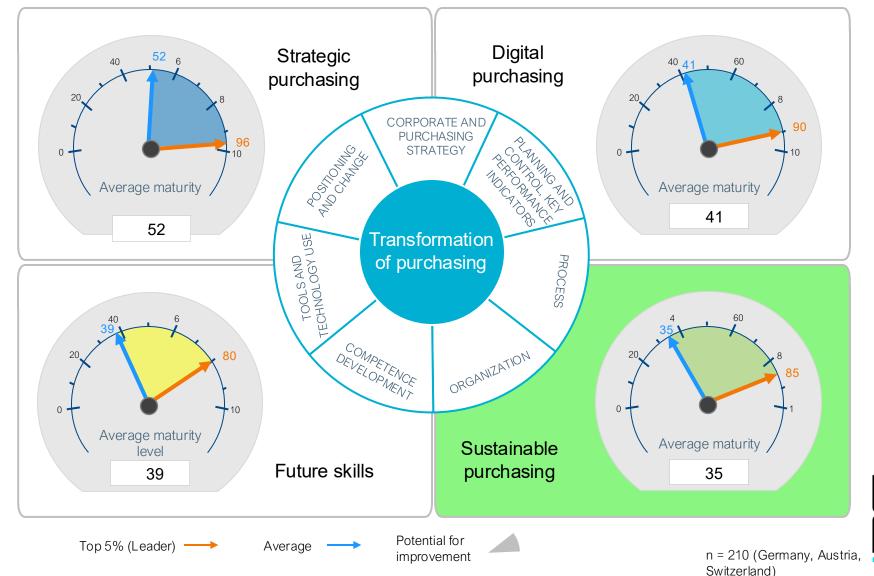


Many purchasing organizations still have **considerable room for improvement**, particularly in the areas of

- digitalization,
- sustainability, and
- > future skills

A successful transformation requires that **change** be driven forward **simultaneously in all four areas** 

 Strategic purchasing forms an essential foundation for the other three areas



# "TWIN-PRO" Future Check | Questions (excerpts)

Futu	re Check Part 1   <b>Strategic Purchasing</b>	Applies slightly Not applicable	Completely to
1	We have a clear understanding within the management team of the <b>value</b> that purchasing should deliver in order to achieve sustainable competitive advantages for our company in the future.		
2	The "future procurement areas" for technologies, products, and services that we intend to source from external partners and suppliers in the future are continuously derived from our company-wide development programs and are clearly defined.		
3	The continuous process of <b>purchasing strategy development</b> is based on a "shared mindset" and is closely aligned with our corporate strategy and business model development.		
4	Within our procurement organization, the <b>strategic goals</b> are clearly defined and their implementation is continuously monitored and measured using specific KPIs, methods, and measures.		
5	Our procurement system (processes, responsibilities, toric and methods there and empty skills) is coordinated and		

Futu	ıre check Part 2 <b>  Digital purchasing</b>	Applicable Not applicable	Applies to a small extent Not applicable	Applies mostly Applies	Completely true Applies
1	Company digitalization strategy: Our company has an overarching digitalization strategy for the challenges ahead.				
2	<b>Integration of purchasing</b> : Our purchasing department was or is closely involved in the development of your company's digitalization strategy.				
3	Top management support: We have the full support of our top management for the establishment of digital purchasing.				
4	<b>Digitization strategy for purchasing and supply chain:</b> We have developed a digitization strategy for our purchasing and supply chain.				
5	Employee involvement: Our employees are aware of the central role of digitalization for the cess of the company and are do to get to ge				

# 5 Digitale Transition der Zukunft. Transition

### "TWIN-PRO" Future Check | Questions (excerpts)

Futu	re check part 4   Future skills in purchasing	Applies Not applicable	Applies to a small extent Not applicable	Applies mostly to	Perfectly accurate to
1	Our working models are attractive (home office, part-time, annual working hours, etc.)				
2	Job profile: Every employee has a structured, coordinated job profile that is reviewed at least once a year.				
3	Competency profile: Each employee has a competency profile that matches their job profile.				
4	Alignment with vision: The competency profiles are aligned with our long-term vision and tasks.				
5	Future skills and organization: We have a clear vision how purchasing and sometimed to the chair found look in the control of				

### Sustainable procurement | IPG supports the sustainable transformation of many purchasing organizations through targeted training programs





















Selected references

















































































































































































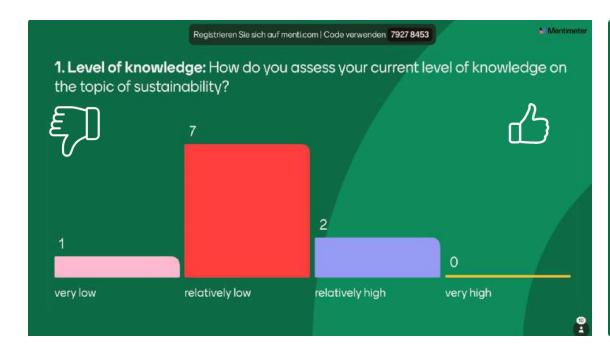


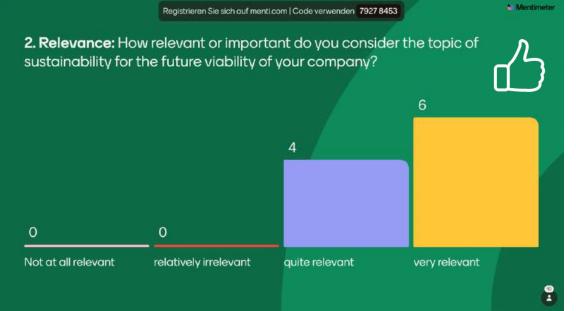




# **Know-how gap** | There is a discrepancy between individual knowledge levels and strategic relevance

Nov. 2025

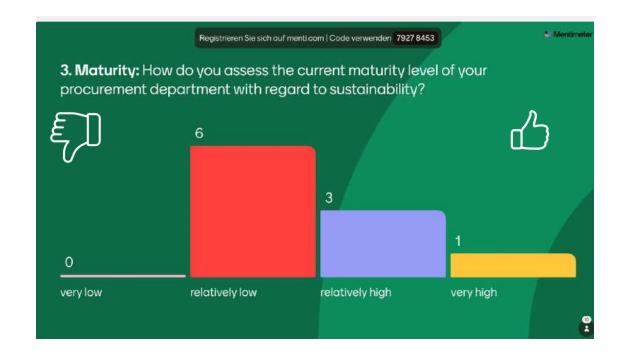






# **SUS maturity level and risk of disruption in harmony** | The maturity level of purchasing is generally considered relatively low - medium, and the risk of disruption is perceived relatively high

Nov. 2025





Comment:

Much better then average across multiple pulse checks

# Positioning of purchasing | Purchasing is an active part of a company-wide sustainability initiative in at least 50% of cases

Nov. 2025





Comment:

Much better then average across multiple pulse checks

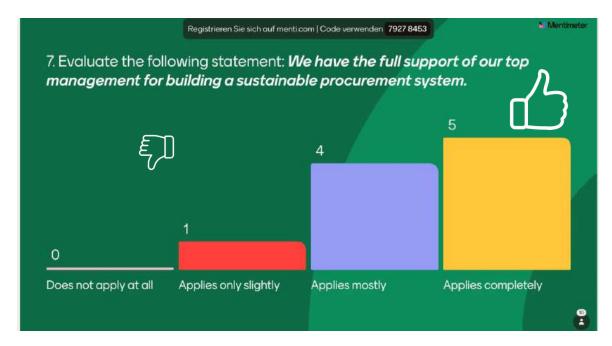
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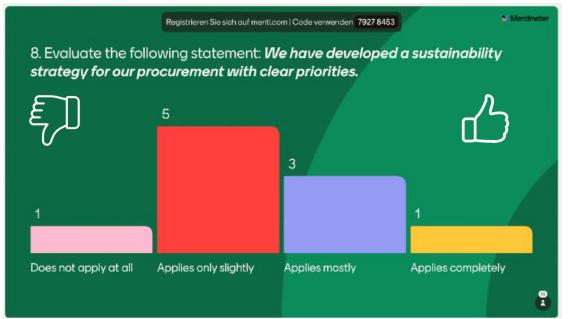
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# **Tone at the top** | Top management is actively supporting SUS purchasing – 60% have not yet developed an SUS strategy for procurement

Nov. 2025





Comment:

Much better then average across multiple pulse checks

Comment:

Much better then average across multiple pulse checks

# **Mobilization vs. employee skills** | Purchasing teams are mostly motivated to promote sustainability, and a lack of skills is perceived as a barrier

Nov. 2025





Comment:

Much better then average across multiple pulse checks



**Training and Al** | Targeted training on sustainable purchasing has already been implemented by 60% – the potential of digital tools has not yet been exploited.

Nov. 2025



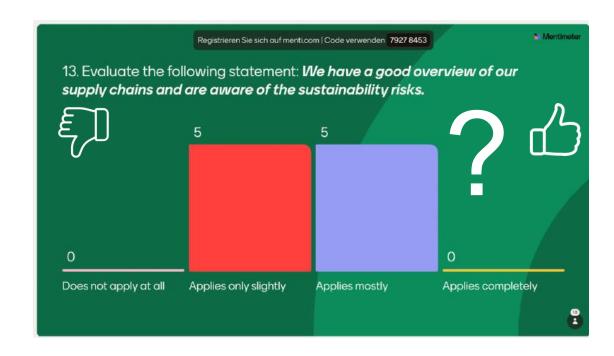


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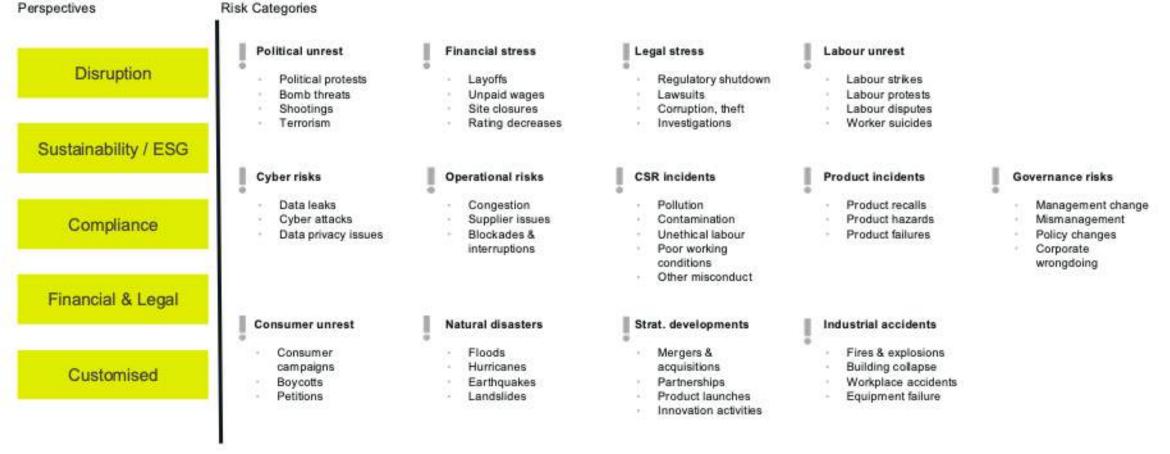
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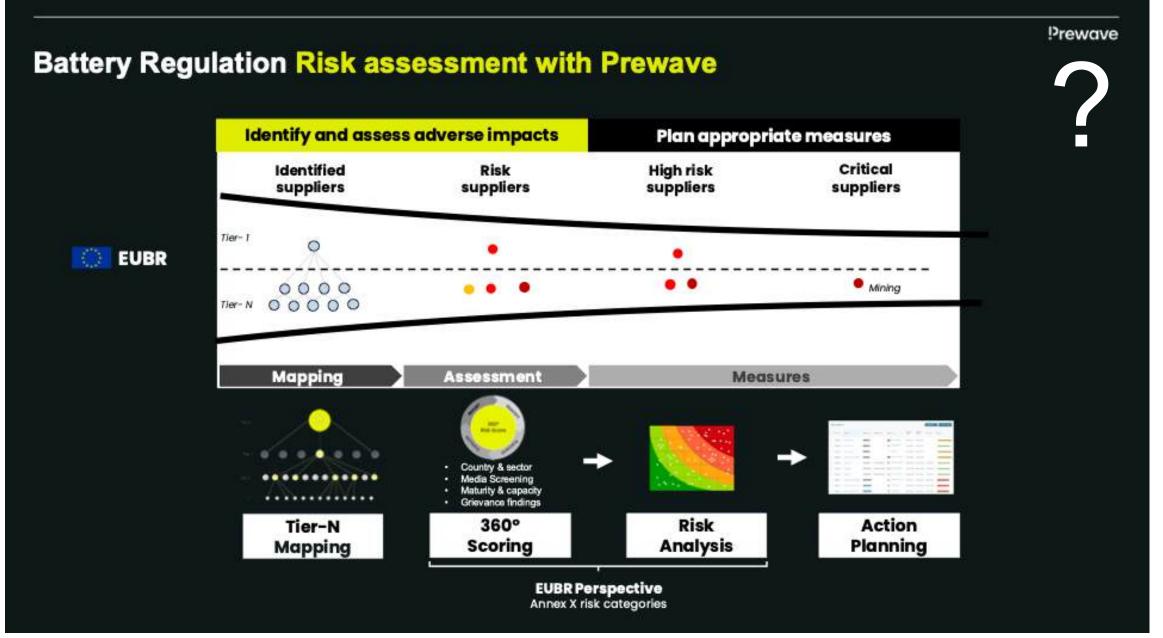
Much better then average across multiple pulse checks



# Prewave | Prewae covers risk across 150+ categories – Targeting specific risks enhances efficiency in risk management

# Prewave





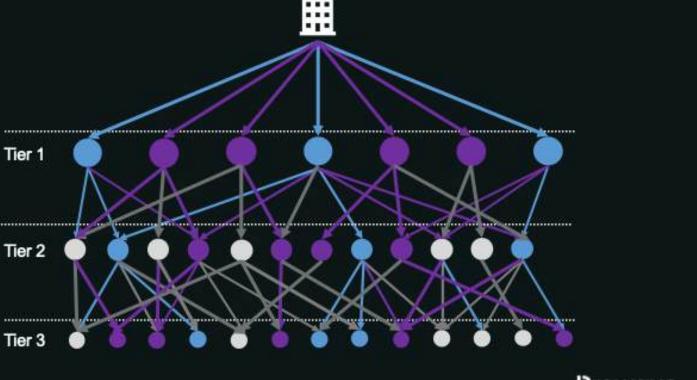


### Public data mapping

Sourced from public media and international trade data

Customs Media Predicted

Enabled by superintelligence.



Implementation gaps | Missing data and systems, unclear legal frameworks, lack of resources & skills, price competitivenes and mindset are perceived as major challenges

Nov. 2025



Sustainable procurement practices are being adopted on a large scale by companies of different sizes and geographical locations. However, the effective implementation of sustainable procurement programs is not without challenges.

#### The biggest obstacles to implementation

- · Lack of internal resources
- Inability to effectively and efficiently track suppliers' sustainability performance
- · Concerns about costs
- Resistance from suppliers
- Many management teams recognize the growing importance of sustainability in the supply chain
  - Only 15% of respondents cited lack of support from management and the board as one of their two biggest challenges
  - For 41% of respondents, this was not a challenge

What are the biggest obstacles and challenges preventing your company from committing to or expanding its sustainable supply chain and procurement?



**Ambition** 



82%

of companies are striving to improve their level of sustainability.

of companies consider sustainability when prioritizing digital transformation initiatives.



of companies have created the necessary conditions for sustainability. 1



Reality

of companies are implementing ambitious sustainability applications enabled by digital and artificial intelligence across the entire value chain.



## Pitfalls | Implementing the sustainability strategy is the biggest challenge

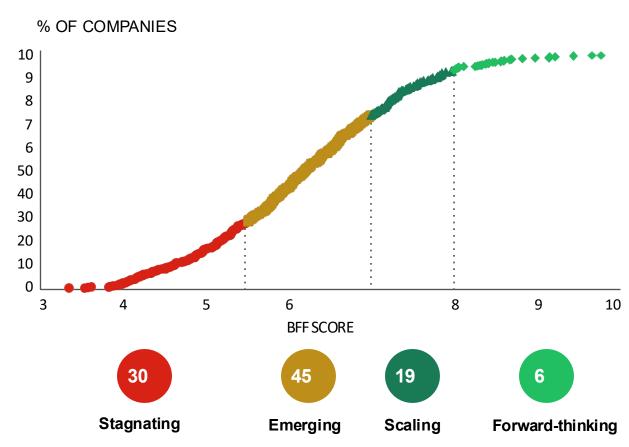
A common challenge is that companies find it difficult to integrate sustainability into their strategy and business model.

- The **sustainability strategy** is separate from the core business
- Decision-making processes are slow and make it difficult to respond quickly
- Sustainability incentives are limited and lack the depth and breadth necessary to bring about meaningful change
- **Sustainability competencies** are not embedded in business units or functions
- Leadership, culture, and change management are not sufficiently addressed
- Those responsible for sustainability lack **sufficient** influence on business activities





What sets leaders apart | A select group of companies has discovered what it takes to become future-proof...



**Source:** BCG's Build for the Future Survey 2022 (n = 724); BCG analysis. **Note:** BFF = Build for the Future. EBIT = earnings before interest and taxes.

Source: BCG

## ... and achieve financial and nonfinancial benefits

Revenue
3-year revenue growth<sup>2</sup>

Profit
3-year revenue growth <sup>2</sup>

Benefits for people High Glassdoor ratings are more likely<sup>3</sup>

Climate protection and sustainability
Improved sustainability values<sup>4</sup>

#### **Generative Al**

Generative AI use cases are systematically transferred to the entire company and its processes

<sup>&</sup>lt;sup>1</sup>All metrics are future-built vs. stagnating.

<sup>&</sup>lt;sup>2</sup>FY2019-FY2022 CAGR (Source: CapIQ).

<sup>&</sup>lt;sup>3</sup>Based on % of companies with ratings of 4+ out of 5.

<sup>&</sup>lt;sup>4</sup>Improvement in ESG score over 3-year period FY2019-FY2022 (Source: CapIQ).

## What sets sustainability leaders apart | Sustainability leaders develop clear sustainability advantages through digitalization and innovative strength

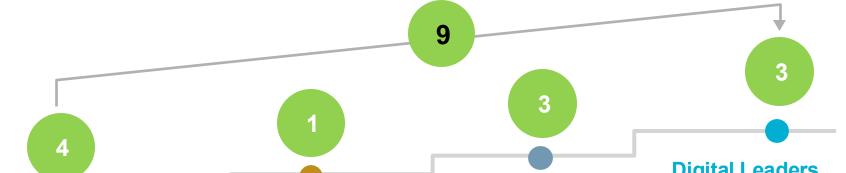
### **Characteristics of** sustainability leaders in purchasing

- > **Priority**: Since achieving sustainability goals is very important to these companies, they are also willing to invest more in sustainable procurement and improving supply chain transparency.
- **Holistic:** Leaders view sustainability commitments holistically, i.e., as an integral part of their supply chain management
- **Tools:** They are able to use a wider range of tools for sustainable procurement

Companies lagging behind in digitalization and innovation

**Advanced companies** in digitalization and innovation

The proportion of companies considered leaders in sustainability is nine times higher among "digital leaders" than among "digital stagnants."



# **Digital stagnants No**

goal defined yet and digital transformation not properly implemented - limited value created

### **Emerging**

Successful programmatic transformation, but challenges in effectively scaling across the entire organization

#### Scaling

Several waves of successful digital transformation transition to innovationdriven growth

#### **Digital Leaders**

Continuous innovation at the forefront of change through systematic development of the necessary skills on a large scale

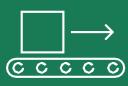
% Share of sustainability leaders: Share of companies that can be considered leaders in sustainability





# What sets sustainability leaders apart | They create a sustainability advantage by focusing on two key areas

#### 1. Making the core sustainable



Sustainable operations (Scope 1 and 2) and organization: Integrate sustainability holistically into their operations by identifying emissions, considering the added value for employees, implementing solutions, and measuring the financial impact



Sustainable procurement and supply chain (Scope 3): Taking the entire value chain into account through greater transparency, setting benchmarks, and achieving targets

### 2. New impetus for sustainable growth



Customer-focused sustainability: Unlock new growth by identifying *unmet needs* and developing **new products and services** – while also rethinking the customer experience



Green technologies and innovation:
Pursuing growth opportunities for *green*businesses, including building, scaling, and investing in technologies





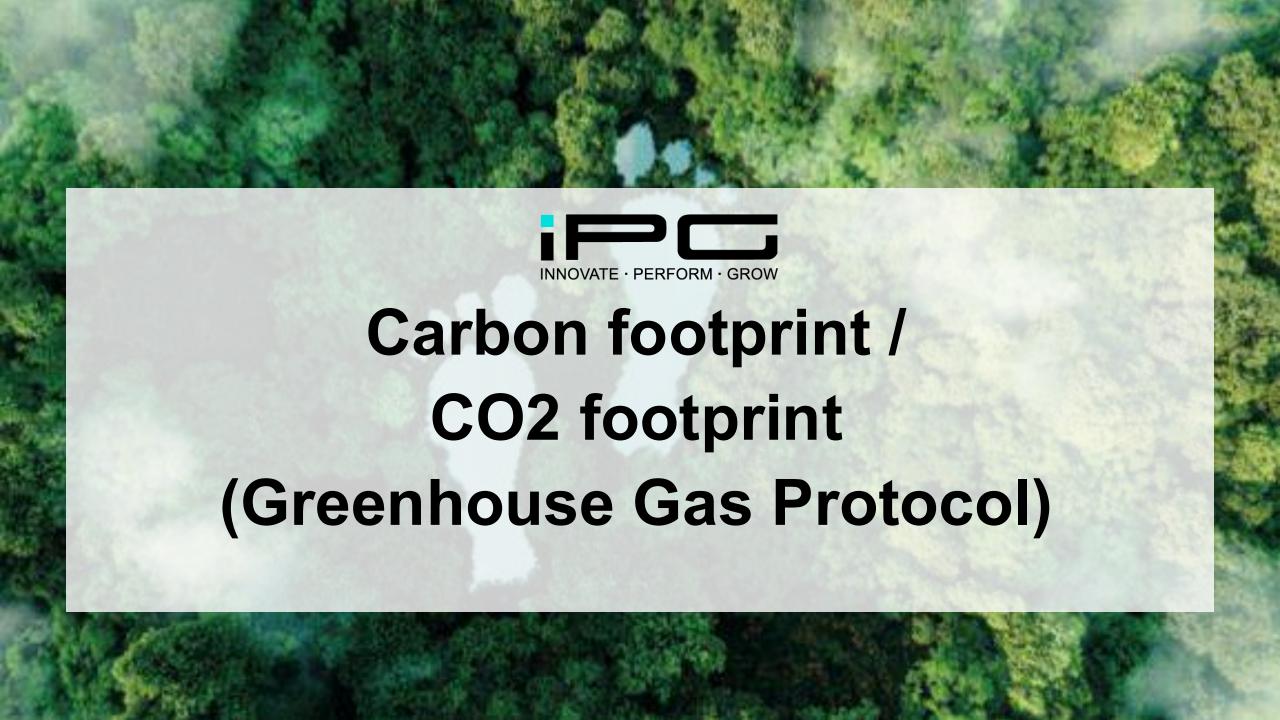
### Companies can make a major contribution to implementing the SDGs because they have influence over many issues and developments (1/2)

	Focus on sustainability	Explanatory notes
1	Greenhouse gases / Use of Fossil energy sources	Greenhouse gases are gases that contribute to the greenhouse effect and can be of both natural and anthropogenic (i.e., human-caused) origin / Emissions related to transportation and livestock farming
2	Resource efficiency & Circular economy	In contrast to the linear "take-make-dispose" model, the circular economy is an economic model that decouples growth from the consumption of finite resources. The aim is to keep products, components, and resources in cycles and to preserve their value for as long as possible.  Specifically, the aim is to:  • Narrowing - On the one hand, the proportion of primary raw materials is reduced through the use of recycled and renewable materials, and on the other hand, the total amount of material in the cycle is reduced through less use.  • Slow down - The service life of products and components is extended through maintenance, repair, refurbishment, updates, and upgrades. This preserves value for longer and reduces the need for new materials.  • Intensify - More output is obtained from the same quantities of materials through more intensive use of products.  • Close - Materials should be reused for a new purpose at the end of their useful life.  • Dematerialize - Physical products are replaced by non-physical (primarily digital) products or services.
3	Hazardous substances	Hazardous substances are substances and preparations/mixtures (solid, liquid, or gaseous) that have one or more hazardous properties and can therefore endanger the life or health of humans and animals, pollute the environment, or damage property.
4	Water consumption & Water scarcity	Water consumption is colloquially defined as the amount of water used for human consumption. This includes water used for direct human consumption as well as water used for everyday life, agriculture, trade, and industry.  Water scarcity occurs when there are insufficient water resources to meet existing water demand.

# Companies can make a major contribution to implementing the SDGs because they have influence over many issues and developments (2/2)

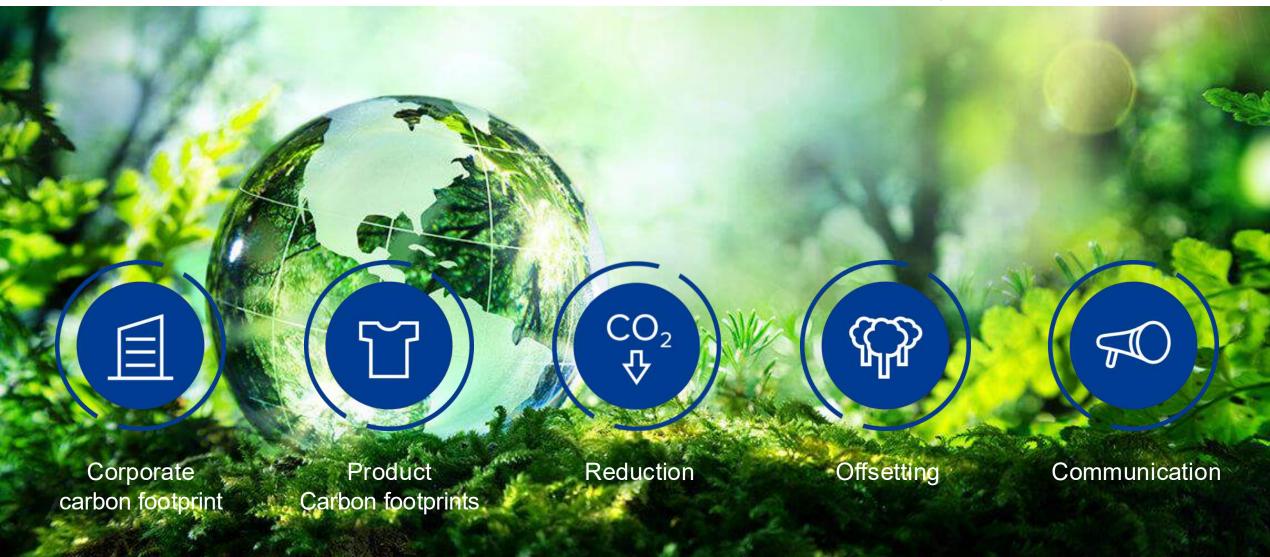
	Focus on sustainability	Explanatory notes
5	Packaging material	Packaging generally refers to the covering or (partial or complete) wrapping of an object, in particular for its protection or for better handling.
6	Land use/ Preservation of biodiversity	The term "biodiversity" refers to the total diversity of life. The diversity of ecosystems (habitats such as water, forests, alpine areas). The diversity of species (animals, plants, fungi, microorganisms). The diversity of genes (within a species and within the entire ecosystem).  Land use (also land use planning) refers to the way in which soil and land (parts of the solid earth's surface) are used by humans.
7	Energy consumption & Energy efficiency	Energy consumption colloquially refers to the demand for energy for various applications. Energy is necessary to perform work. Depending on the application, a distinction is made between mechanical work, lighting, and heating and cooling processes, which are characterized by time-related measurements and parameters.  Energy efficiency is the ratio of the output of services, goods, or energy to the energy input. Energy efficiency is therefore understood as the rational use of energy.
8	Emissions (excluding GHG*)	Emission of particles, substances, (sound) waves, or radiation into the environment.
9	Social sustainability / compliance with labor standards and fair business practices	Social sustainability describes the conscious organization of social and cultural systems.  Social sustainability should enable a stable society in which all members can participate and which guarantees human dignity, labor rights, and human rights across generations.  Combating child labor, forced labor and slavery as well as discrimination





## Holistic climate protection strategies comprise five steps





## Carbon Footprint – Corporate Carbon Footprint (CCF) and Product Carbon Footprint (PCF)

Two approaches to establishing a greenhouse gas balance:

- Corporate Carbon Footprint (CCF) as a company-based approach
- Product Carbon Footprint (PCF) as a product-related approach.



**Sustainable procurement must** master both approaches!

### **Corporate Carbon Footprint (CCF)**

- A corporate carbon footprint accounts for a company's own greenhouse gas emissions and all relevant emissions caused along the value chain in which the company operates.
- If the CCF calculation is followed by a detailed analysis of the greenhouse gas balance sheet, emission drivers can be identified and targeted reductions in energy and resource consumption can be implemented. This leads to cost savings that often exceed the expenditure for the reduction measures.
- As a practical control tool, a CCF thus provides an overview of the company's greenhouse gas inventory and serves to improve operational energy and resource management.

### **Product Carbon Footprint (PCF)**

- A Product Carbon Footprint balances all greenhouse gas emissions - relative to a defined unit of use - that arise during the life cycle of a product.
- **All process stages** are taken into account, from the development, manufacture, and transport of raw materials or preliminary products, through production and distribution, to use, reuse, and disposal. **Services** can **also** be understood as products in this sense.
- Depending on the system boundaries selected, only part of the product life cycle can be mapped:
  - > In the B2B sector, the emissions generated during production, including the upstream processes (cradle-toqate), are often recorded.
  - > For **B2C relationships**, the emission data up to the **point of** sale, including the upstream chains and production, is usually summarized.





# A consistent perspective that covers the entire life cycle is considered a key success factor.

PCF \* Focus

Raw materials	Logistics	Production	Logistics	Utilization	Disposal	
<ul> <li>Production material</li> </ul>	s • Inbound logistics	<ul> <li>Electricity</li> </ul>	<ul> <li>Intralogistics</li> </ul>		<ul> <li>Recycling</li> </ul>	
<ul><li>Packaging materials</li><li>Process heat</li><li>Administration</li></ul>		<ul><li>Process heat</li></ul>	<ul> <li>Outbound</li> </ul>		<ul> <li>Recycling</li> </ul>	
		logistics		<ul> <li>Incineration</li> </ul>		

### **Cradle-to-gate (C2G)**

"From cradle to factory gate":

A cradle-to-gate analysis takes into account the environmental impact of the production of the building material. This begins with the extraction of raw materials and **ends with the delivery of the finished products to** the manufacturer's factory **gate**.



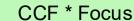
### **Cradle-to-cradle (C2C)**

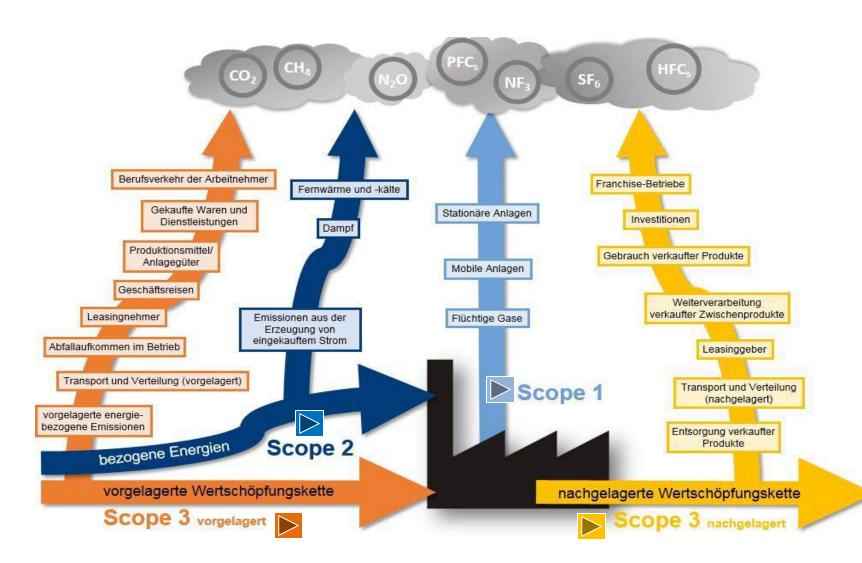
"From cradle to cradle": an approach to a consistent and comprehensive circular economy



gas emissions)

#### Operational system boundaries: According to the GHG Protocol, CO2 emissions are divided into "scopes."





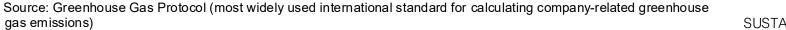
Internationally recognized standards specify how greenhouse gas emissions must be calculated, whether for an entire country, a company, or a reduction project.

The greenhouse gas balance is calculated in accordance with these guidelines.

The calculation divides emissions into three scopes:

- Direct emissions (scope 1)
- Indirect emissions from the provision of electricity and other purchased energy, e.g., district heating (Scope 2)
- Indirect emissions in upstream and downstream activities (scope 3)





#### Emissions categories Scope 1 – Categories (1/1)

Scope 1 Category		1 Category	Description/examples and the necessary data and data collection			
	1.1	Direct emissions from combustion processes in stationary installations	Combustion processes in stationary installations  • Use of heating oil in heating systems  • Natural gas for CHP plants  Data: Quantities of primary energy sources used, delivery notes and invoices, measurements of consumption from meter readings			
	1.2	Direct emissions from combustion processes in mobile installations	Combustion processes in mobile plants (transport and commercial vehicles)  • Diesel consumption of trucks  • Liquefied petroleum gas consumption of forklifts  • Gasoline consumption of company cars  Data: Amount of fuel or distances traveled, invoices, delivery notes, fuel receipts, fuel cards, or mileage (km)			
	1.3	Direct emissions of volatile gases	Direct emissions of climate-relevant gases  • Leaky pipes  • Leaks in air conditioning systems  • Leaks from natural gas pipes  Data: Determination of leakage based on invoices indicating the amount of refrigerant refilled			
	1.4	Direct emissions from processes	Direct emissions from processes  • These are installations covered by the EU Emissions Trading System.  Data: Determination of emissions based on production data/product consumption volumes or meter readings			

#### Emissions categories Scope 2 – categories (1/1)

Scope 2 Category		Description/example, as well as necessary data and data collection		
2.1 Indirect emissions from purchased electricity		Emissions generated during the production of the electricity purchased by the company from the supplier. Excludes emissions from the exploration and transport of primary energy (e.g., extraction and transport of hard coal).  Data: Amount of purchased electricity, invoices from the energy supplier, meter readings		
2.2	Indirect emissions from district heating/cooling	Emissions generated by the district heating/cooling purchased by the company during production at the supplier. As in 2.1, excluding emissions from the exploration and transport of primary energy.  Data: Amount of district heating/cooling purchased, invoices, meter readings		
2.3	Indirect emissions from purchased steam	Emissions from the generation of steam purchased from a supplier.  Data: Amount of purchased steam, invoices, meter readings		

calculating company-related greenhouse gas emissions

#### Emissions categories Scope 3 categories (1/4)

Scope 3	3 Category	Description/example, as well as necessary data and data collection
Upstrea	am value chain	
3.1	Purchased goods and services	All emissions are included, from the extraction of raw materials to further processing and manufacturing, as well as transport to your company (from cradle to factory gate). Make sure that no goods are listed under 3.1 that belong in one of the other categories.  • Raw materials  • Auxiliary materials  • Office consumables (printed materials, paper, etc.)  Data: Quantity of goods and services purchased, invoices for raw materials and additives purchased for the manufacture/processing of products, and packaging materials
3.2	Means of production/capital goods	<ul> <li>Emissions generated during the manufacture of capital goods. These goods include, for example</li> <li>machinery</li> <li>Truck fleet</li> <li>Data: Unit numbers for capital goods should be available at the time of purchase (tip: ask the manufacturers for the PCF of the capital goods).</li> </ul>
3.3	Fuel and energy-related emissions	<ul> <li>Emissions from upstream processes, distribution, and losses in the provision of electricity, heat, or primary energy.</li> <li>Extraction and transport of natural gas used in the company</li> <li>Losses in transmission and distribution networks</li> <li>Data: Fuel and energy consumption data for Scope 1 categories (1.1 &amp; 1.2) and Scope 2 categories (2.1, 2.2, 2.3) are required here.</li> </ul>

#### Emissions categories Scope 3 – categories (2/4)

Scope	3 Category	Description/example, as well as necessary data and data collection				
Upstre	am value chain					
3.4	Upstream transport and distribution	Emissions from the transport of purchased goods from suppliers. Transport carried out by an external logistics company to deliver goods to the reporting company. Transport carried out by external parties but paid for by the reporting company.  • Ship transport from overseas suppliers  • Truck transport for the delivery of auxiliary materials to your company  Data: Determination of data on purchased goods (weight) and distances traveled (km) for purchased products				
3.5 Waste generation in the company		Emissions from the treatment and disposal of waste generated directly by your company, as well as the associated waste treatment.  • Production waste  • Operational waste  • Landfilling, recycling, incineration  Data: Waste data collected (activity data is the tonnage of waste by type of disposal)				
3.6	Business travel	Business trips by employees in means of transport that do not belong to the company.  • Taxi rides  • Flights with airlines  • Trips using public transport  Data: Employee travel expense reports, trips booked by the HR department				
3.7	Employees' commuting	Employees commuting to work in vehicles that do not belong to the company. <b>Data:</b> Employee survey (required: person-kilometers traveled, means of transport, working days in the reporting year) Anonymous evaluation by the HR department				
3.8	Leased items in the upstream value chain	Operation of leased buildings, machinery, or vehicles. Energy consumption (direct and indirect) of these leased assets.  Data: Energy consumption, leasing contracts, leasing providers, invoices				





#### Emissions categories Scope 3 – categories (3/4)

Scope 3	3 Category	Description/example, as well as necessary data and data collection					
Downstream value chain							
3.9 Downstream transport and distribution  Further processing of sold intermediate products		Emissions arising from the transport of sold products (from the reporting company to the customer). Transport carried out by external logistics companies and is not paid for by the reporting company.  Data: Assumptions about tonnage and distance per means of transport used for downstream deliveries					
		Emissions generated by the further processing of intermediate products sold by the reporting company. Emissions at another company during the further processing of the products.  Data: Inquiry to the processing customer, data from test benches					
3.11	Use of sold products	Emissions generated during the use phase of the goods sold to the end customer.  • Energy supply for electrical appliances, for example  • Emissions from the operation of vehicles, for example  Data:  • Quantity of products sold in the reporting year  • Energy consumption of the product (e.g., per year or use)  • Assumptions about user behavior (frequency of use per year)  • Lifespan of the product in years					



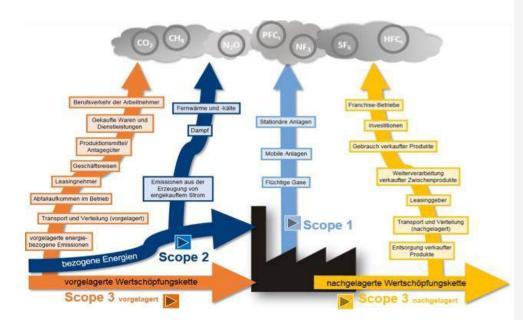
#### Emissions categories Scope 3 – categories (4/4)

Scope	3 Category	Description/example, as well as necessary data and data acquisition						
Downs	Downstream value chain							
3.12	Disposal of sold products	Emissions generated during the disposal of sold products. For example, emissions from:  • Landfilling  • Recycling  • Incineration  Data: Assumptions about end consumers' disposal behavior, required:  • Quantities of products sold and their packaging (number of items, liters, weight)  • Assumptions about the disposal/recycling of products (e.g., percentage distribution by type of production)						
Leased assets in the downstream value chain		Emissions generated by items that belong to the reporting company but are leased by other companies. The reporting company acts as the lessor. For example, emissions from  • Leased vehicles  • Buildings  • Plants  Data: lessee, invoices						
3.14	Franchise operations	Emissions from the operation of franchise business activities in which the reporting company acts as the franchisor.  Data: Energy consumption of franchise operators						
3.15	Investments	<ul> <li>Emissions from business activities related to investments. Emissions from energy consumption of investments</li> <li>Investments in other companies</li> <li>Corporate loans granted by the reporting company</li> <li>Data: Requests for energy consumption data from your business partners Your investments</li> </ul>						





Example: Corporate Carbon Footprint (CCF) of a medium-sized manufacturing company (e.g., furniture manufacturer)



#### Scope 1: Direct emissions (company-owned sources)

These emissions arise directly from the company's own facilities and vehicles.

- Fossil fuels for machinery & equipment (e.g., natural gas for heating, diesel for generators)
- Company vehicles & fleet (combustion engines, e.g., delivery trucks)
- Process emissions (emissions from chemical processes in production)
- Total Scope 1 emissions: 1,500 t CO<sub>2</sub>e (20%)

#### Scope 2: Indirect emissions from purchased energy

These are emissions from the company's electricity and heat consumption.

- Electricity for production facilities & offices
- District heating & cooled water for air conditioning
- Lighting & IT infrastructure
- Total Scope 2 emissions: 1,000 t CO<sub>2</sub>e (13%)

#### Scope 3: Indirect emissions along the value chain

These emissions arise outside the company but are caused by its business activities.

- Supply chain & transport of raw materials (e.g., wood, metal, fabrics for furniture)
- Employee commuting (e.g., travel by car, train)
- Business travel (flights, hotels, rental cars)
- Packaging materials & disposal
- Use of the products sold (energy consumption by the end customer, maintenance)
- End-of-life (recycling or disposal of furniture)
- Total Scope 3 emissions: 5,000 t CO<sub>2</sub>e (67%)

Total corporate carbon footprint CCF = 7,500 t CO₂e per year



# Product Carbon Footprint (PCF) - Examples

PCF of a 1-liter glass bottle of orange juice

#### Total product carbon footprint: PCF = 3.2 kg CO₂e per 1-liter bottle of orange juice

#### 1. Raw material extraction & agriculture

- Orange cultivation (fertilizers, irrigation, pesticides, land use)
- CO<sub>2</sub> emissions from machinery, tractors, irrigation systems
  - → Emissions: 0.5 kg CO<sub>2</sub>e

#### 2. Production & processing

- Transport of oranges to the factory
- Processing: washing, pressing, pasteurization, bottling
- Energy consumption at the production facility
  - → Emissions: 0.7 kg CO<sub>2</sub>e

#### 3. Packaging

- Manufacture of glass bottles
- Labels, caps
- Transport of packaging materials to the filling plant
  - → Emissions: 0.9 kg CO<sub>2</sub>e

#### 4. Transport & distribution

- Transport from the producer to the retailer
- Cooling during transport
- Storage in the supermarket
  - → Emissions: 0.6 kg CO<sub>2</sub>e

#### 5. Use & consumption

- Cooling the orange juice at home
- Rinsing and recycling the glass bottle
  - → Emissions: 0.3 kg CO<sub>2</sub>e

#### 6. End-of-life (disposal & recycling)

- Glass bottle is recycled (energy required for melting down and reuse)
- Disposal of labels and caps
  - $\rightarrow$  Emissions: 0.2 kg CO<sub>2</sub>e







# The special role of procurement in implementing sustainability strategies

# Reducing CO2 emissions before production – BMW wants to make its supply chain in China more climate-friendly

June 2021

Not driving is not the biggest climate sinner. Most CO2 emissions are generated beforehand during production – especially in battery-powered cars. This is where BMW is focusing its efforts in China, the largest car market.

"We have to look at the entire value chain," said Jochen Goller, head of BMW China, on the sidelines of the conference, according to the German Press Agency.

The "majority of emissions" come from the supply chain prior to production.

"Many people believe that cars are the biggest source of emissions.

But when you look at the entire cycle, the **supply chain** leaves **the largest carbon footprint.**"



# The procurement function as a multiplier for sustainability along the value chain

CCF \* Focus

Depending on the industry, sustainability impacts vary along the value chain. **Hot spot analyses** reveal these impacts and can serve as a decision-making tool for purchasing.

#### Distribution of environmental impacts along the value chain (example: vehicle manufacturing)

Stages of the value chain	Raw material extraction	Production of intermediate products	Direct suppliers	Vehicle manufacturing companies (own sites)	Total
Greenhouse gases	8	54	28	10	140 Megatons of CO <sub>2</sub> e
Air pollution	<b>3</b>	57	30	<b>6</b>	<b>0</b> Megatons of NO <sub>2</sub>
Water consumption	21	23	18	38	18 million m³ Water
Land use	91	4	3	2	<b>3</b> million ha

SUS: Sustainability

## The procurement function as a multiplier for sustainability – overview

CCF \* Focus

Sustainable procurement is a multiplier that helps shape the **value creation of your own company and numerous suppliers**, thereby making a significant contribution to the environment and society.

#### Multiplier effect of purchasing along the value chain

#### Raw material extraction / further processing

- Direct influence on **supplier** selection
- Development of suppliers through collaboration and (co-)innovation
- Participation in eco-friendly product design
- Indirect influence on the selection of upstream suppliers
- Creation of transparency across the value chain

#### Value creation in company

- Exchange with consumers to plan demand
- Participation in product development / -design
- Co-design of product specifications
- Strategic, tactical, and operational procurement of requirements (demand management)

#### Market / customers

- Consideration of market requirements in demand procurement
- Proactive shaping of requirements by searching for sustainable product alternatives and secondary material options

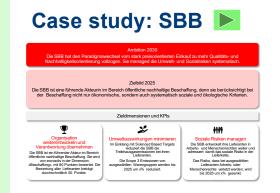
#### Use End customers / End-of-life

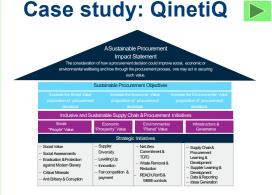
- Contribution to resourcesaving products by taking life cycle costs & sustainability effects into account
- Consideration of circular economy criteria in product selection



#### Summary of the contents of a sustainable procurement strategy

- Official statement from management on the implementation of sustainable procurement with a declaration of benefits for the company
- Declaration of full **recognition and compliance with human rights** (policy statement)
- Transparent presentation of the identified opportunities and risks in the procurement organization, particularly taking into account the supply chain
- Materiality assessment to which areas does this procurement strategy apply (product groups, procurement markets, etc.)?
- > Analysis and involvement of stakeholders
- Definition of specific sustainable procurement goals based on the company's sustainability goals
- Formulation of specific sustainable procurement measures to effectively address these opportunities and risks and achieve the defined goals
- > Establishing **specific key performance indicators** for management and performance review
- Accompanying internal and external communication measures for stakeholder dialogue and successful change management







#### TWIN-PRO | Tailor-made, multidisciplinary blueprint for digital and sustainable purchasing

NNOVATE



#### Multidimensional change | The five dimensions of multidisciplinary transformation

Change requires a simultaneous focus on strategy, people, leadership and culture, processes, and technology.

Vision, Mission
 Strategy



- > Clear objectives and strategic integration of sustainability as an integral part of value creation.
- Avoid fragmented initiatives through a holistic approach.

2. People



- > Employees are key to implementation and impact.
- > Empowerment, motivation, and participation ensure successful transformation.

3. Leadership, Culture & Collaboration



- > Leaders shape values, priorities, and cooperation.
- A culture of trust and interdisciplinary collaboration break down silos.

4. Process Engineering & Organization



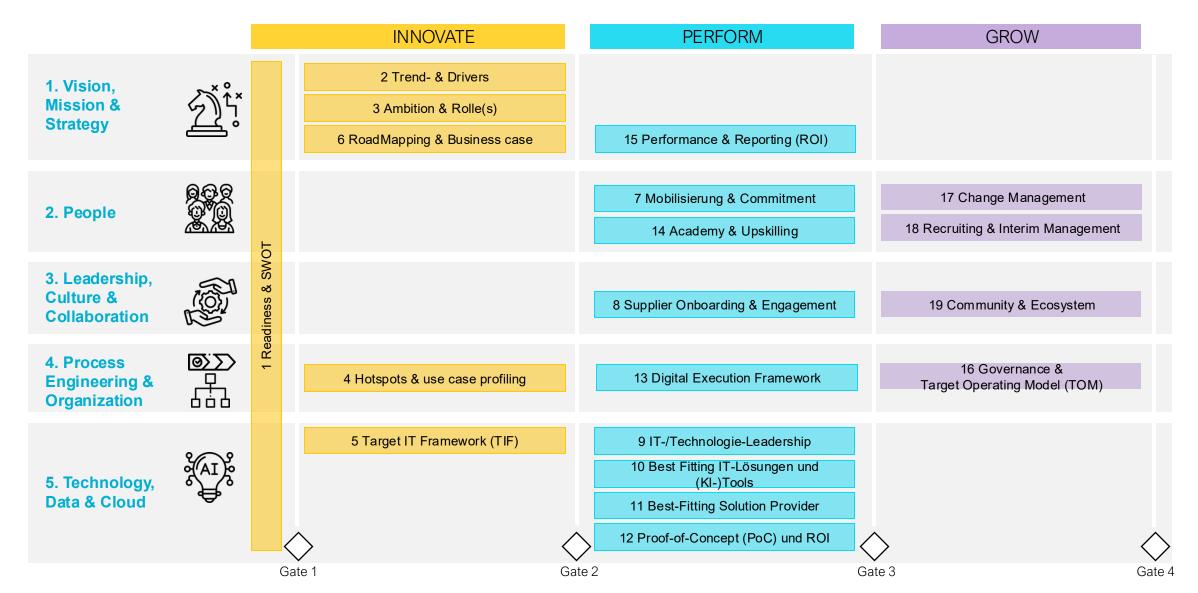
- >
- Digital tools only work with clear, standardized processes. Establish new roles and processes.
- → Systematically integrate sustainability into core processes ("Sustainability by Design").

5. Technology, Data & Cloud



- > Technological foundation for transparency, efficiency, and sustainability assessment.
- Data quality, interfaces, and governance ensure effectiveness.

#### TWIN-PRO | Tailor-made, multidisciplinary blueprint for digital and sustainable purchasing



# CONTENTS INTENDED FOR IPG MASTERCLASS PARTICIPANTS

#### Values | Value contribution of sustainable procurement

- Values of previously unmonetized externalities\* especially growth and innovation impulses
- Costs of externalities not yet monetized\*
- Costs of externalities\*
- Acquisition, usage (maintenance), and disposal costs
- The traditional purchase price\*

#### Non-monetized values

 Growth impulses and additional sales through sustainable business models and solutions with intensive involvement of sustainable purchasing · Innovation potential through the development of resource-saving and environmentally friendly solutions

#### Non-monetized costs

- Massive reputational risks and damage to image as a result of environmental scandals
- Decline in profits due to loss of market share as a result of customers switching to ethically responsible brands
- Higher financing costs as a result of investors rewarding sustainability-oriented companies with more favorable financing terms

#### Life cycle costs (LCC)

- Costs due to disproportionately high CO2 taxes caused by high greenhouse gas emissions
- Costs for CO2 offsets due to missed CO2 targets
- · Legal penalties and long-term financial burdens due to environmental and social requirements

#### Costs due to increasing supply bottlenecks, unstable supply chains, and supply chain disruptions Political instability in production countries and necessary supplier changes as a result of climate change

- Disproportionately rising material costs/raw material prices due to excessive consumption of the ever-increasing ecological footprint) = increased costs
- Efficiency losses due to high material waste, rising energy costs, inadequate recycling mechanisms, and dependence on volatile raw material markets
- Sustainable materials. which may be more expensive than conventional alternatives in the short term. save costs in the long term through energy efficiency or reduced waste

#### Total cost of ownership (TCO)



Material, production, and delivery/transportation costs, as well as customs natural resources/resource scarcity (as a result of

**Purchase** Organization Company



<sup>\*</sup> Externalities include environmental, social, and economic consequences that are not directly reflected in market prices.

#### Good practice example





# Good Practice Example 1 Sustainable purchasing strategy



#### **Ambition: Climate-neutral SBB 2030**

Climate-neutral SBB



- Today, trains run on 90 percent hydropower, and from 2025 they will run on 100 percent renewable energy.
- The electricity (50 Hz) in buildings has already been renewable since 2019.
- By 2030, SBB aims to generate 30 GWh of solar power by 2030.
- By 2040, SBB aims to use 100 percent renewable energy by 2040.

Climate neutrality

CO<sub>2</sub> - compensation.

100% renewable energies.

Upstream chain:

1 million tons of CO 2
rocurement, construction activity

#### **Energy efficiency.**

With its energy-saving program, SBB aims to save 850 GWh by 2030. This corresponds to one-third of its current energy consumption or the electricity consumption of 212,000 households.

By the end of 2020, a reduction of 470 GWh had already been achieved.

Shift of transport to rail: minus 5 million tons of CO<sub>2</sub> .

cargo \_\_\_

100,000 tons of  $CO_2$ .

Climate neutrality = energy efficiency + 100% renewable energies + CO<sub>2</sub> e compensation



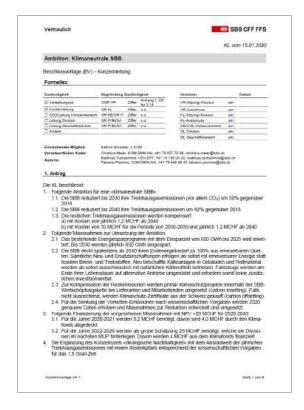
#### Ambition "Climate-neutral SBB" (100% renewable energy) – We are also challenged here!



Climate-neutral SBB

#### The following ambition for a "climate-neutral SBB 2030":

- → By 2030, SBB will reduce its greenhouse gas emissions (primarily CO<sub>2</sub>) by 50% compared to 2018.
- → SBB will reduce its greenhouse gas emissions by 92% compared to 2018 by 2040
- → The remaining greenhouse gas emissions will be offset from 2030 onwards.









SCM must make a corresponding contribution to this!

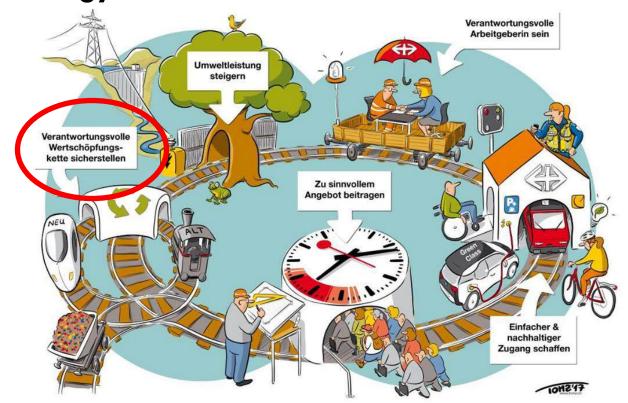


#### **⇔** SBB CFF FFS

## The five strategic priorities of the current SBB sustainability strategy 2017–2020

#### Sustainable procurement

is one of the priority areas of action in the "responsible value chain."



#### Die fünf strategischen Stossrichtungen:

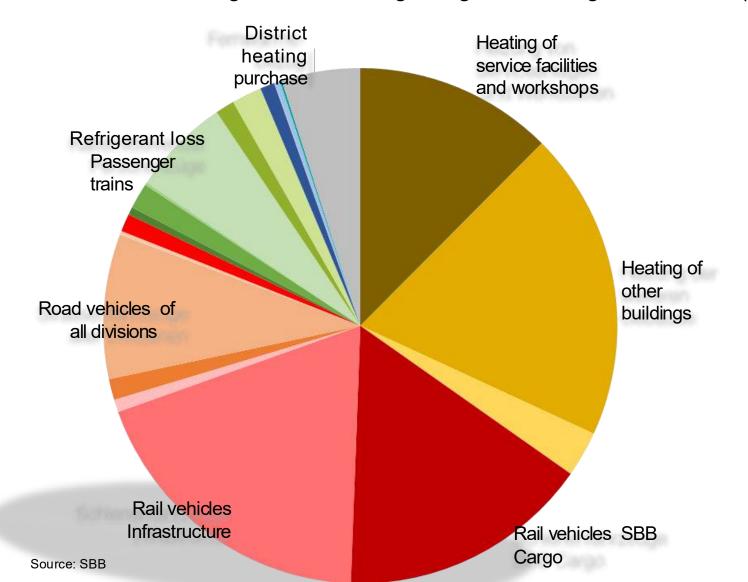
- Verantwortungsvolle und effiziente Wertschöpfungskette sicherstellen
- Umweltvorteil bei Personen- und Güterverkehr gegenüber der Strasse sichern
- Verantwortungsvolle Arbeitgeberin sein
- · Zugang und Nutzung von Mobilität und Logistik nachhaltig und einfach gestalten
- · Beitrag an nachhaltiges Verkehrs- und Immobilienangebot der Schweiz leisten



#### Company greenhouse gas balance – Scope 1+2



This is where SBB generates the highest greenhouse gas emissions (as of March 2021)



In 2020, the activities of SBB AG, SBB Cargo AG, the power plant companies, and Securitrans caused just under 80,000 tons of direct greenhouse gas emissions (CO<sub>2</sub> eq).

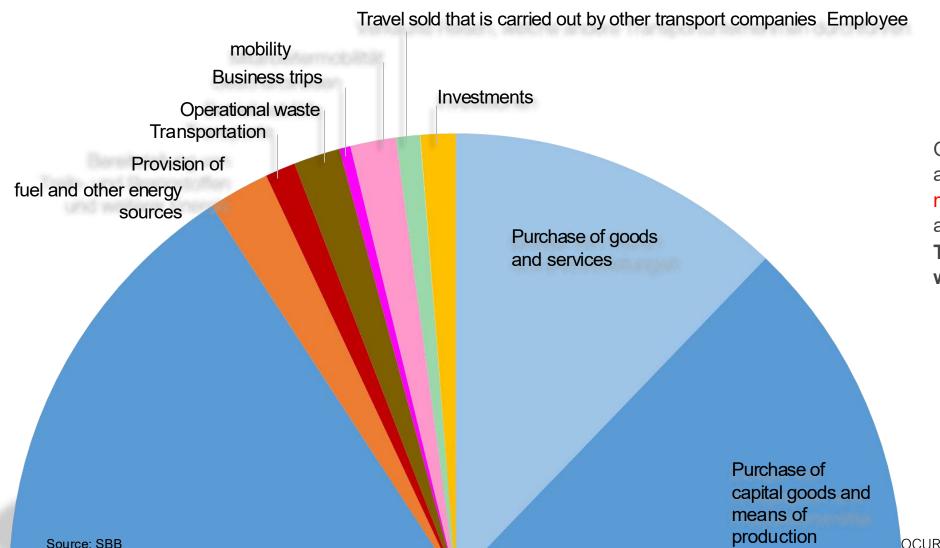
The unlabeled, smaller contributions to total emissions come from switch heating, rail vehicles and passenger bus lines, Securitrans road vehicles, refrigerant losses from stationary systems, power plant reservoirs, the loss of insulating gas in switchgear, and the additional electricity purchased for the rail network and buildings.



#### The company's greenhouse gas balance – Scope 3



This is where SBB generates the most greenhouse gas emissions (as of March 2021)



Outside its own company, SBB's activities generate around 1 million tons of emissions (CO<sub>2</sub> eq) annually.

That is ten times as much as within the company itself.

#### ent 📕

#### **SBB CFF FFS**

### Further development of SUS procurement: systematic management of environmental and social risks

Sustainable procurement at SBB

A sustainable procurement strategy sets the guidelines for responsible corporate behavior in purchasing and should be consistent with the company's overall sustainability strategy.

#### Ambition 2030

SBB has completed a paradigm shift from strongly price-oriented purchasing to a greater focus on quality and sustainability. It systematically manages environmental and social risks.

#### Target vision for 2025

SBB is a leading player in the field of sustainable public procurement, as it takes into account not only economic criteria but also social and environmental criteria in its procurement activities.

#### Target dimensions and KPIs



### Further developing the organization and taking responsibility

SBB is a leading player in the field of sustainable public procurement. It has been awarded 80 points by Ecovadis in the "Procurement" category. The average score for all suppliers is 50 points.



#### Minimizing environmental impact

In line with Science Based Targets, SBB is reducing greenhouse gas emissions among its suppliers.

Scope 3 emissions from selected product groups will be reduced by x% by 2025.



#### Managing social risks

SBB is developing its suppliers in terms of labor and human rights, thereby addressing social risk in the supply chain.

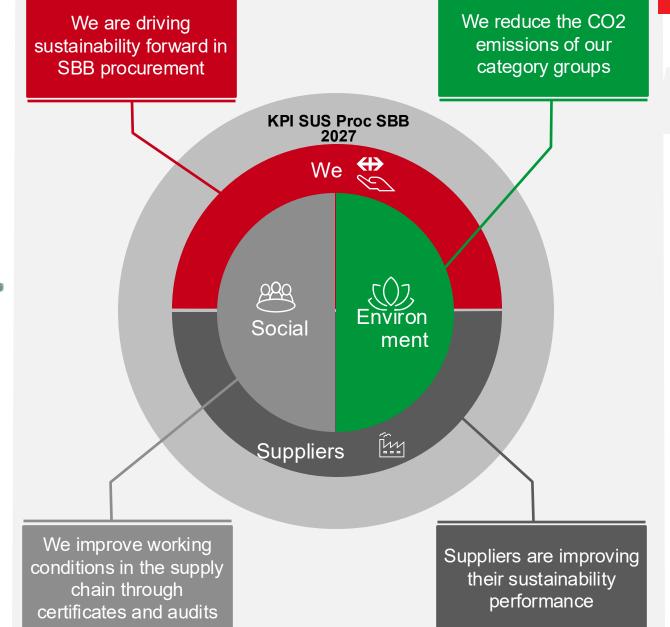
The risk of labor or human rights violations at selected suppliers will be reduced by x% by 2025.



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Sustainable procurement at SBB







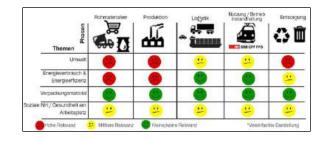
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# SBB CFF FFS

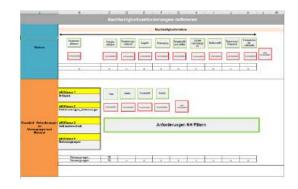
#### The 3 pillars of sustainability in purchasing



#### SUS risks in category groups



#### Catalog with SUS criteria









(since 2017)



(since 2009)



Sustainable procurement at SBB

#### E-learning with the SCM Academy



**Events (Smart Lunch)** 

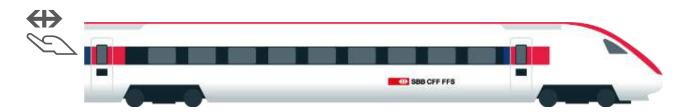
Best practice exchanges

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#### Sustainable procurement





Sustainable procurement at SBB

SBB's own EcoVadis score in the "sustainable procurement" dimension will be at least 80 points in 2027.

In addition, with a focus on the 115 risk category groups:





The Ecovadis rating of all suppliers will average 50 in 2027 and cover 60% of the purchasing volume.

The probability of labor or human rights violations at selected suppliers will be reduced by 50% by 2027.

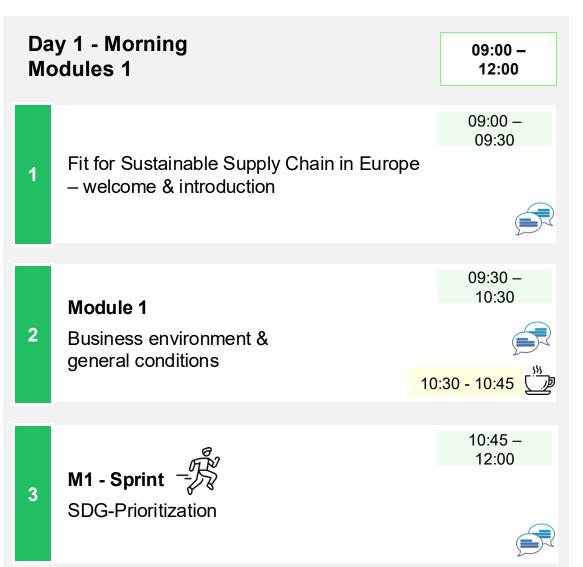
CO2 emissions from approximately 40 category groups will be reduced by 30% by 2027.

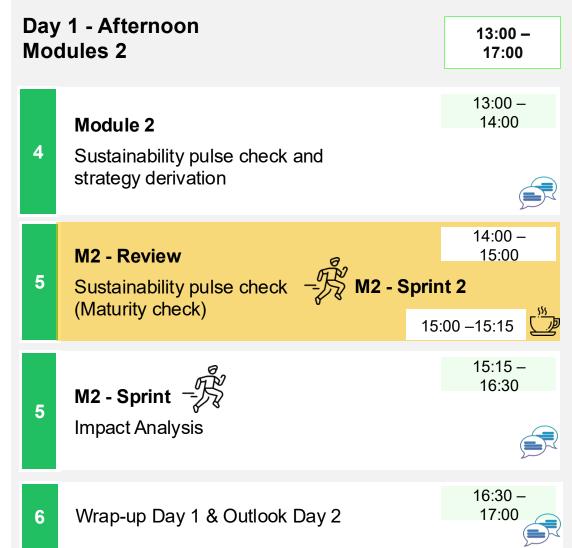


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#### Fit for Sustainable Supply Chain in Europe









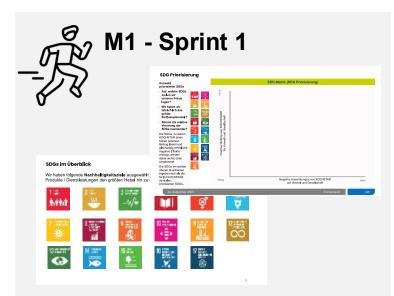
Questions & comments





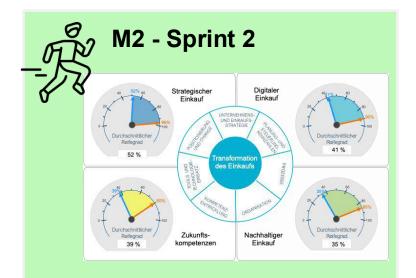
#### SDGs, Readiness Check and Impact Analysis





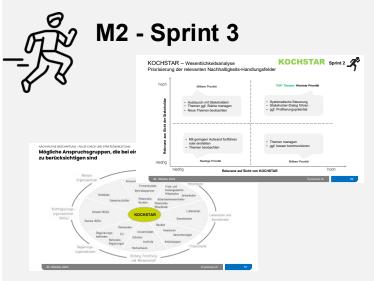
#### **Sustainable Development Goals (SDG)**

- Contextualization: Break down the global issues addressed by the SDGs into key points relevant to your company's local operations.
- 2. Evaluate each SDG according to its positive contribution and negative impact
- 3. Prioritization: Which SDGs do we want to focus on?
- 4. Where does your company actually have the greatest potential for influence?



#### Sustainability Readiness Check for Procurement

- The Readiness Check makes it possible for the first time to measure the maturity of digital and sustainable purchasing together.
- In a short time, you will receive an overview of all potential issues and important success drivers that make your purchasing resilient and futureproof.



#### Impact analysis

- Identify direct and indirect environmental and sustainability aspects as well as opportunities and risks from a company perspective
- 2. Identify the relevant stakeholder groups of companies
- 3. Identify relevant topics, opportunities, and risks from
- 4. Entry of the results in a materiality matrix



# CONTENTS INTENDED FOR IPG MASTERCLASS PARTICIPANTS

#### **Sustainability Readiness Check for Procurement**



#### **Sustainability Readiness Check for Procurement**

**Step 1:** Select one participant out of each group, which stated a high degree of maturity on the question:

Q3. Maturity: How do you assess the current maturity level of your procurement department with regard to sustainability?

**Step 2:** Fill out the maturity check matrix for the selected procurement organization

- Degree of maturity
- Testimonial, proof

		Chec	klist for introducing sustainable procurement (2/2)		<b>V</b>	<b>*</b>	
		No.	Description		Degree of Maturity	Testimonial, proof	
		3	Designing sustainable procurement processes				
		3.1	Deriving measures for sustainable procurement - Based on priorities and key areas for action				
		3.2	Integration of sustainability aspects into procurement processes and systems  Supplier management processes (e.g., supplier selection, supplier evaluation)  Tendering processes (e.g., consideration in award decisions)  Other strategic, tactical, and operational procurement processes				
		4	Measuring success				
hec	dist fo	or intro	oducing sustainable procurement (1/2)	V	`	<b>\</b>	
<b>)</b> .	Desci	ription		Degree of Maturity	Testimonial,	proof	
	Layin	g the fo	oundation				
	• Use	of argu	pport from top management imentation aids such as stakeholder surveys, benchmarks with competitors, dations from industry associations, regulatory framework				
2	• Cor	i <b>nabilit</b> nsiderat	procurement into existing organizational structures on the topic of y ion of existing governance structures for sustainability; integration of procurement into extructures				
3			n and involvement of relevant stakeholders yees in various functions, interest groups, industry initiatives, suppliers, and partners				
	Setting strategic guidelines						
1	Derive priorities and key sustainability issues  If possible, based on the company-wide sustainability strategy and materiality analysis						
Definition of the scope of a sustainable procurement strategy - e.g., definition of relevant product groups and organizational units							
3	Development of a sustainable procurement strategy  Formulation of the strategic positioning, the level of ambition, and the key areas of action in line with the company-wide sustainability strategy						

#### M2 - Sprint 2

#### **Sustainable Procurement Checklist – Roadmap for Procurement (1/2)**

To systematically integrate sustainability into procurement, a checklist can be used as a roadmap. The implementation steps should be tailored to the individual needs of the company.

Chec	Checklist for introducing sustainable procurement (1/2)								
No.	Description	Degree of Maturity*	Testimonial, proof						
1	Laying the foundation								
1.1	Securing support from top management  Use of argumentation aids such as stakeholder surveys, benchmarks with competitors, recommendations from industry associations, regulatory framework								
1.2	<ul> <li>Integrating procurement into existing organizational structures on the topic of sustainability</li> <li>Consideration of existing governance structures for sustainability; integration of procurement into appropriate structures</li> </ul>								
1.3	Identification and involvement of relevant stakeholders  • e.g., employees in various functions, interest groups, industry initiatives, suppliers, and partners								
2	Setting strategic guidelines								
2.1	Derive priorities and key sustainability issues  • If possible, based on the company-wide sustainability strategy and materiality analysis								
2.2	Definition of the scope of a sustainable procurement strategy  • e.g., definition of relevant product groups and organizational units								
2.3	Development of a sustainable procurement strategy  • Formulation of the strategic positioning, the level of ambition, and the key areas of action in line with the company-wide sustainability strategy								

<sup>\*</sup> Four rating levels: 1 = very low 2 = relatively low 3= relatively high 4 = very high

#### Sustainable Procurement Checklist – Roadmap for Procurement (2/2)

-5

M2 - Sprint 2

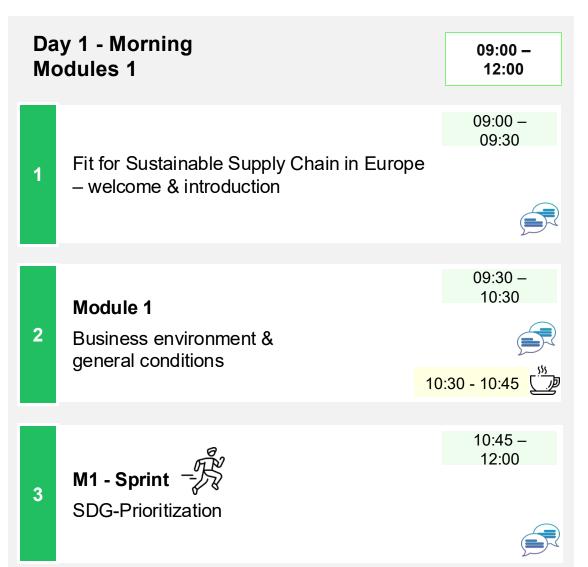
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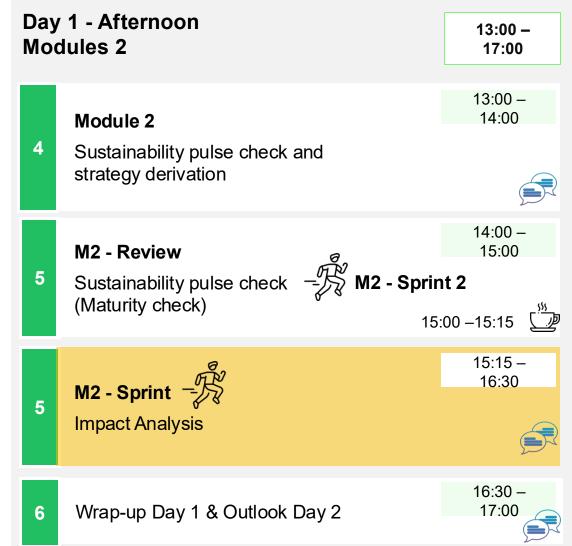
Chec	Checklist for introducing sustainable procurement (2/2)						
No.	Description	Degree of Maturity*	Testimonial, proof				
3	Designing sustainable procurement processes						
3.1	Deriving measures for sustainable procurement  • Based on priorities and key areas for action						
3.2	<ul> <li>Integration of sustainability aspects into procurement processes and systems</li> <li>Supplier management processes (e.g., supplier selection, supplier evaluation)</li> <li>Tendering processes (e.g., consideration in award decisions)</li> <li>Other strategic, tactical, and operational procurement processes</li> </ul>						
4	Measuring success						
4.1	Definition of relevant key performance indicators for sustainable procurement  • e.g., key figures such as the proportion of suppliers who accept the code of conduct, the proportion of suppliers assessed according to sustainability criteria						
4.2	Measuring progress and target achievement  • e.g., using controlling instruments such as the Sustainable Balanced Scorecard						
4.3	Communication and reporting on sustainable procurement activities  Internal and external communication as part of stakeholder dialogue; reporting as part of sustainability reporting						

<sup>\*</sup> Four rating levels: 1 = very low 2 = relatively low 3= relatively high 4 = very high

#### Fit for Sustainable Supply Chain in Europe







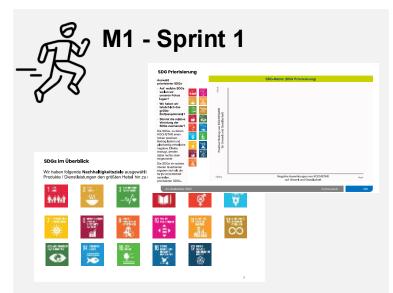






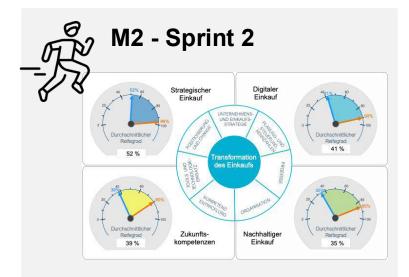
#### SDGs, Readiness Check and Impact Analysis





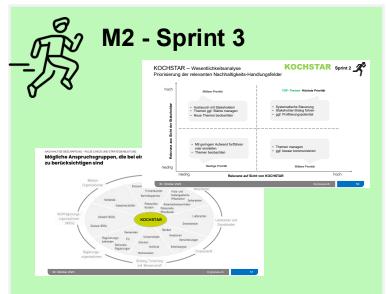
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- The Readiness Check makes it possible for the first time to measure the maturity of digital and sustainable purchasing together.
- In a short time, you will receive an overview of all potential issues and important success drivers that make your purchasing resilient and futureproof.



#### Impact analysis

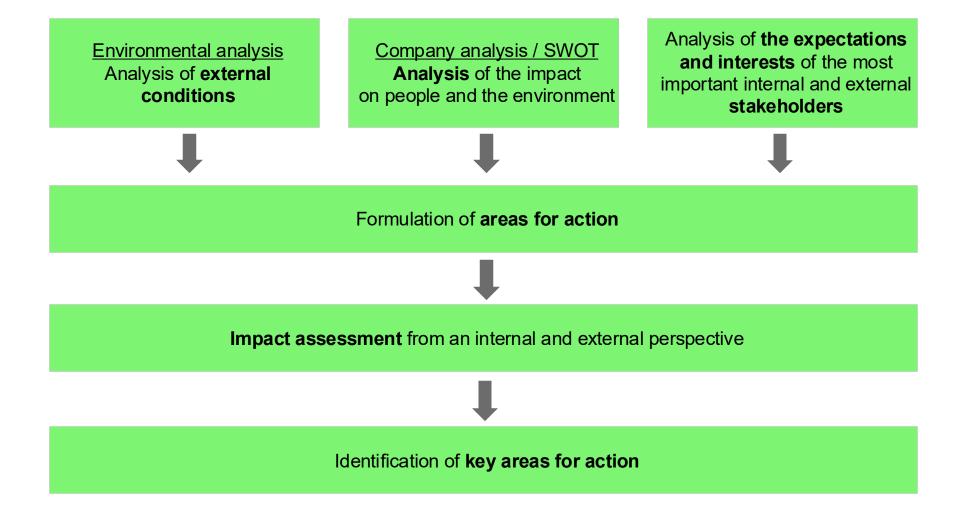
- Identify direct and indirect environmental and sustainability aspects as well as opportunities and risks from a company perspective
- 2. Identify the relevant stakeholder groups of companies
- 3. Identify relevant topics, opportunities, and risks from
- 4. Entry of the results in a materiality matrix



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# Process steps for identifying key areas for action





Identification of stakeholders

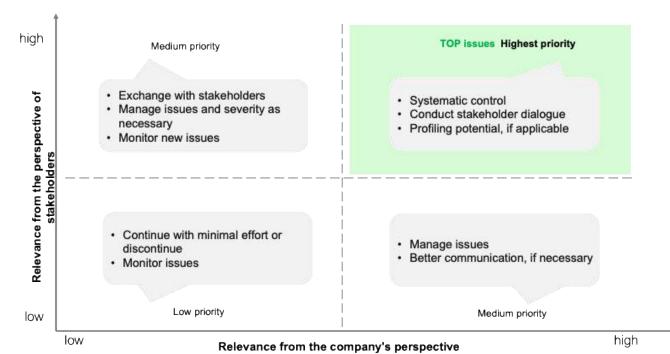
Relevant areas of action for stakeholders

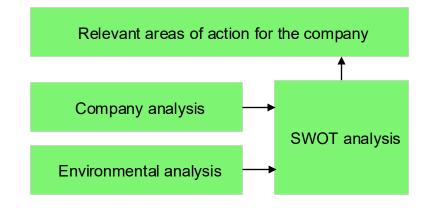
Stakeholder expectations

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### **Steps**

- Step 1: Identification of direct and indirect environmental and sustainability aspects as well as opportunities and risks from the company's perspective
- Step 2: Identification of relevant stakeholders
- Step 3: Identification of relevant topics, opportunities, and risks from the perspective of stakeholders (external stakeholder analysis)
- > Step 4: Enter the results in an **impact matrix**





# Impact analysis – COMPANY perspective (inside-out)

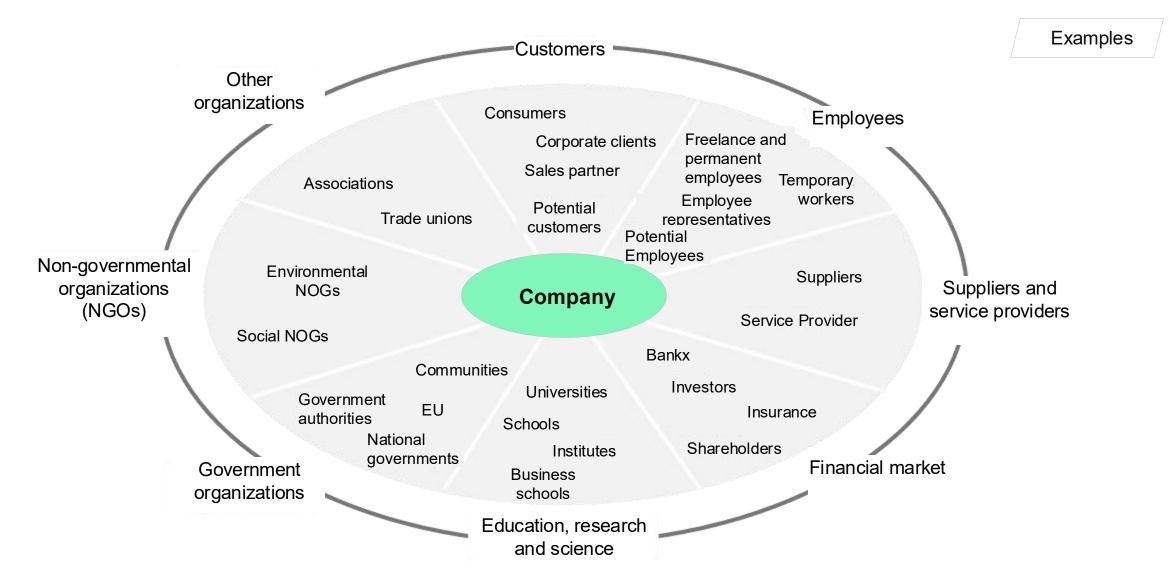


Corporate goals (including SDGs)	Opportunities and risks	Relevant sustainability action areas from a corporate perspective

# AATE - PERFORM GROW

# Potential stakeholders to be considered in a impact (materiality) analysis





## Potential stakeholders to be considered in an impact analysis



The following groups should typically be considered:

- Internal stakeholders: e.g., employees, management, board members. <u>Conservice</u> ESG+2mohawkind.com+2
- External stakeholders: e.g., customers/consumers, suppliers, investors/shareholders. Cisco+1
- Regulatory/Policy-makers: e.g., government agencies, regulators. <a href="stern.nyu.edu+1">stern.nyu.edu+1</a>
- Community & society: e.g., local communities, NGOs, advocacy groups. <a href="mailto:speeki.com+1">speeki.com+1</a>
- Industry/Trade partners: e.g., industry associations, business partners, service providers.
   Conservice ESG
- Suppliers in the value chain: e.g., upstream suppliers, contractors. <u>BDO</u>



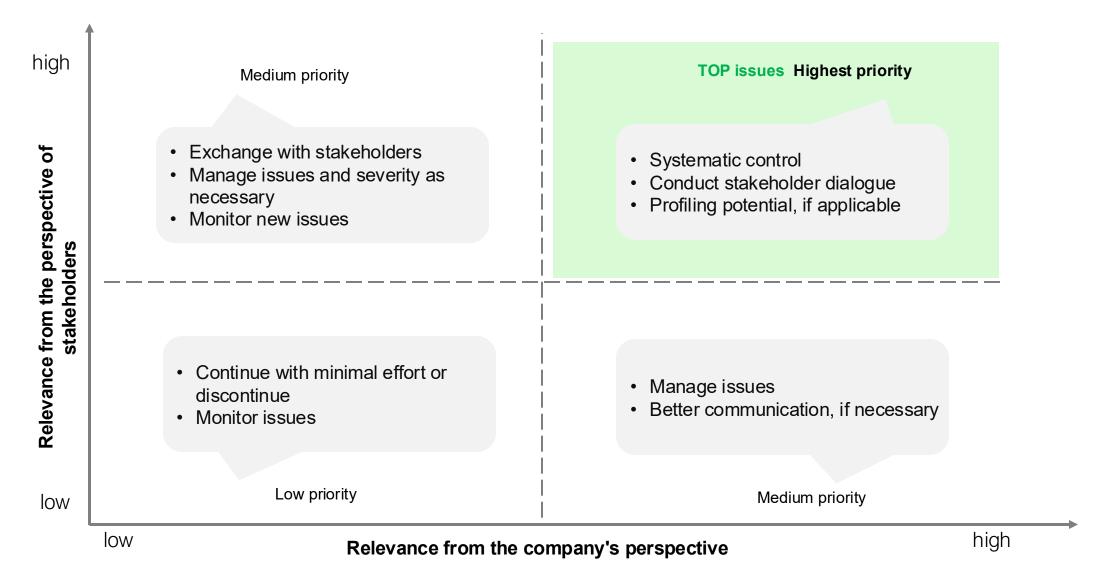
# Impact analysis – STAKEHOLDER perspective (outside-in)



Stakeholders (Stakeholders)	Expectations	Relevant sustainability action areas from the perspective of stakeholders
•••	•••	

# **Materiality analysis**

# Prioritization of relevant sustainability action areas



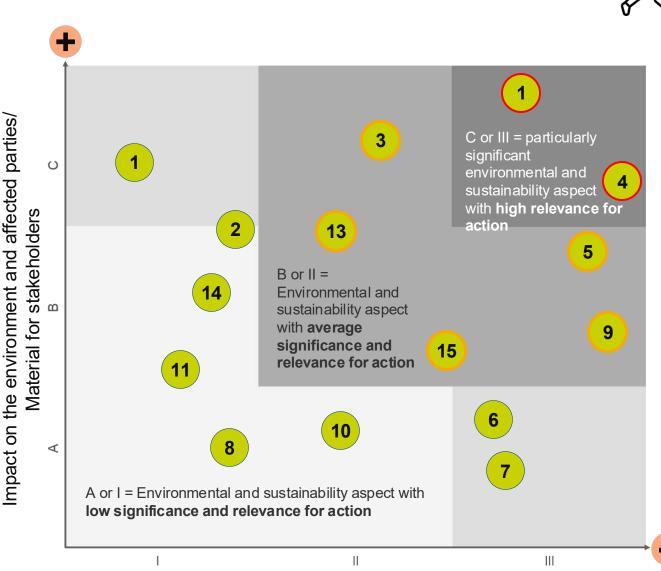
# **Materiality analysis**



# Examples of key sustainability issues and areas for action

(Assessment was carried out for illustrative purposes and does not necessarily reflect real situations or assessments)

- 1. Respect for property rights
- 2. Compliance with human rights by suppliers
- 3. Mitigation of climate change
- 4. Good working conditions and social protection
- 5. Prevention of biodiversity loss
- 6. Adaptation to climate change
- 7. Increasing resource efficiency
- 8. Fair competition
- 9. Dealing with local communities
- 10. Water consumption
- 11. Equal opportunities and non-discrimination
- 12. Prohibition of child and forced labor
- 13. Compliance with labor rights by suppliers
- 14. Avoidance of hazardous substances
- 15. Anti-corruption



# Materiality analysis of the ACS Group





### MATERIALITY MATRIX

- In accordance with the principles of the GRI Standards for determining the content of the 2021 Integrated Report, the ACS Group conducted a materiality analysis to identify the relevant topics.
- In this context, the materiality analysis was used as a starting point for the ACS Group's strategic considerations on sustainability (Sustainability Master Plan 2025).



- Ethics and compliance
- Occupational health and safety in employees and contractors
- Olimate Change: Transition to a Low-Carbon Business Model
- 4 Risk and opportunity management
- 6 Good corporate governance
- 6 Strategy and governance in sustainability
- Environmental management and biodiversity protection
- Equality, diversity and non-discrimination
- 9 Respect for human rights
- O Quality employment and fair pay
- 1 Transparency and dialogue with stakeholders
- Pinancial solvency and value generation for shareholders and investors
- Sustainable and resilient infrastructures
- 1 Investment and sustainable financing
- Customer orientation and quality
- 1 Talent attraction and professional development
- 1 Local development and community impact
- 18 Responsible supply chain management
- Circularity in the supply of raw materials and waste management
- 20 Innovation and Technology
- Water management
  - ENVIRONMENTAL DIMENSIONSOCIAL DIMENSION
- GOVERNANCE DIMENSION

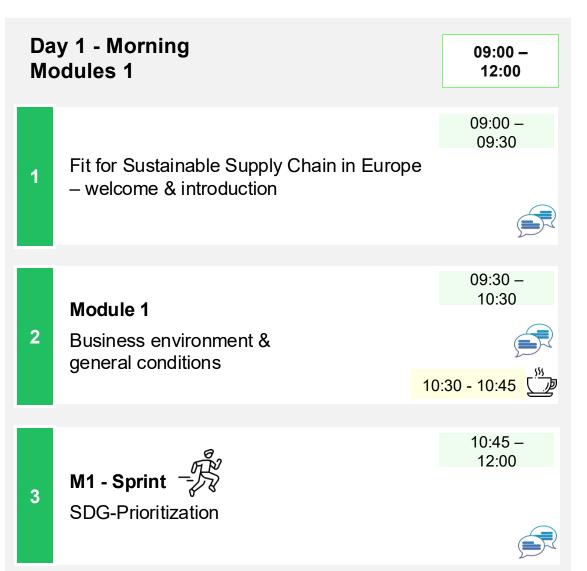
HIGH PRIORITYMEDIUM PRIORITYLOW PRIORITY

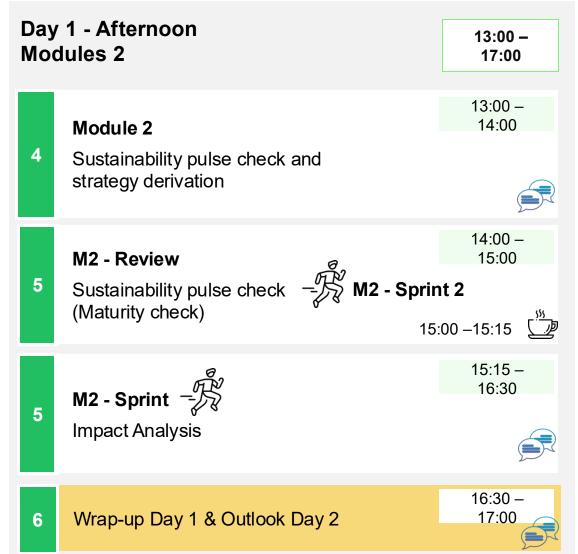
Grupo ACS is a publicly traded Spanish construction group based in Madrid. ACS is one of the largest construction companies in Europe.



## Fit for Sustainable Supply Chain in Europe















# Wrap-up Reflection

Questions?

Comments?







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