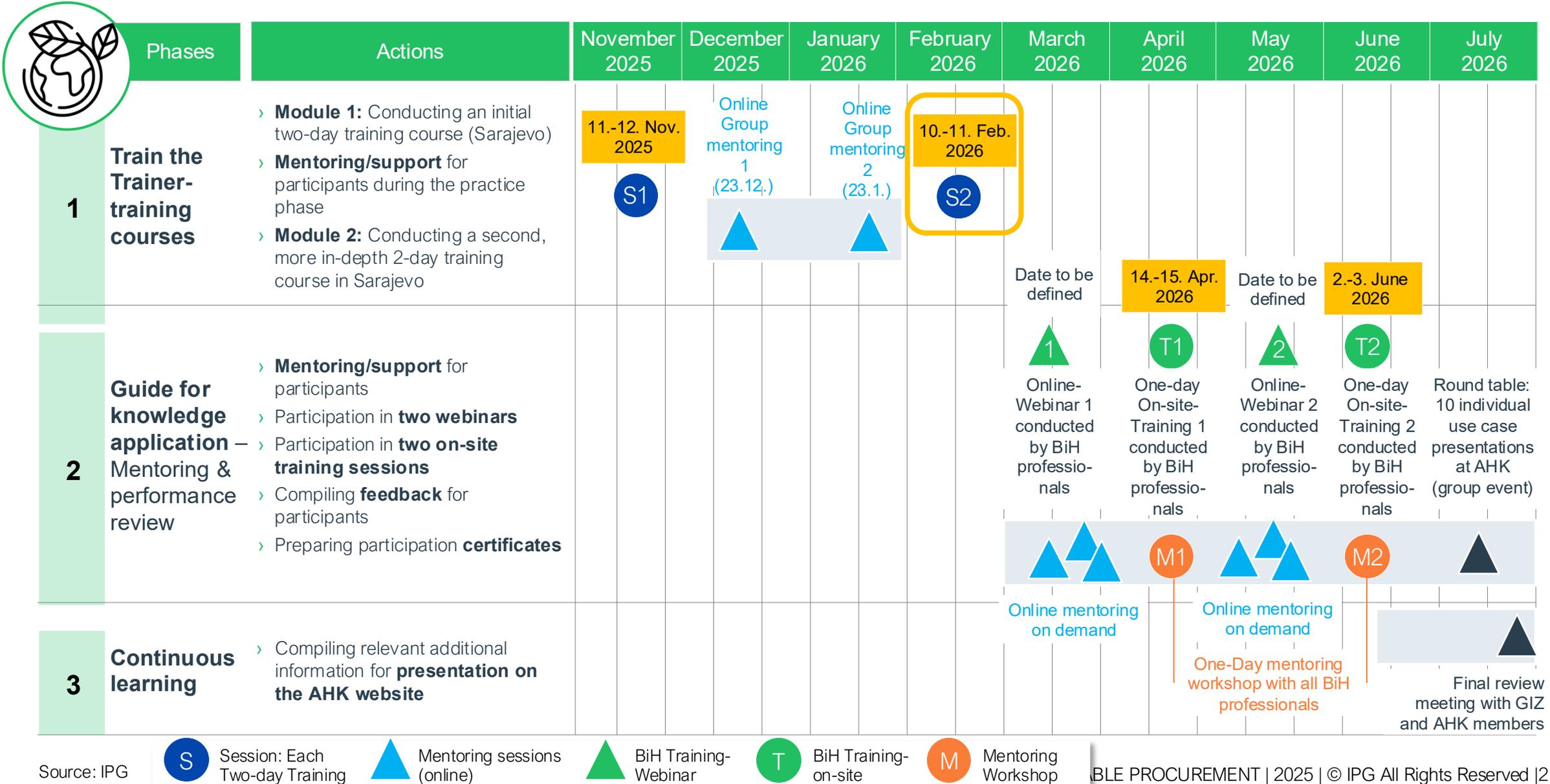




Fit for Sustainable Supply Chain in Europe

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

Timing | Trainings will be conducted in Nov. 25 (S1) and Feb. 26 (S2) – one-day mentoring workshops planned for April 26 and June 26



Source: IPG

S Session: Each Two-day Training
 ▲ Mentoring sessions (online)
 ▲ BiH Training-Webinar
 T BiH Training-on-site
 M Mentoring Workshop

Training focus | Module overview per session 1 and 2

S1

Session 1

11.-12. Nov. 2025

M1

Business environment & general conditions

M2

Sustainability pulse check and strategy derivation

M3

Sustainability category group analysis

M4

Sustainability supplier analysis

S2

Session 2

10.-11. Feb. 2026

M5

Sustainability supply chain analysis

M6

Digital (AI-)Tool Guide

M7

Transformation roadmap and Benefit / Value monitoring

M1-7

Recap Session

Session 1:
Masterclass "Sustainable Procurement"

M1	Business environment & framework conditions › Climate change, ecological footprint, Supply Chain Due Diligence Act in Germany, EU Supply Chain Act, Swiss Responsible Business Initiative, science-based targets
M2	SUS Pulse Check and strategy derivation in purchasing › Integrating sustainability into the purchasing strategy
M3	SUS product group analysis › Sustainability in product group management
M4	SUS Supplier analysis › Sustainability in supplier management: 1. Supplier evaluation 2. Supplier development

Session 2
Masterclass "Sustainable Procurement"

M5	SUS supply chain analysis › Sustainability throughout the supply chain
M6	SUS Tool Guide › Digital solutions for sustainability in purchasing and supply chain management.
N7	SUS Transformation management in procurement › Development of a sustainability program › Sustainability measurement (Sustainable Balanced Scorecard)

1. Structure of our presentation.

We went through some tools during masterclass but in Sprint materials there are addition tools. What content is required for the final presentation?



M1 - Sprint 1

Sustainable Development Goals (SDG)

1. 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?



M1 Business environment & general conditions

M2 - Sprint 2

Sustainability Readiness Check for Procurement

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



M2 Sustainability pulse check and strategy derivation

M2 - Sprint 3

Impact analysis

1. 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



M2 Sustainability pulse check and strategy derivation

M3 - Sprint 1/2

Material criticality assessment

1. Which materials contribute most to CO₂ emissions, energy consumption, resource scarcity and all relevant sustainability focus areas defined (1-9)
2. Plot material groups into the Material Risk Matrix
3. Derive appropriate mitigation measures for each material group



M3 Sustainability category group analysis

M3 - Sprint 2/2

Category optimization levers for sustainability

1. Which category group levers for sustainability do you consider most suitable for your category group?
2. Which top three levers would you prioritize?
3. What other stakeholders do you need to implement the top three levers?
4. What specific measures would you pursue for the top three levers?
5. What role does purchasing play in each case?



M3 Sustainability category group analysis

M4 - Sprint 3

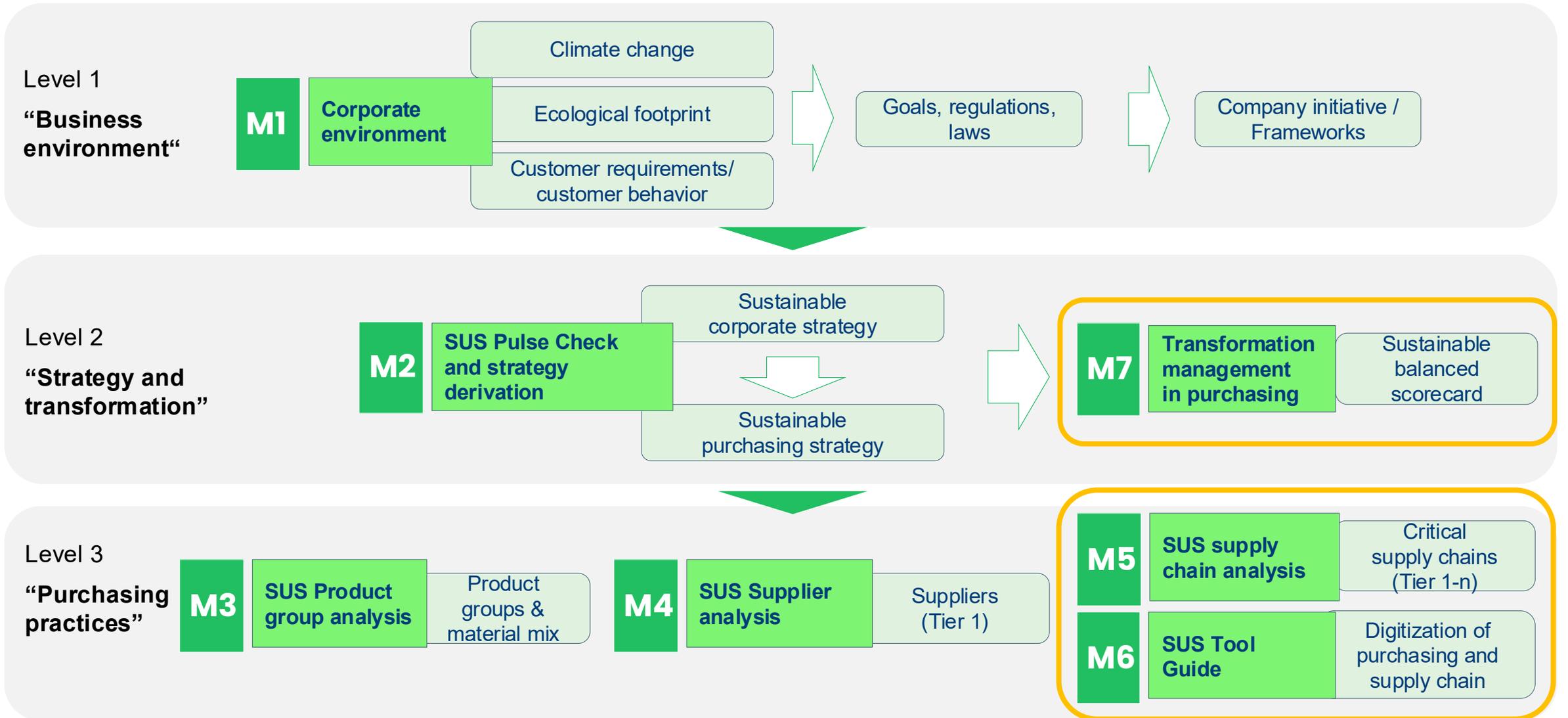
Supplier measures for sustainability

1. Which supplier measures for sustainability do you consider most suitable for your category group?
2. Which top 3 measures would you prioritize?
3. What other resources do you need to implement the top three measures?
4. What specific action plan do you intend to pursue for each of the top three measures?
5. What role does purchasing play in each case?



M4 Sustainability supplier analysis

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



**Tuesday, February 10th
Day 1 – Morning: Module 5**

09:00 – 12:00

1	Fit for Sustainable Supply Chain in Europe – welcome & introduction	09:00 – 09:15	
2	Module 5 - introduction SUS supply chain analysis – 5-phase methodology	09:15 – 10:45	
		10:45 - 11:00	
3	M5 - Sprint  SUS supply chain analysis – Team SaraCook & Team BosnaCool	11:00 – 12:00	

**Tuesday, February 10th
Day 1 – Afternoon: Module 6**

13:00 – 17:00

4	Module 5 - Sprint review Team Presentations – Team SaraCook & Team BosnaCool	13:00 – 13:45	
5	M6 - introduction ToolMap Taxonomy and Tool introduction	13:45 – 14:45	
		14:45 – 15:00	
6	M6 - Sprint  Tool prioritization & selection – Team SaraCook & Team BosnaCool	15:00 – 16:00	
7	M6 – Sprint review Team Presentations – Team SaraCook & Team BosnaCool Wrap-up Day 1 & Outlook Day 2	16:00 – 17:00	



Questions & comments



Coffee break



All times given are indicative and may vary.

**Wednesday, February 11th
Day 2 – Morning: Module 7**

9:00 - 12:00

- 1

Module 7

SUS Transformation Management for Sustainable Procurement

09:00 – 10:15

10:15 - 10:30 
- 2

M7 - Sprint 

Draft SUS Transformation RoadMap – Team SaraCook & Team BosnaCool

10:30 – 11:30
- 3

M7 – Sprint review

Team Presentations – Team SaraCook & Team BosnaCool

11:30 – 12:00

**Wednesday, February 11th
Day 2 – Afternoon: Recap M1 – M7**

13:00 – 15:00

- 4

Recap Modules 1 - 7

Clarify questions and open topics

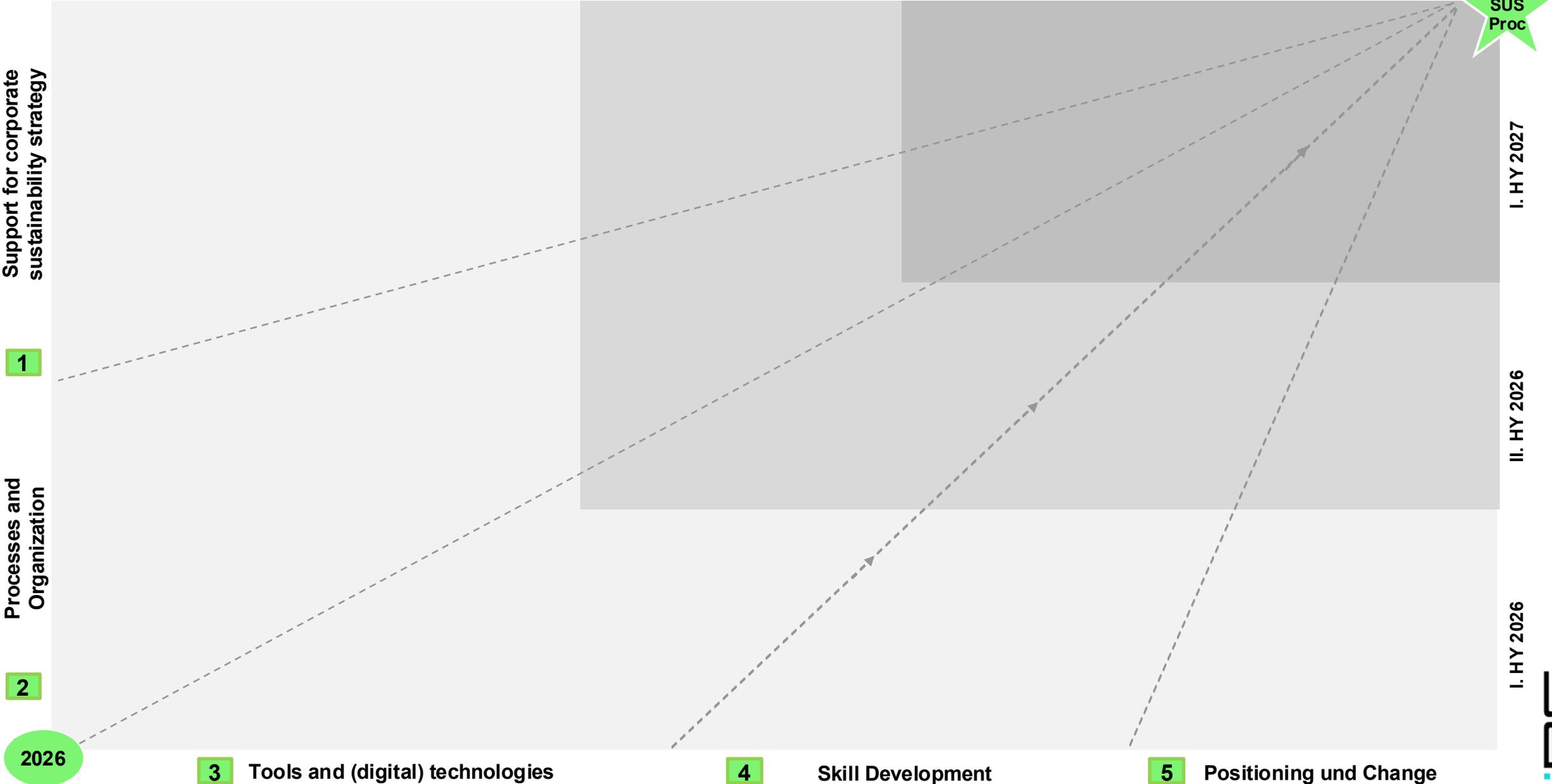
13:00 – 14:30
- 6

Outlook

March – July 2026:
Mentoring sessions
Online-Webinars conducted by BiH professionals
On-site-Trainings conducted by BiH professionals

14:30 – 15:00

Strategy derivation - Derive necessary sustainability measures in the procurement roadmap



CONTENTS INTENDED FOR IPG MASTERCLASS PARTICIPANTS



Team 1 «SaraCook»

	Name	Last Name	
1	Semir	Bjelak	
2	Haris	Ohran	
3	Elvir	Ćatić	
4	Merima	Osmić	
5	Nerma	Salihović	 Delegation der Deutschen Wirtschaft in Bosnien und Herzegowina Predstavništvo njemačke privrede u Bosni i Hercegovini

Team 2 «BosnaCool»

	Name	Last Name	
1	Enis	Brigić	
2	Esad	Lemes	
3	Kenan	Starčević	
4	Zijah	Jelkić	
5	Amina	Koljić-Hujić	

IPG Masterclass



Sustainable Procurement

G5 – NH Supply Chain Analysis

IPG PARTNERS GROUP

Tuesday, February 10th
Day 1 – Morning: Module 5

09:00 –
12:00

1 **Fit for Sustainable Supply Chain in Europe – welcome & introduction**

09:00 – 09:15



2 **Module 5 - introduction**
SUS supply chain analysis –
5-phase methodology

09:15 – 10:45

10:45 - 11:00 



3 **M5 - Sprint** 

SUS supply chain analysis –
Team SaraCook & Team BosnaCool

11:00 – 12:00



Tuesday, February 10th
Day 1 – Afternoon: Module 6

13:00 –
17:00

4 **Module 5 - Sprint review**

Team Presentations –
Team SaraCook & Team BosnaCool

13:00 – 13:45



5 **M6 - introduction**

ToolMap Taxonomy and Tool introduction

13:45 – 14:45

14:45 – 15:00 

6 **M6 - Sprint** 

Tool prioritization & selection –
Team SaraCook & Team BosnaCool

15:00 – 16:00



7 **M6 – Sprint review**

Team Presentations –
Team SaraCook & Team BosnaCool

16:00 – 17:00

Wrap-up Day 1 & Outlook Day 2




Questions & comments

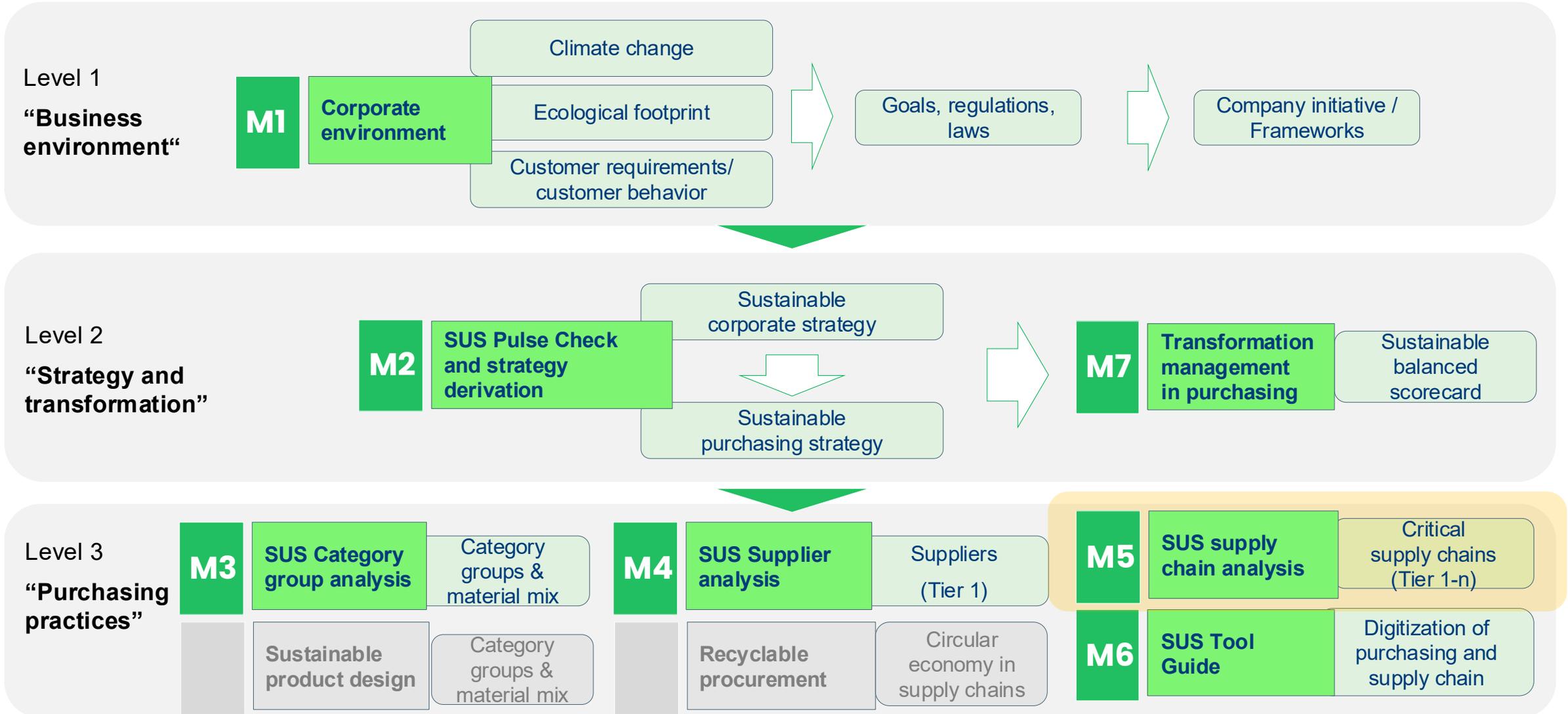


Coffee break



All times given are indicative and may vary.

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



Today's supply chain management in practice

Carsten Vollrath, IPG Partners Group

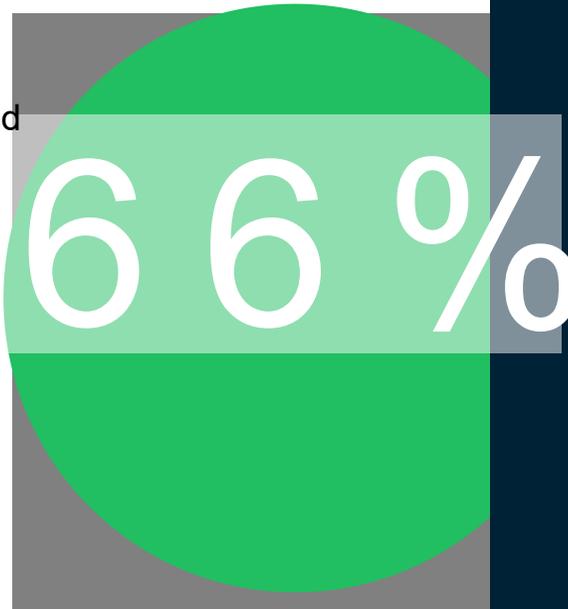
IPG-Masterclass

Sustainable Procurement

The LkSG in practice

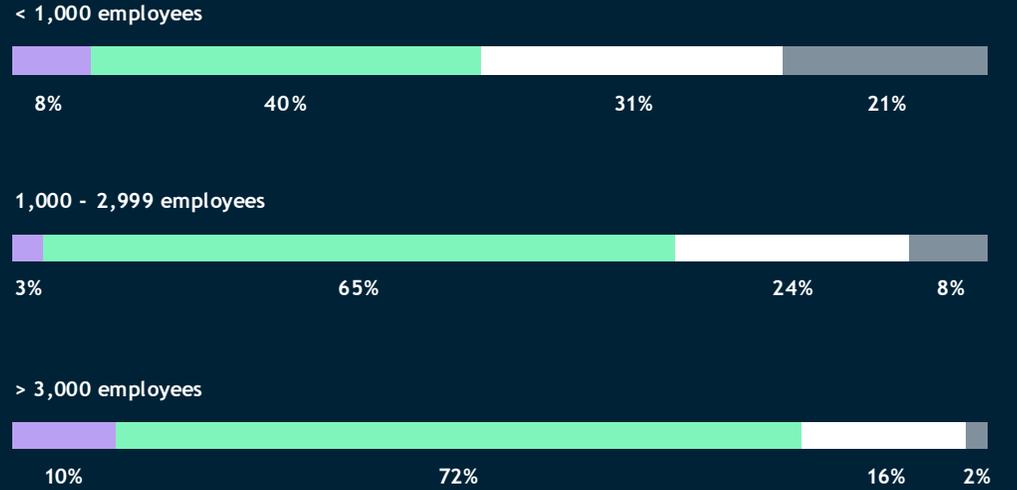
Two-thirds of companies see their supply chain as a key lever for greater sustainability

- On closer inspection, it becomes apparent that this **assessment** correlates **strongly with the size of the company** and the extent to which it is affected by the LkSG.
- Among large companies with more than 3,000 employees, **82%** attach (very) high importance to the supply chain
- For companies with between 1,000 and 3,000 employees, the proportion is still **68%**, while among smaller companies with fewer than 1,000 employees only **48%** share this view



5

What role does the supply chain play in your company's sustainability strategy (2023)?



of all survey participants measure the supply chain as (very) important for their sustainability strategy in (2022: 69%). There are significant differences depending on the size of the company.

- Most important role
- Significant role
- Small role
- Currently not yet Consideration

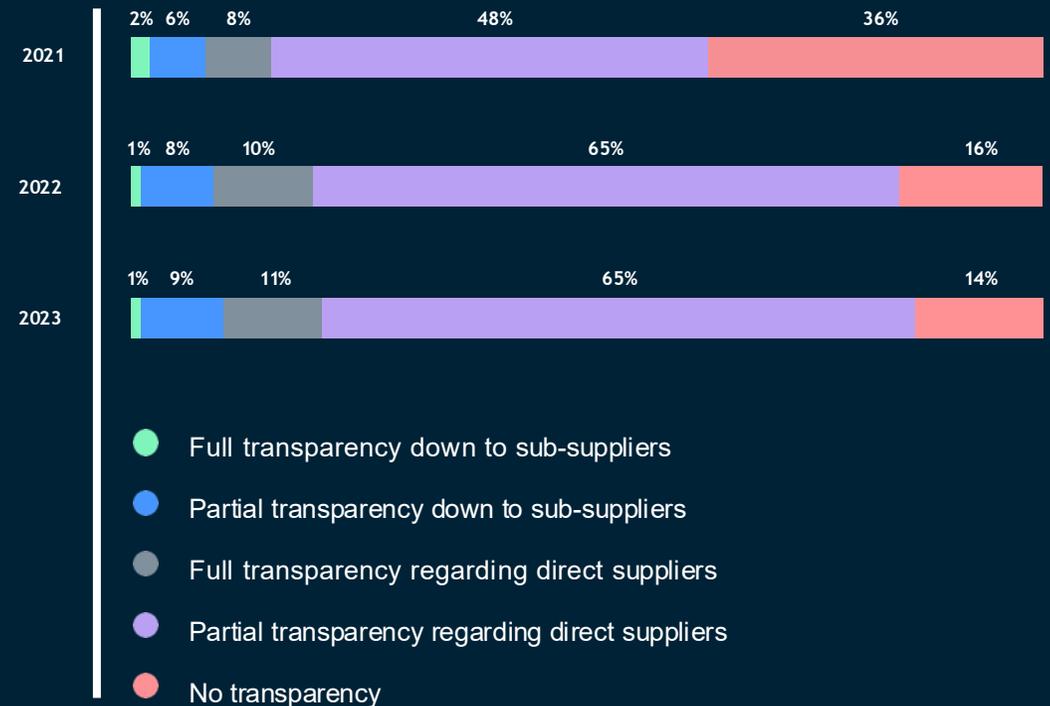
The LkSG in practice

High supply chain transparency and traceability facilitate the effective handling of due diligence obligations

- **Only 10% of companies have at least partial knowledge of their entire supply chain**, a minimal improvement over previous years. Given the often complex supply chain dynamics and unfavorable contractual relationships with suppliers, this is hardly surprising and therefore remains one of the biggest challenges.
- The picture is more positive among direct suppliers. While only 11% report complete visibility, 65% do have the necessary insights to some extent.
- However, it should be borne in mind that the **most significant sustainability risks**, e.g., in the area of forced and child labor or in the environmental sector, are **found at the lower levels of the supply chain** in many industries
- Accordingly, **comprehensive knowledge of indirect suppliers is a prerequisite for targeted risk identification and mitigation as well as holistic legal compliance**

12

How transparent is your supply chain with regard to sustainability risks?

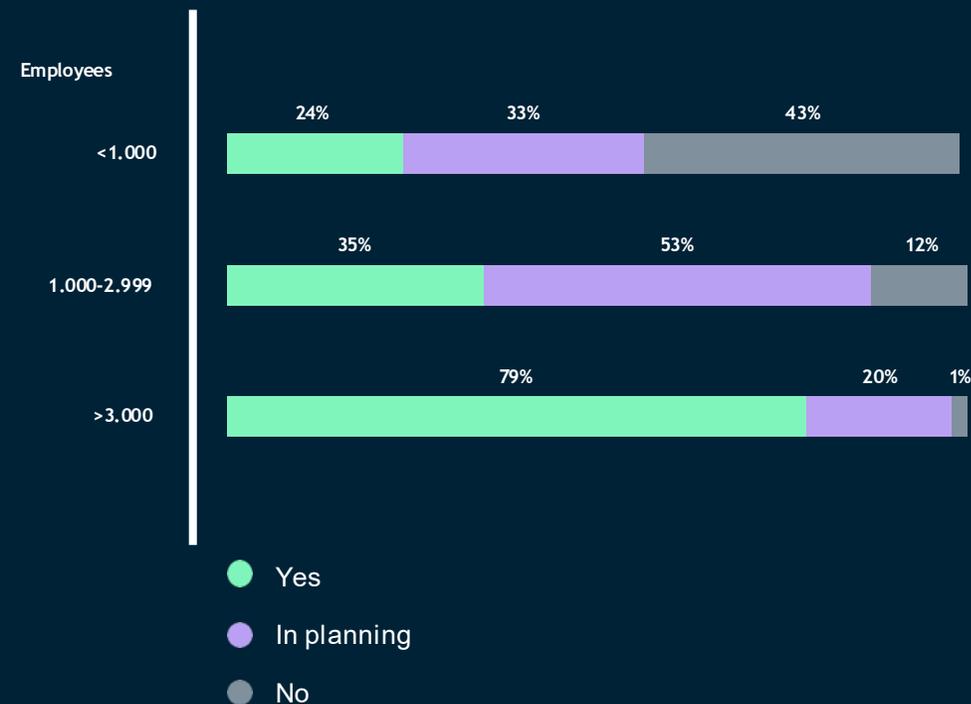


The LkSG in practice

Establishing a risk management system as a priority

- **79% of large companies have already implemented or are planning to implement a risk management system** to identify sustainability risks in their supply chain – a significant increase compared to the first study in 2021, when the figure was 57%.
- Unsurprisingly, almost **99% of companies affected by the LkSG since 2023** have implemented or planned risk management for supply chain screening.
- **At around 88% (including planning), the level of implementation is also well advanced among companies affected since 2024**, showing that they are preparing for the law at an early stage.
- In addition, **57% of SMEs are** specifically addressing the issue, although the majority of them are still in the planning phase.

Have you implemented a risk management system to identify sustainability risks in your supply chain (2023)?



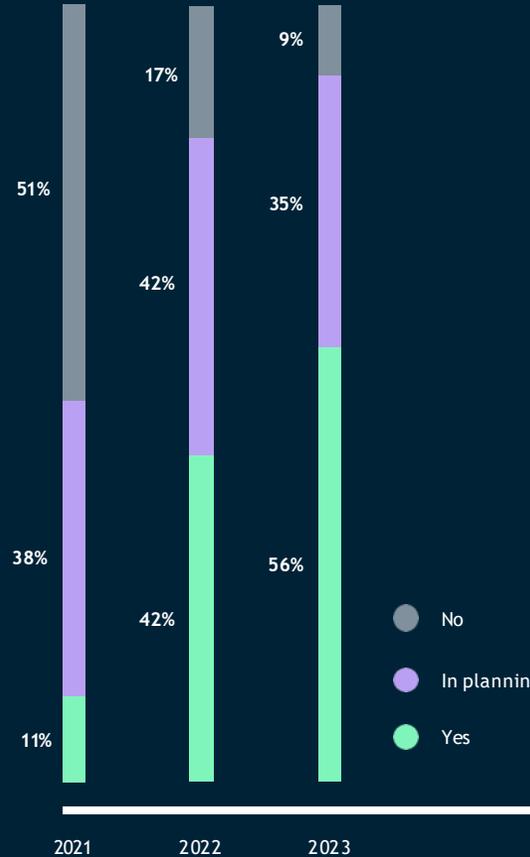
The LkSG in practice

Without the use of technological tools, sustainability risks in supply chains cannot be adequately mapped.

- **As a result, 91% of companies rely on technology (including planning), a significant increase from 49% in 2021.**
- This development reflects, among other things, the complexity of many supply chains and underscores that manual processes, such as the use of Excel, are no longer effective.
- Companies see the main advantages of technological approaches primarily in **increased efficiency and transparency.**

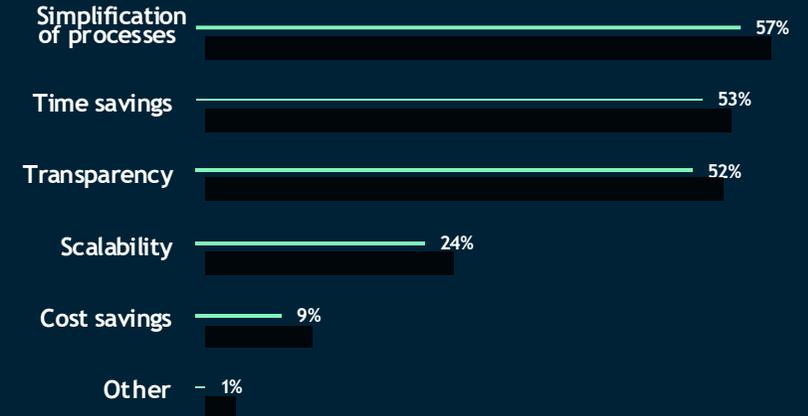
1

Do you use technology to identify and analyze sustainability risks in your supply chain (> 1,000 employees)?



11

What do you see as the main advantages of using technology (2023)? (Max. 2 answers)



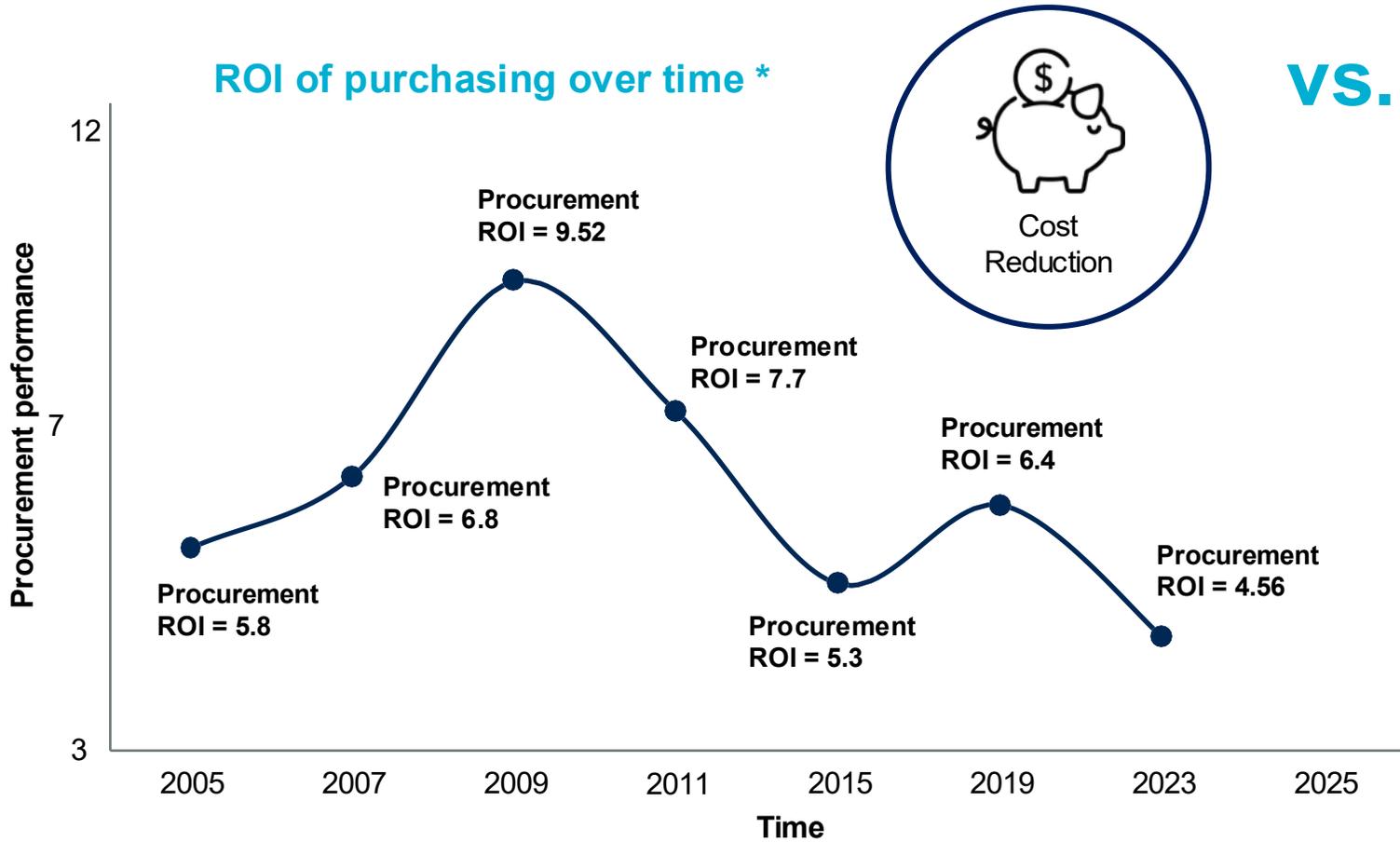
Importance of Sustainability Supply chain analysis

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Declining ROI and expanded priorities | Declining opportunities for cost savings are colliding with expanded priorities...



VS.

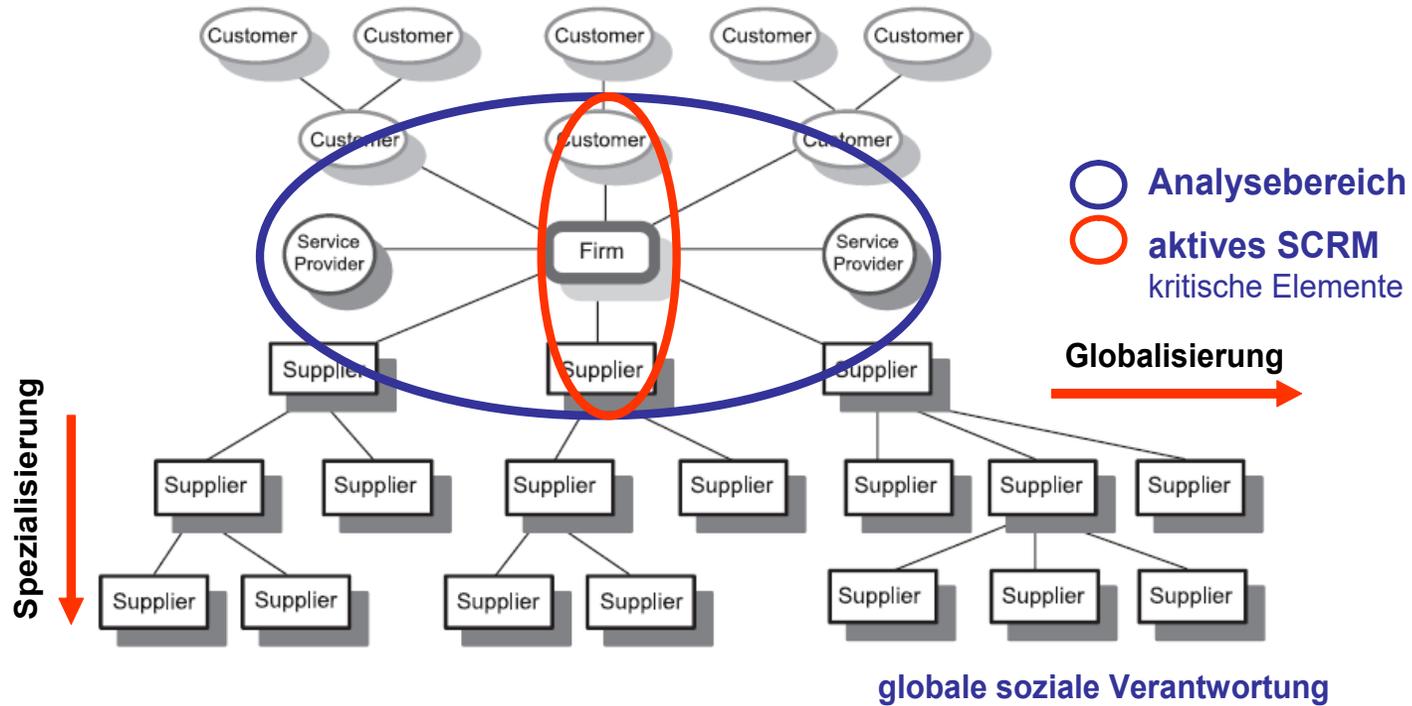


n = 61 (2005); 78 (2007); 63 (2009); 121 (2011), 69 (2015), 103 (2019), 101 (2023)

* The ROI of procurement is defined as the total savings achieved divided by the total budget for the function.

Scope of control is increasing | The supply chain or supply network is becoming the focus of risk assessment

Mapping a value creation system



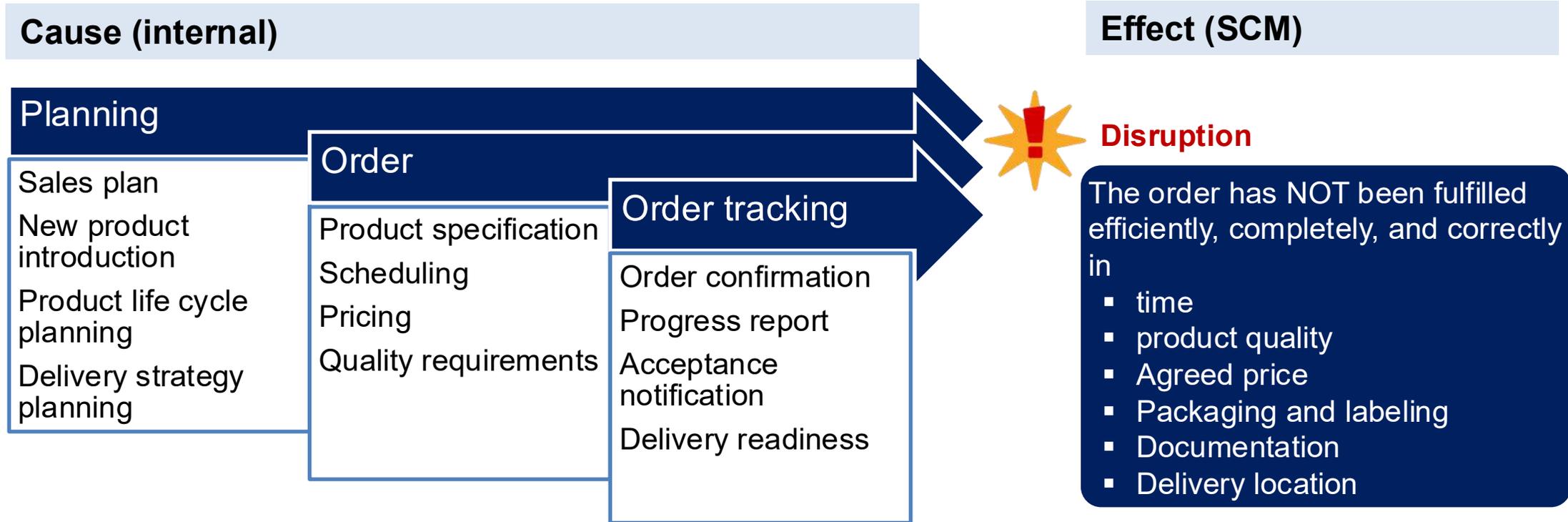
- **The scope of control is expanding** due to
 - 1. **Globalization** of business activities
 - 2. **Specialization** of companies through a focus on core competencies, and
 - 3. Use of new, advanced **technologies**
- With **regulatory changes** (including the EU Green Deal and supply chain due diligence legislation), the **extended supply chain** is increasingly coming into focus



Globalization of the supplier base and the specialization of suppliers increase the number of companies and markets that need to be continuously monitored

Consequence: The risks in the supply network increase significantly

Delivery disruptions are on the rise | The consequences of risks occurring in the supply chain cause serious disruptions to delivery, operations, and earnings



- **85%** of all companies report at least **1 delivery interruption** per year
- **13%** of all companies report more than **10 delivery interruptions** per year
- **3%** of all companies surveyed report more than **50 delivery interruptions** per year

If risks are identified early on, the consequences can be avoided or at least mitigated.
Example: OTIF ("On Time In Full") as a digital use case

Monetary effects of climate-related supply disruptions | Climate events act as a cost multiplier

Climate-related supply disruptions are no longer an exception – they are a recurring cost factor running into the billions

- **Frequency & types of impact (costs, revenue, productivity):** In a global survey of companies, **57%** reported that physical climate events had impacted their operations in the past year; among those affected, **54%** cited **higher costs**, **40%** cited **work/staff disruptions**, and **39%** cited **revenue losses**.
- **Transportation/logistics costs as an immediate lever:** Weather causes **~23% of all road delays in the US** and costs trucking companies **~\$2–3.5 billion per year** (including downtime, detours, contractual penalties).
- **Systemic bottleneck risks (hubs):** Disruptions at maritime chokepoints affect around **\$192 billion** in trade volume annually and lead to **~\$14 billion** in direct economic losses per year.
- **Macro effect on trade & supply chain costs:** The economic climate risk impact on global trade is estimated at **~\$81 billion**; when output/consumption effects are included, the estimate rises to **≥\$122 billion**.
- **Example from Europe (indirect supply chain/production losses):** For EU extremes in the summer of 2025, losses of **~€43 billion** are estimated for 2025 and **~€126 billion by 2029** (including indirect effects such as production losses/business disruption).
- **Direct operating costs in companies:** According to BCG, large companies* bear **an average of ~\$182 million per year** in costs due to climate-related supply chain disruptions (e.g., outages, rerouting, downtime; reputation consequences not included).

* Global, multinational, and publicly traded companies with **high value streams and market presence** with **complex, globally distributed supply chains**, industries with high operational and supply chain pressure (manufacturing, technology, FMCG, etc.)

Negative effects lack transparency | The effects of supply disruptions are often underestimated because there is no cross-functional perspective



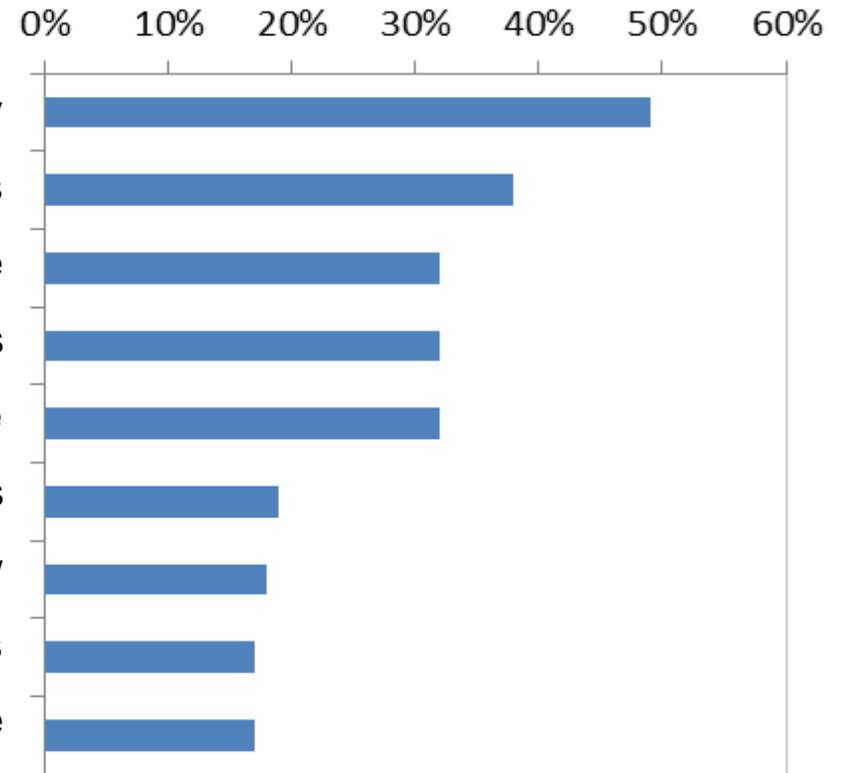
Disruption ————— **means**

The order is NOT fulfilled efficiently, completely, and correctly in

- time
- product quality
- Agreed price
- Packaging and labeling
- Documentation
- Delivery location

17% of companies state that the cost of the largest single disruption exceeded €1 million

Consequences of a supply disruption in %



Sustainable procurement can use this cross-functional perspective to sharpen its own "business & benefit" case

Monetary effects of climate-related supply disruptions | Supply disruptions not only cause transport costs to skyrocket—the greatest effects arise from downtime, capital commitment, and lost revenue

Typical supply chain disruption cost blocks (aggregated empirical values from studies and practice)

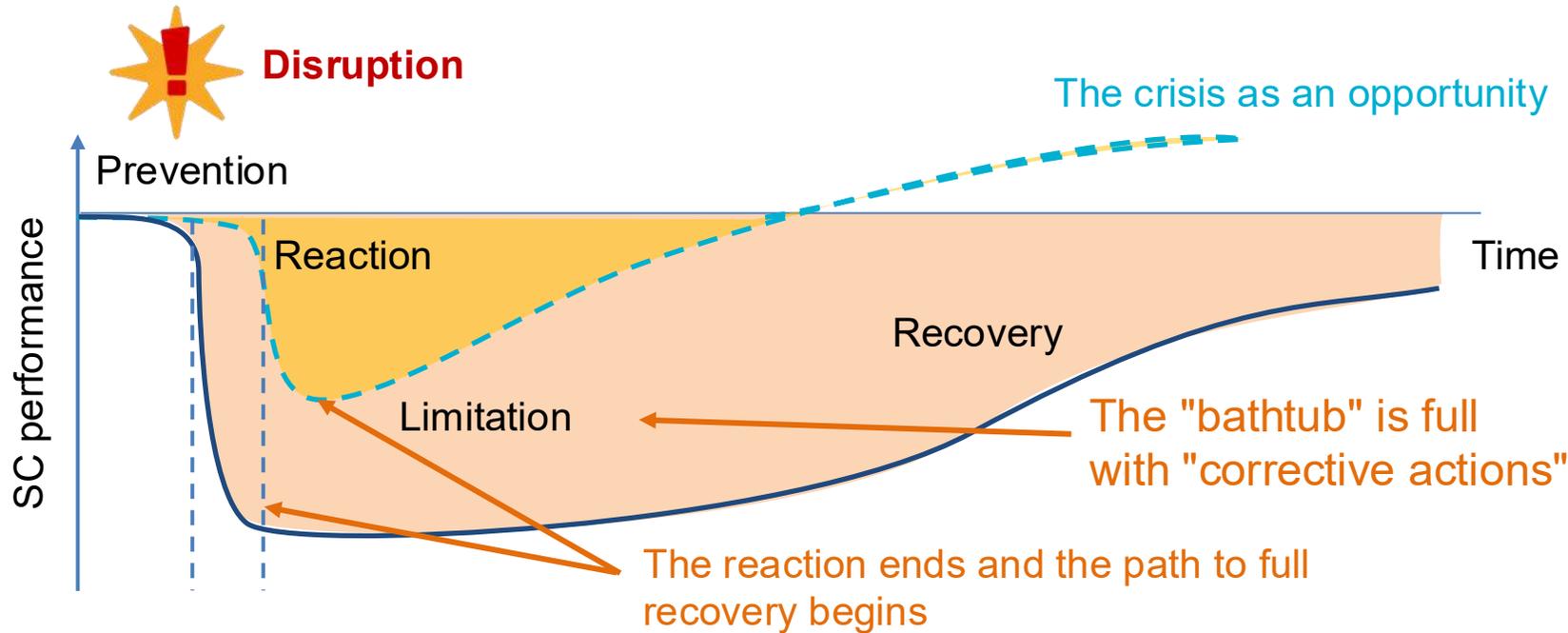
- 1. Transportation and expediting costs (~25%)**
Express freight, rerouting, spot market prices, alternative modes of transport.
- 2. Production downtime (~20%)**
Line stoppages, underutilization, inefficient restarts.
- 3. Inventory & working capital costs (~18%)**
Safety stocks, obsolescence, tied-up liquidity.
- 4. Contract penalties & SLA violations (~12%)**
Penalties, failure to meet delivery commitments.
- 5. Loss of revenue (~15%)**
Delivery failures, lost orders, delayed market launches.
- 6. Loss of reputation & market share (~10%)**
Customer churn, loss of trust (often with long-term effects).

Business Case | What is the value of a Sustainable & Resilient Supply Chain for your company? Executive Perspective

Cost/benefit levers	Without investment (reactive)	With sustainable & resilient orientation (preventive & corrective actions)
Transport & Expedite Costs	High spot market prices, express freight, rerouting	More stable routes, lower volatility, predictable costs
Production & Operations	Production downtime, inefficient restarts	Greater supply security, stable production planning
Inventories & working capital	High safety stocks, capital commitment, obsolescence	Optimized inventories, lower capital commitment
Sales & market share	Delivery failures, delayed market launches, customer losses	High delivery reliability, stronger customer loyalty
Reputation & financing	Reputation risks, higher capital costs, ESG discounts	Better access to capital markets, investor confidence
Overall effect	Recurring, unplanned additional costs	More stable cash flows, positive ROI

Sustainable supply chains are not a cost factor, but rather insurance against recurring losses amounting to millions or billions

Expensive recovery phases | An unexpected occurrence of risks in the supply network leads to significant performance losses, often with long and expensive recovery phases



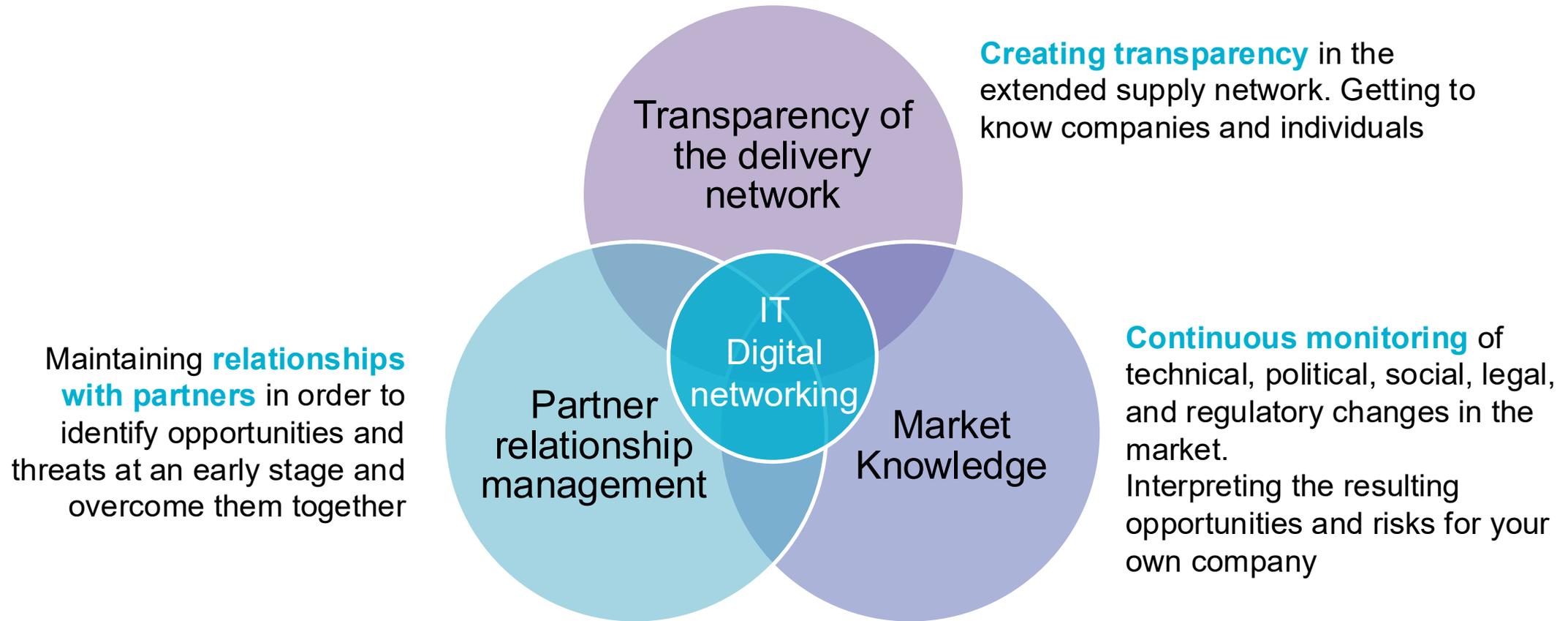
Long-term remaining difference:

- Customer loss,
- creditworthiness
- ...

"Corrective actions" means:

Sustainable procurement can greatly influence the depth and length of the "bathtub" through a resilient network design, proactive risk management, and an early warning system

Four cornerstones of an early warning system | The early warning system requires an integrated system of high transparency, good market knowledge, relationship management, and IT



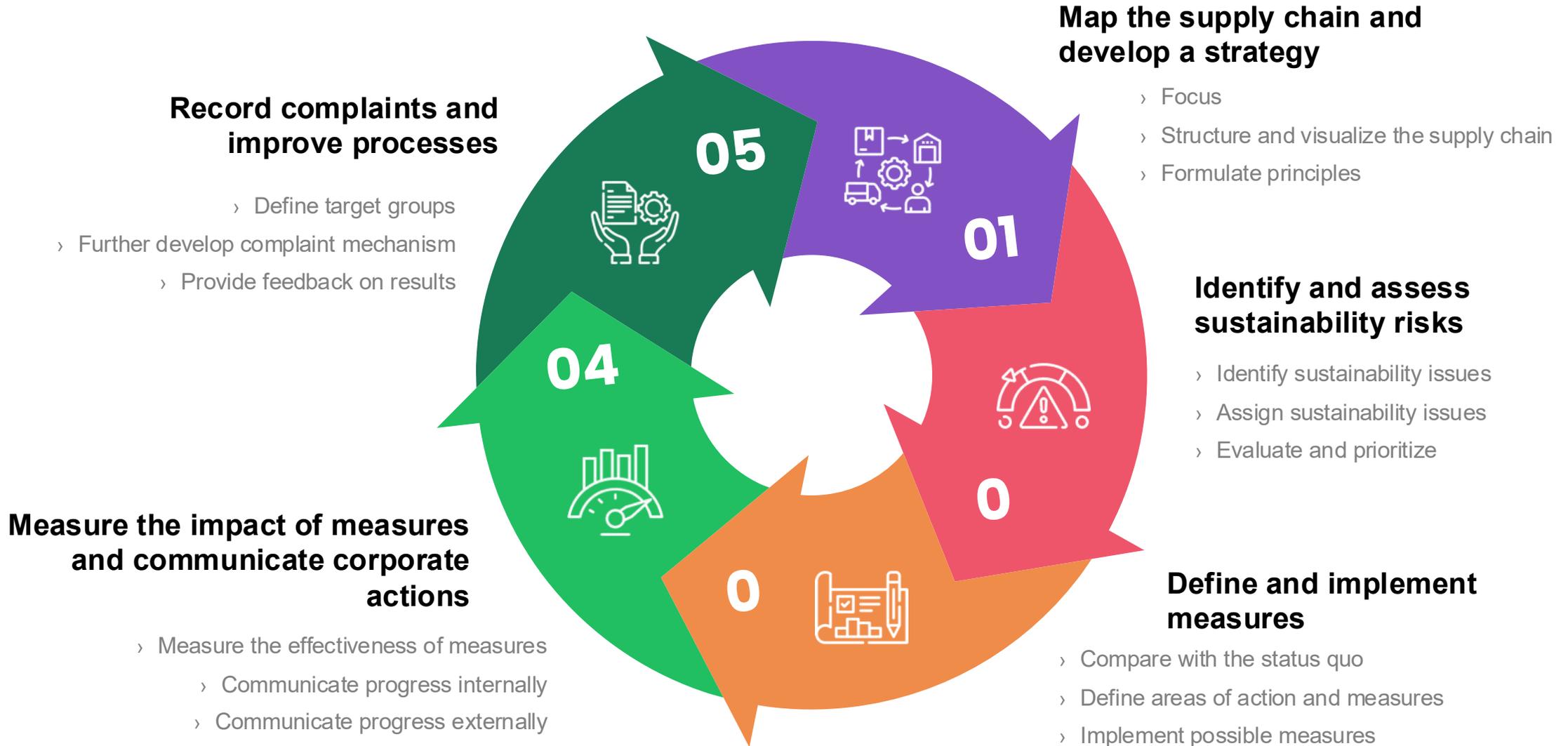
Sustainability Supply chain analysis Phase model

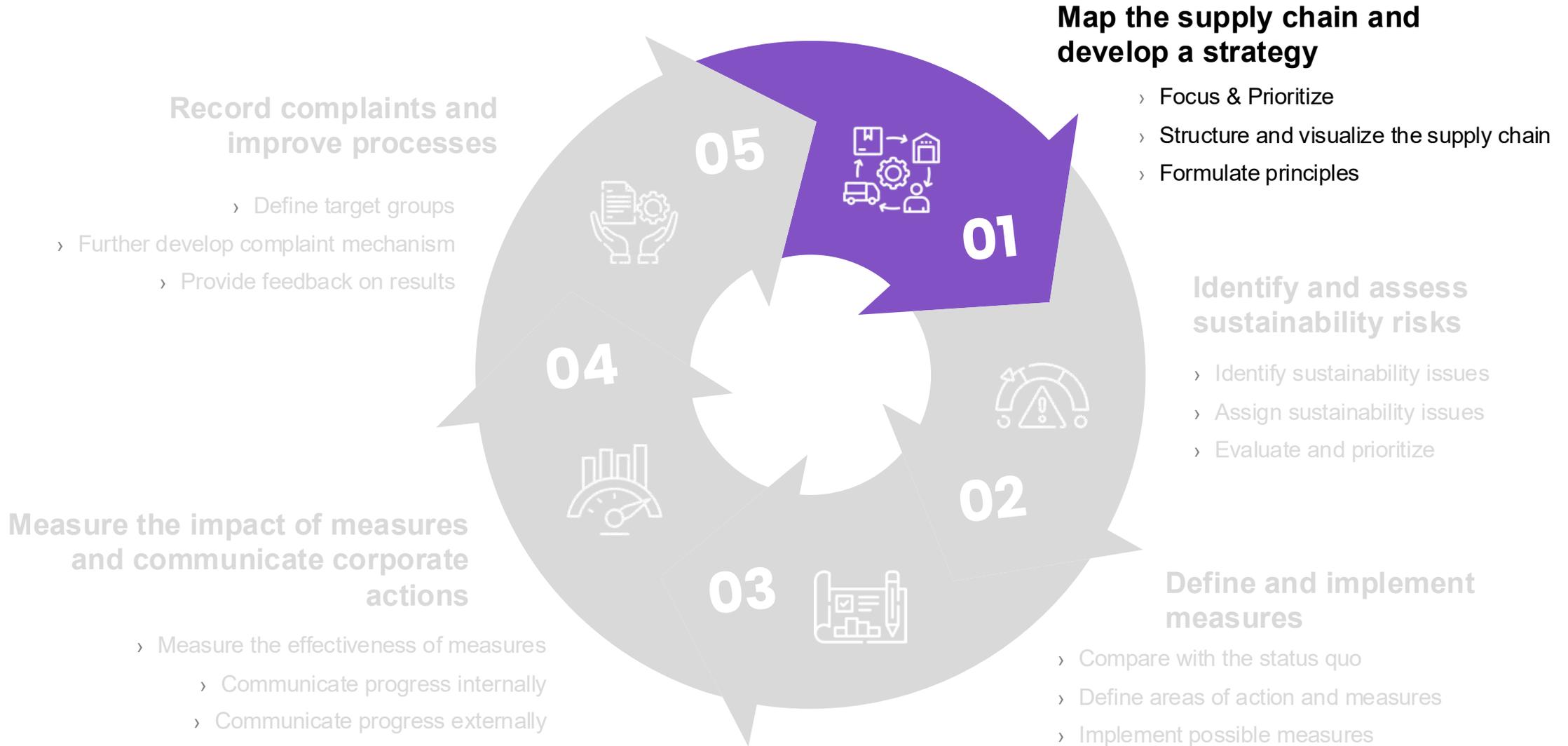
Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Overview of the five phases of supply chain analysis as a continuous improvement process





Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Objectives of the process phase

The company obtains an **overview of the supply chain** – ideally from the level of **direct suppliers to the level of raw material extraction**.

The company collects **information on the supply chain structure and processes** required to identify key sustainability issues.

Prerequisites

Data on the purchase volumes of the materials and/or intermediate products procured is just as helpful for the successful implementation of this process step as further **information on direct and sub-suppliers** (activities/processes, locations).

Results

- **Mapping of the supply chain**, including various supply chain stages, activities/processes in the individual stages, and their locations
- If relevant: **Focusing the supply chain based on important product groups (or similar)**
- Public commitment by the company (or its management) to respect human rights and protect the environment along the supply chain

Modules

1.1 Focus

Especially for companies with a large number of products (or services), it makes sense **to focus on a sub-area of the supply chain** at the beginning – for example, on **important product groups**.

1.2 Structure and visualize the supply chain

In order to bundle and consolidate basic information, it makes **sense to visualize the supply chain**.

This provides the **basis for the subsequent steps** and enables an exchange with employees to identify key sustainability issues and areas for action.

1.3 Formulate principles

In order to clearly communicate its commitment both internally and externally and **to formulate a level of ambition**, the company should formulate or revise **its corporate principles**.



Getting started: Focus on purchased products/materials for a more in-depth analysis

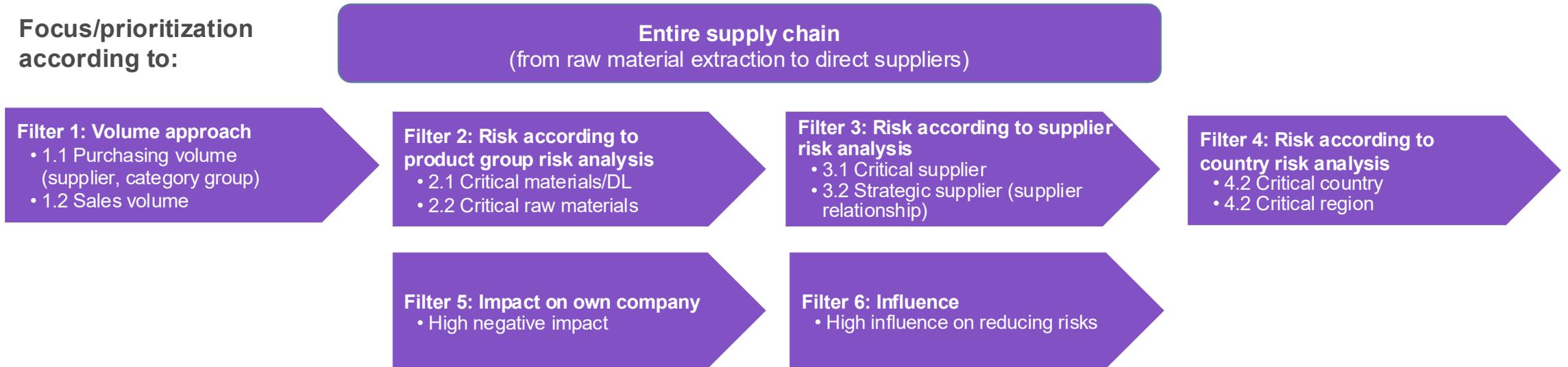
Obtaining data for structuring and visualizing the supply chain can be challenging and time-consuming, especially if the company has a large number of products and/or suppliers.

It is then important to **find a sensible starting point** that helps reduce complexity before tackling the topic of "sustainable supply chain" for the first time. the topic of "sustainable supply chains."

Depending on the industry/company size, **you can focus or prioritize using filter criteria:**

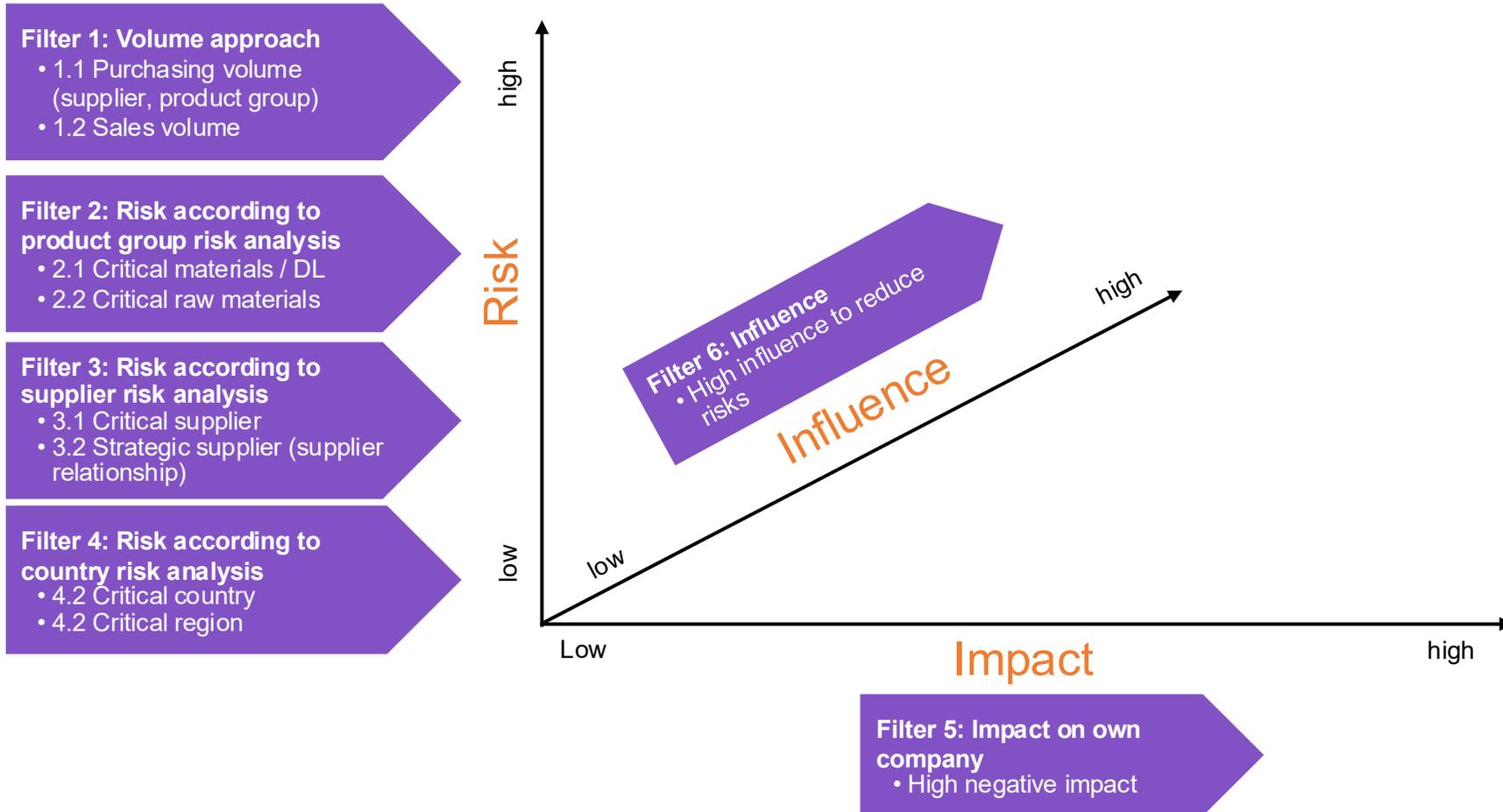
- based on **purchasing volume (filter 1.1)** or **product sales volume (filter 1.2)**
- Focusing on specific **raw materials** may (additionally) be useful if many similar products are manufactured.
- Focus on **critical category groups (filter 2.1)**, **critical materials and services (filter 2.2)**, and/or **critical suppliers (filter 3.1)**, **strategically important suppliers (filter 3.2)**, and/or **critical countries (filter 4.1)** and **regions (4.2)**

Focus/prioritization according to:





Introduction: Focus on purchased products/materials for in-depth analysis



- Implement
- Phase 1**
- Phase 2
- Phase 3
- Phase 4
- Phase 5

Supply chain matrix

raw material	Raw material extraction (Tier 5)	Further processing (Tier 4)	Production of intermediate products (Tier 3)	Pre-manufacturing (Tier 2)	Direct suppliers (Tier 1)	Factory gate

1. Structure and visualize the supply chain

Example: Food industry (jam manufacturer)*

	Raw material extraction (Tier 5)	Further processing (Tier 4)	Production of intermediate products (Tier 3)	Pre-manufacturing (Tier 2)	Direct suppliers (Tier 1)
raw material	Sugar plantations in Brazil and Cuba Sugar cane harvest	Sugar factory Brazil and Cuba Pressing of cane sugar	Sugar factory Germany Sugar refining		 Sugar
	Hazelnut plantation Turkey Harvesting hazelnuts	Hazelnut plantation Turkey Roasting + packaging of hazelnuts			 Hazelnuts nuts
	Oil plantation Indonesia Harvesting palm fruit	Palm oil factory Indonesia Pressing/sterilization of palm oil			 Palm oil

Key questions for orientation

- **Who** are the suppliers?
- **Where** do the activities take place?
- **What** manufacturing activities/ processes take place at each stage of the supply chain?

Key question for orientation

What is the **supply chain structure**?

Factory gate



Jam is a spreadable preparation made from fruit and sugar, which is produced by boiling down the fruit.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

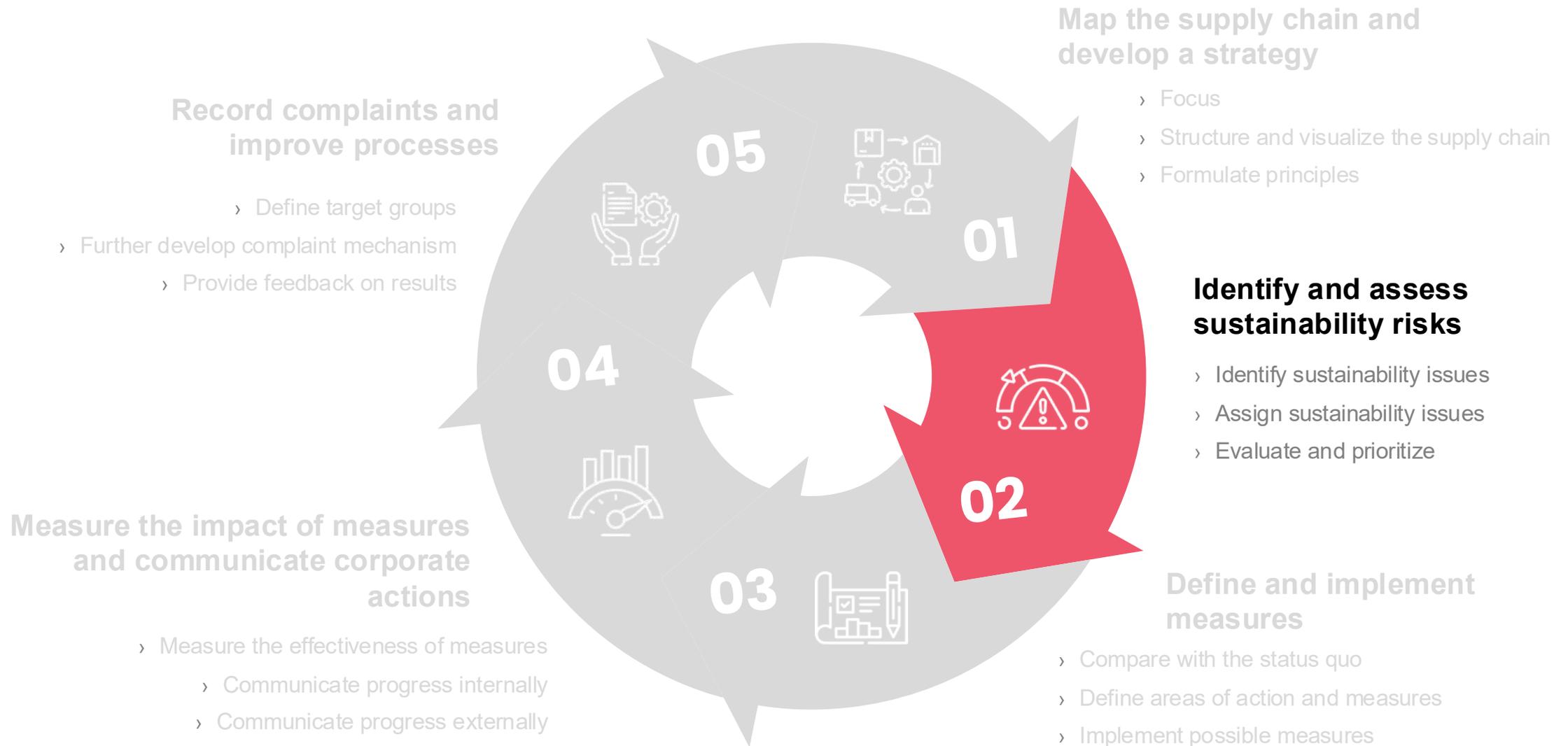
Phase 1: Approaches at a glance

Information and sources of information



Global Supply Chain Database





Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Objectives of the process phase

The company is aware of the **sustainability issues and risks that are relevant to its supply chain** and can use this information **to identify key areas** for action to design and optimize a sustainable supply chain.

Requirements

The information gathered in process step 1 and the **visualization of the supply chain** form the **basis for evaluating and prioritizing sustainability issues**.

The company should also plan for employees **to work together to identify which sustainability issues are material and which areas for action arise from them**.

Results

- **Assignment** of processes in the supply chain to sustainability issues/focus areas
- **Risk analysis** through evaluation and prioritization of sustainability issues
- Listing of **areas for action for design and optimization** (based on the risk analysis)

Modules

2.1 Identify issues

The company obtains an **overview of relevant sustainability issues** (e.g., greenhouse gas emissions, water consumption, occupational health and safety).

2.2 Assign sustainability topics

The sustainability topics are then **assigned to** the individual **stages of the supply chain** or **to** the companies in the supply chain. When identifying issues in the first sub-step, the company should consider the assignment to supply chain stages or processes, but not yet carry it out. In this way, the company can already link the steps, but avoids work steps becoming too complex, for example in an internal workshop.

2.3 Evaluate and prioritize

Finally, **sustainability topics** are **evaluated and prioritized**. This knowledge provides the basis for creating a list of areas for action.

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 	<p><u>Greenhouse gases</u> 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</p>
2	Resource efficiency & Circular economy 	<p>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.</p> <p>Specifically, the aim is to:</p> <ul style="list-style-type: none"> • <u>Narrowing</u> - 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. • <u>Slow down</u> - 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. • <u>Intensify</u> - More output is obtained from the same quantities of materials through more intensive use of products. • <u>Close</u> – Materials should be reused for a new purpose at the end of their useful life. • <u>Dematerialize</u> – Physical products are replaced by non-physical (primarily digital) products or services.
3	Hazardous substances 	<p><u>Hazardous substances</u> 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.</p>
4	Water consumption & Water scarcity 	<p><u>Water consumption</u> 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.</p> <p><u>Water scarcity</u> occurs when there are insufficient water resources to meet existing water demand.</p>

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 	<u>Packaging</u> 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 	<p>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).</p> <p><u>Land use</u> (also land use planning) refers to the way in which soil and land (parts of the solid earth's surface) are used by humans.</p>
7	Energy consumption & Energy efficiency 	<p><u>Energy consumption</u> 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.</p> <p><u>Energy efficiency</u> 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.</p>
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 	<p><u>Social sustainability</u> describes the conscious organization of social and cultural systems.</p> <p>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.</p> <p>Combating child labor, forced labor and slavery as well as discrimination</p>



Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Step

- Not every industry or country risk necessarily applies to your own company.
- It is therefore important that you **compare** the **research results with your own company activities** to check whether the results of the industry- and country-specific research apply to your company and also to identify additional risk areas.
- Your **own employees** and **direct suppliers should be involved** in order to identify actual risks.

To be checked before companies carry out the risk analysis:

- **Who** can and should be approached?
- In small companies in particular, **management**, which is directly involved in many processes, should also be involved.
- In **what format** does the exchange take place?
- Internally, the exchange can be organized through **workshops**, for example.
- Information from **direct suppliers** can be collected through certificates (e.g., environmental management systems), self-disclosures, or audits.



Key questions for guidance:

- **How serious** is the (potential) impact?
 - **Extent:** How serious is the (potential) negative impact?
 - **Scope:** How many people are (potentially) affected?
 - **Remediability:** How difficult would it be to mitigate, remedy or prevent the (potential) negative impact?
- **How likely** is it that a negative impact will occur?



- Implement
- Phase 1
- Phase 2**
- Phase 3
- Phase 4
- Phase 5



Step

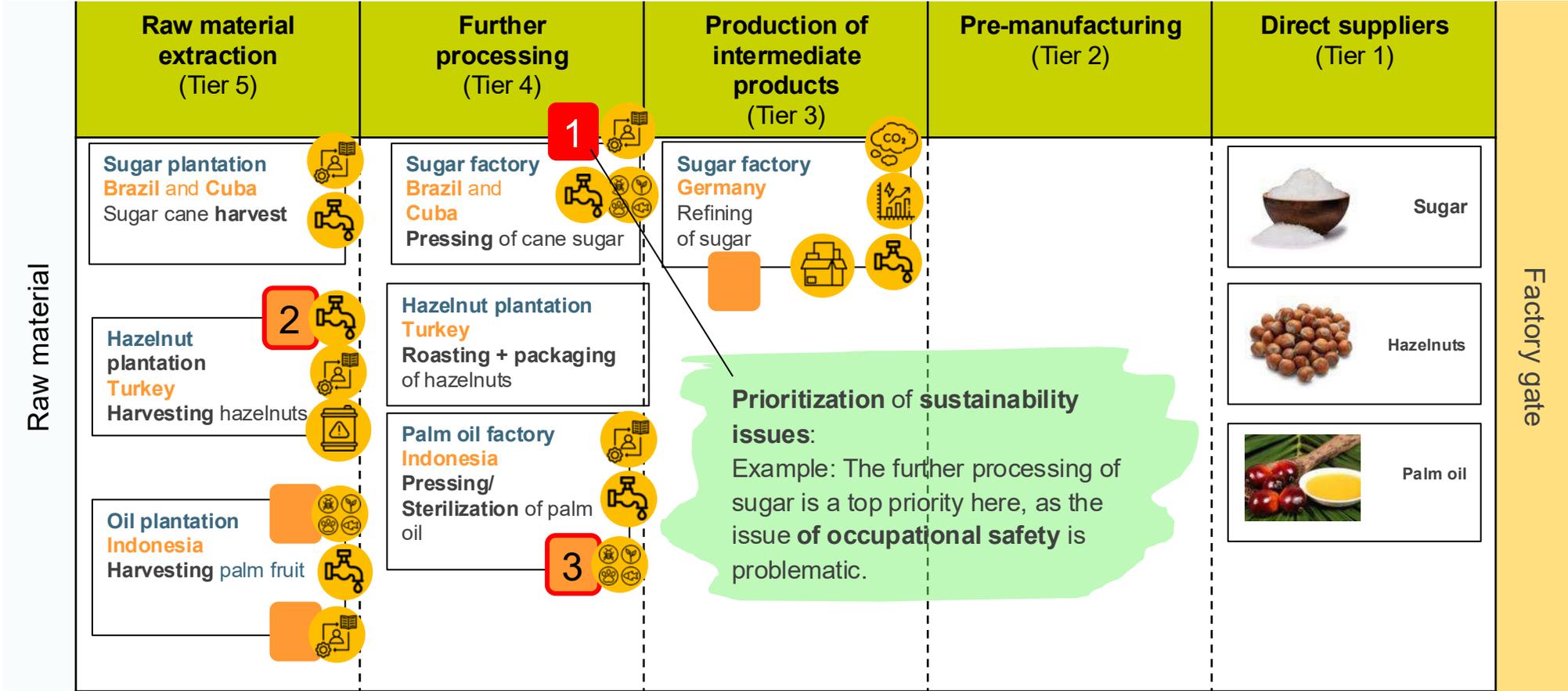


The company transfers the results of the prioritization to the supply chain matrix.

Example: Food industry (jam manufacturer*)

Legend

- High/Priority A
- Medium/Priority B
- Low/Priority C



* Information is not based on data from a real company. Evaluation is not complete.

Risk analysis using the example of value chain – chocolate

- Implement
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5

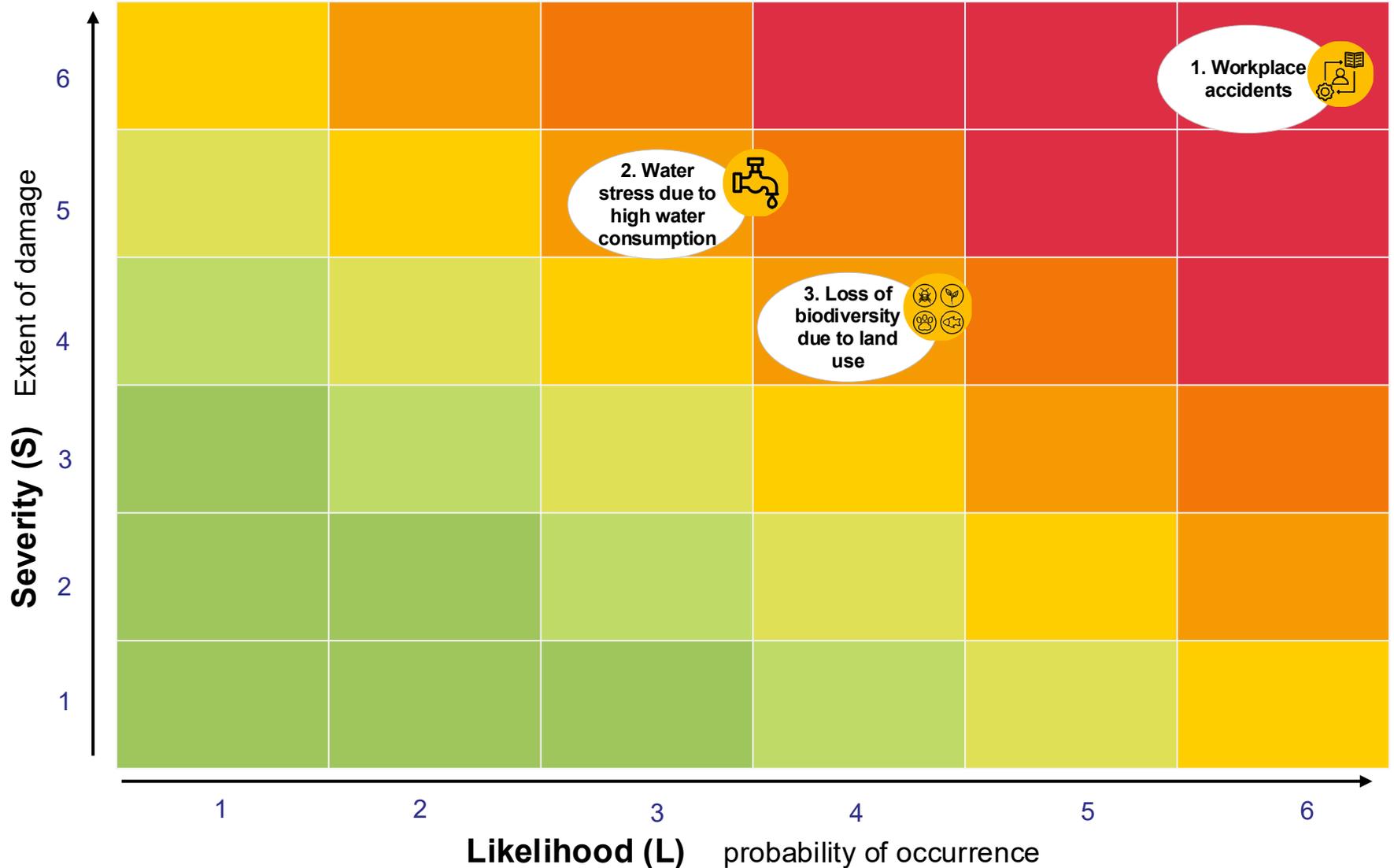
Example: food industry (jam manufacturer*)

Assessment of Severity (extent of damage)

- 6 – catastrophic
- 5 – very high
- 4 – critical
- 3 – medium
- 2 – low
- 1 – very low

Assessment of Likelihood (probability of occurrence)

- 6 – certain
- 5 – probable
- 4 – occasional
- 3 – conceivable
- 2 – unlikely
- 1 – inconceivable





Example: food industry (jam manufacturer*)

Exemplary assessment and prioritization of impacts on the environment and affected parties*						
#	Impact	Process in the supply chain	S	L	Justification	Overall
4	Work accidents due to inadequate safety standards in a factory	Further processing > Sugar factory	6	6	<ul style="list-style-type: none"> • There have already been fatal accidents at work. • No workers have received training to date. • The negative effects are irreversible. 	High
5	Water stress due to high water consumption in a region characterized by water scarcity	Raw material extraction > Harvesting hazelnuts in Turkey	5	3	<ul style="list-style-type: none"> • The impact is already being felt; however, only a limited number of people are affected; • There is the possibility of minimizing and reversing the impact through technical solutions. 	Medium
5	Loss of biodiversity due to land use	Production of intermediate products > Oil plantation in Indonesia: Harvesting palm fruit	4	4	<ul style="list-style-type: none"> • There are indications of rainforest deforestation for new plantations and the destruction of habitats (e.g., for orangutans, tigers), loss of ecological diversity. • Further in-depth research is required. 	Medium

S = Severity: Extent of damage, **L = Likelihood:** probability of occurrence

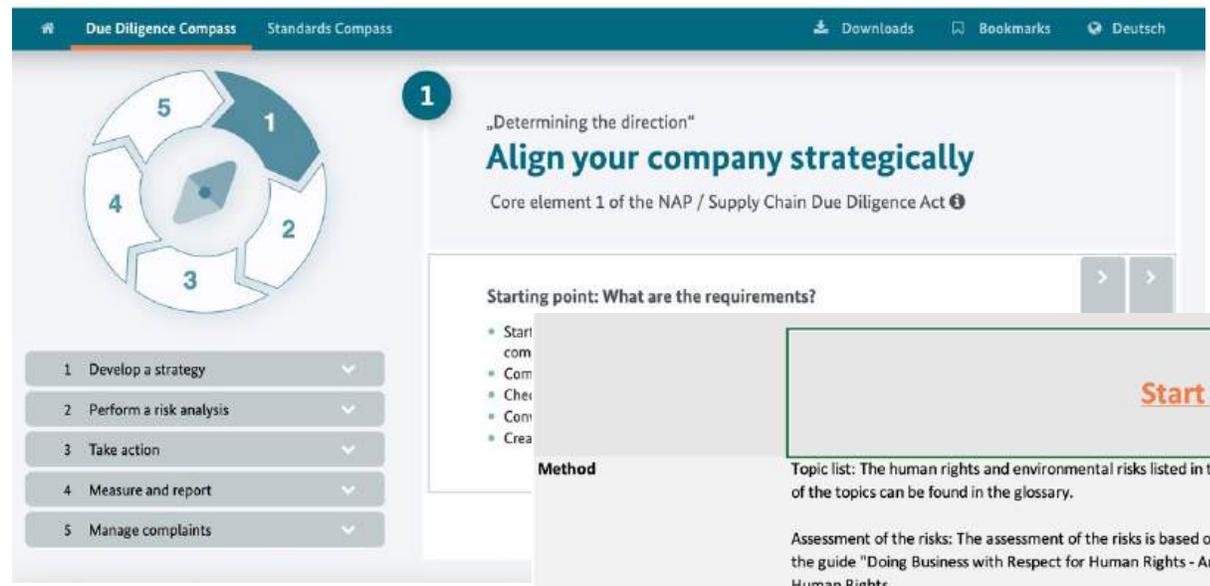
The SME Compass – Managing supply chains more sustainably



Due diligence implementation made easy
How to respect the environment and human rights in your company and along the supply chain

Once you have identified the relevant human rights and environmental risks along your value chain, you can use the tool to:

- › Step 1: **Locate the risks** in the following five stages of the value chain: raw material extraction, production of intermediate products, direct suppliers, company's own sites/production facilities, and downstream value creation
- › Step 2: **Evaluate the risks using a three-level scale** (high/medium/low); and
- › Step 3: Based on this evaluation, **prioritize the risks** and **develop appropriate measures**.



Method

Topic list: The human rights and environmental risks listed in this tool are based on the list of topics in the CSR Risk Check. A brief definition of the topics can be found in the glossary.

Assessment of the risks: The assessment of the risks is based on the UN Guiding Principles on Business and Human Rights and specifically the guide "Doing Business with Respect for Human Rights - Analysing Impacts Practitioner Supplement" from the Danish Institute for Human Rights.

Schematic illustration of the rules for assessing the risks of the severity

Scale	Scope	Irremediability	Severity
high	high or middle or low	high or middle or low	high
high or middle or low	high or middle or low	high	high
middle or low	high or middle or low	middle	middle
middle	high or middle or low	low	middle
low	low	low	low

Assessment of the risk

Severity	gering	mittel	hoch
hoch	high	high	high
mittel	middle	middle	high
gering	low	middle	middle

Probability of occurrence: gering, mittel, hoch

<https://kompass.wirtschaft-entwicklung.de/>

<https://kompass.wirtschaft-entwicklung.de/en/>

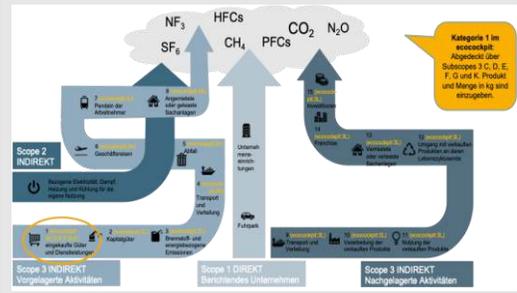


Phase 2: Approaches at a glance

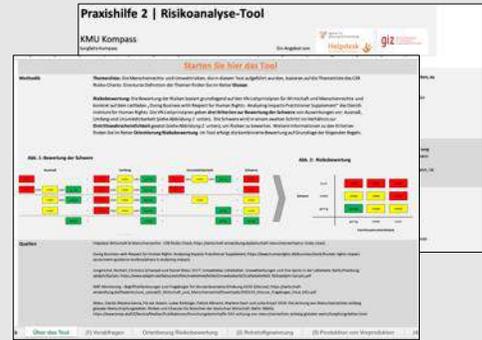
Information and sources of information for calculating scope 3 emissions



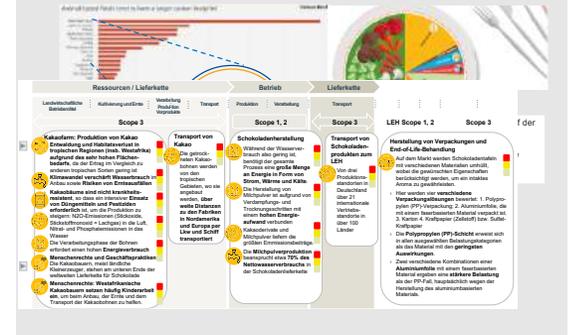
Scope-3 emission measurement -Approaches



Risk analysis SME Compass



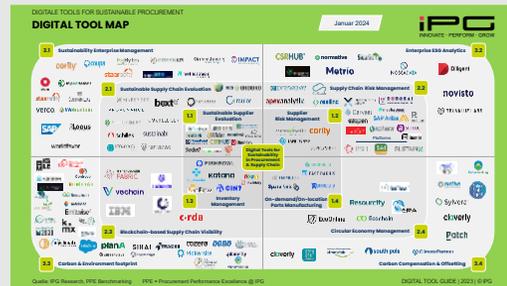
Risk analysis WS chain chocolate



Double Maturity Analysis Determine Which IROs Are Material



Digital tools for supply chain analysis

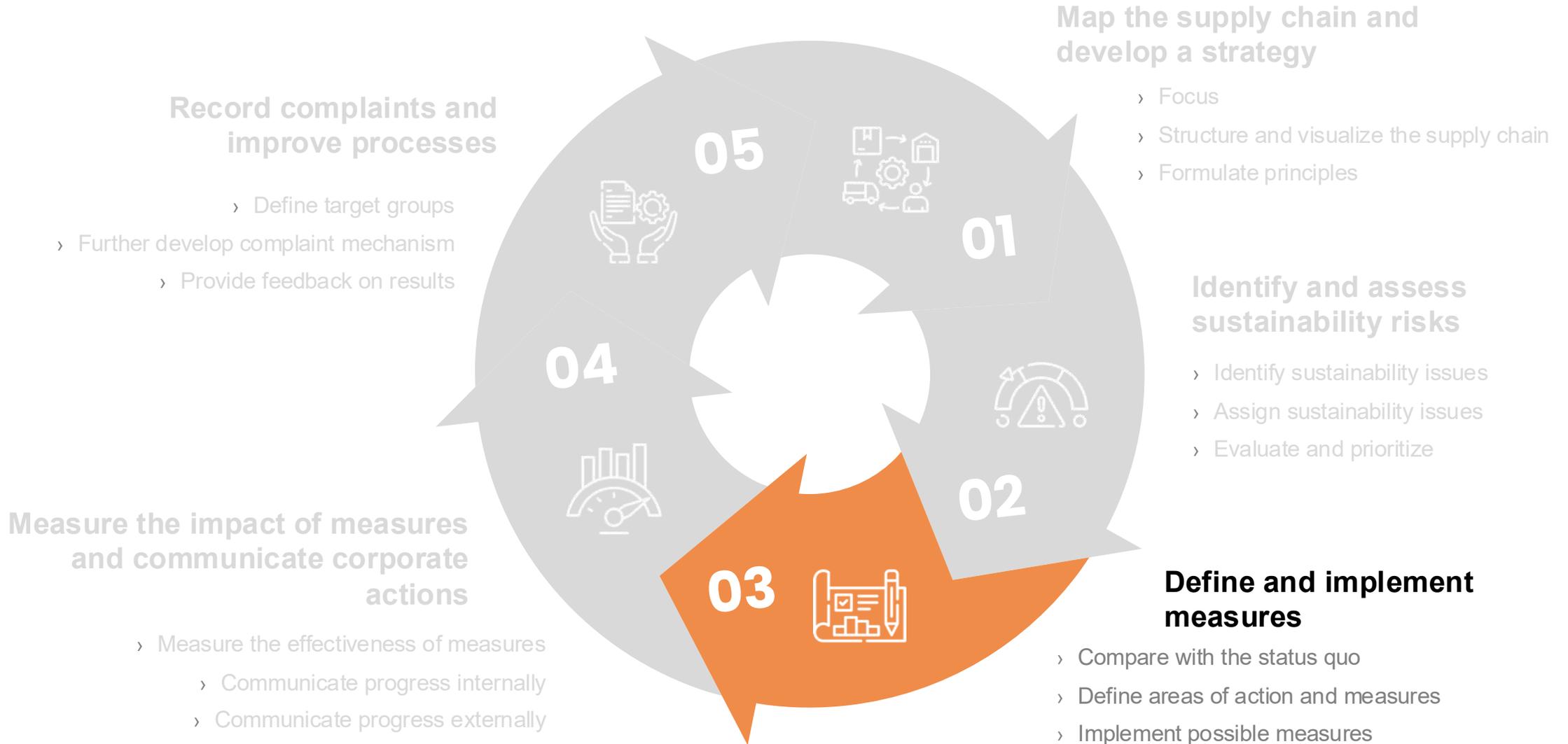


What do CO2 emission trackers achieve?



Review





Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Goals of the process phase

The company has an **overview** of what information or existing processes can be used **to make the supply chain more sustainable**.

It has **defined specific measures** that will help **to design and optimize the sustainable supply chain**.

Prerequisites

In addition to the information from the first two process steps, it is helpful if the company can provide an **overview** of existing written documentation **on existing management systems**, etc.

Results

- Comparison with existing goals, measures, and processes (**gap analysis**)
- **List of measures** for designing and optimizing a sustainable supply chain

Modules

3.1 Comparison with the status quo

The first step is to identify which existing processes and information can be used for sustainable supply chain management.

3.2 Define areas of action and measures

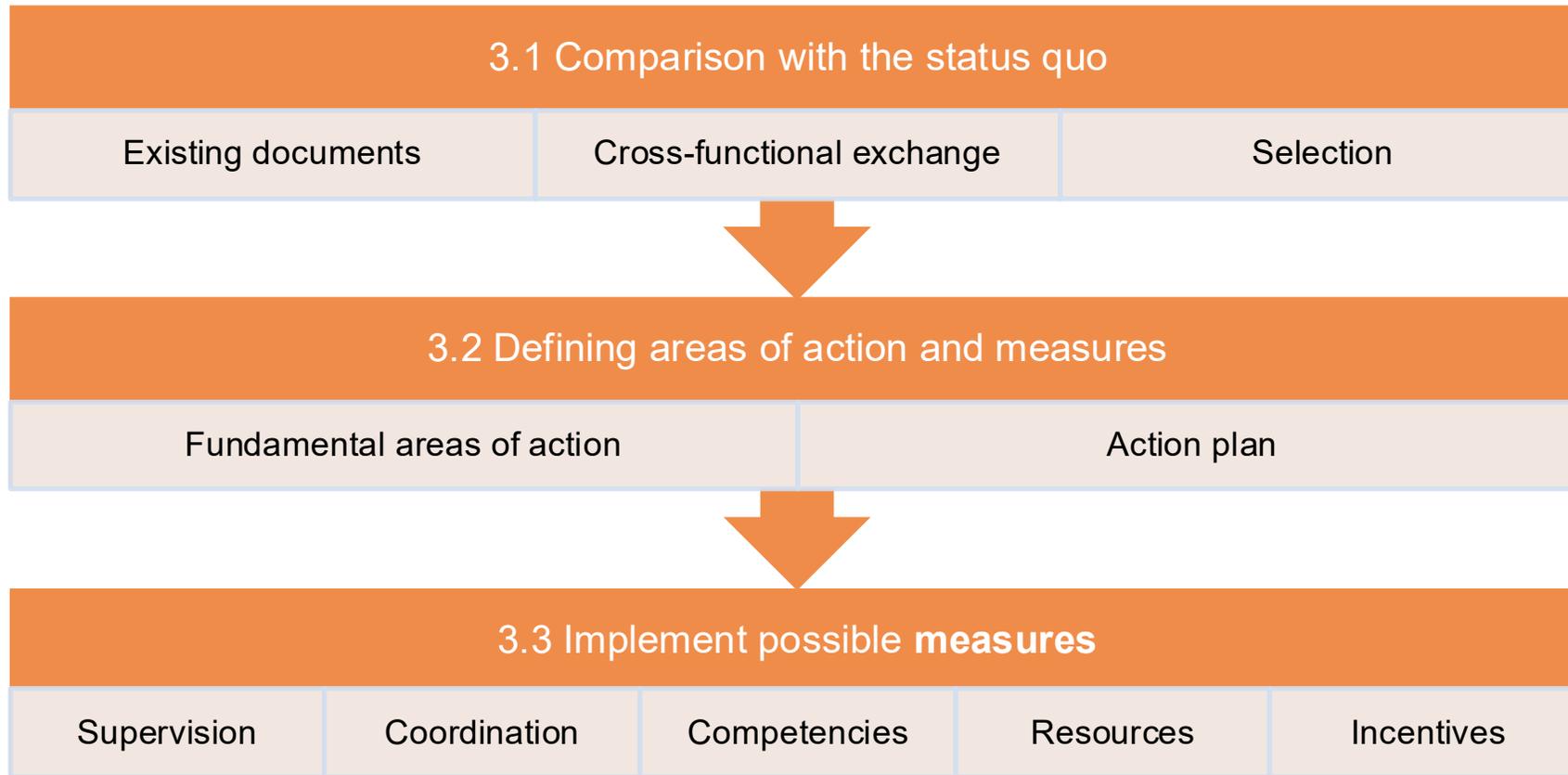
The second step involves defining measures that the company can use to restructure and optimize its supply chain from a sustainability perspective.

3.3 Implement measures

The third step involves implementing defined measures. This section outlines two possible measures.



Phase 3: Define and implement measures



Phase 3: Overview of approaches

Strategies for reducing sustainability risks in the supply chain



Checklist of measures

20 strategic purchasing levers for sustainability – overview

Improvement of specifications

- S1 Changing specifications to promote sustainability
- S2 Changing product design (e.g. through modularity, reparability, lightweight construction) for greater sustainability
- S3 Innovations: Actively pursuing sustainability innovations among our suppliers
- S4 Demand management: Reduction of demand (reduce) in product groups with high sustainability/sustainability risks - e.g. reduction of total material quantity in the cycle through less use
- S5 Reducing resource use: The proportion of primary raw materials used to produce through the use of recycled and renewable materials ("Reduce")
- S6 Extending service life: Extending the service life of materials, components, and products through maintenance and repair as well as overhaul and reconditioning ("Reuse")
- S7 Intensity use: Get more output from the same amount of materials through reuse, redistribution, and sale of materials, components, and products ("Reuse")
- S8 Upcycling of products: Creative and sustainable use of old and used materials, components, and products at the end of their useful life to create new products of higher value or better quality ("Recycle")
- S9 Recycling: Parts or materials are recovered from the product for reuse ("Recycle")
- S10 Dematerialization: Physical materials, components, and products are replaced by non-physical (primary digital) products or services

"Develop advantages"

- W1 Make the entire value creation process more efficient in line with sustainability goals
- W2 Make suppliers more sustainable, e.g. faster processes, fewer kilometers, etc. (e.g. from global to local sourcing)
- W3 Change supply chains, e.g. vertical integration*, to achieve greater transparency
- W4 Supplier qualification: Implement qualification measures for sustainability
- W5 Intensity supplier relationships: Get to know suppliers better and build relationships that are more focused on sustainability
- W6 Performance-based contracting: Programs that offer suppliers incentives to develop more sustainable concepts
- W7 Lobbying: Introduction and enforcement of new political measures to promote sustainable behavior
- W8 New procurement markets: Moving away from geographical sustainability hotspots
- W9 Cooperative partnerships for sustainability with suppliers
- W10 Focus on certifications and sustainability standards in purchasing

Joint value creation

Market power of buyers: low to high

Supplier power of suppliers: low to high

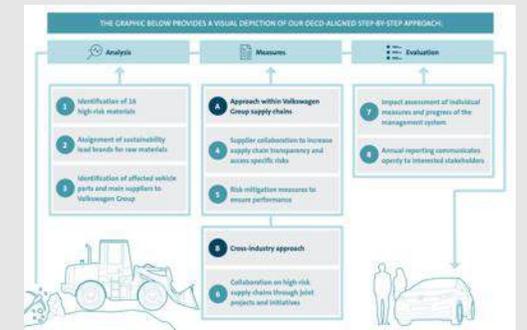
Legend: Green square = Suitable for ABC, Red square = Not suitable for ABC

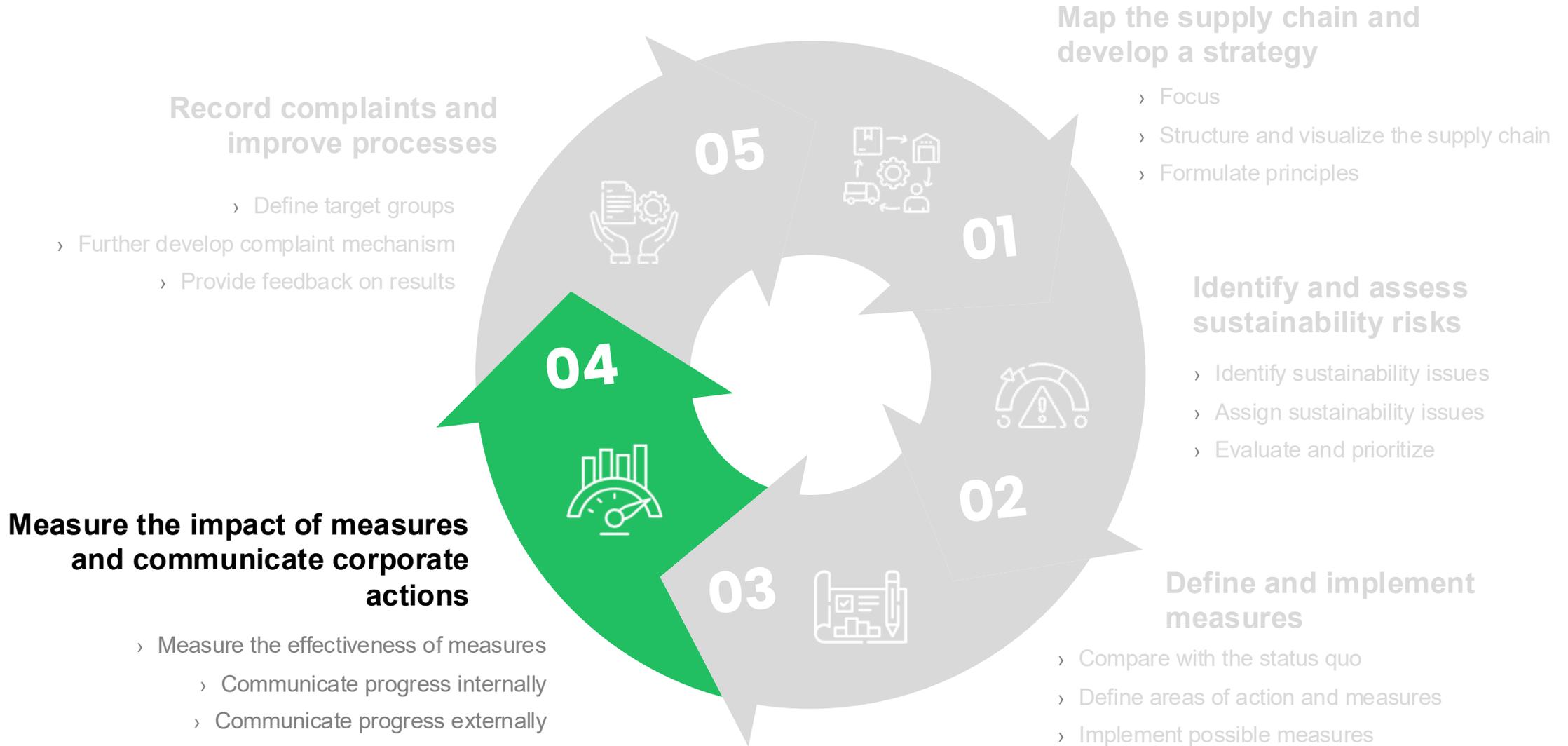
*Vertical integration refers to a form of corporate consolidation in which the vertical stage of relationships is processed by merging several companies with successive stages of processes or flows. Vertical integration is further classified into an internal corporate reorganization.

Supplier management



Good practice example Volkswagen





Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5



Overview of key process steps and activities

The effectiveness of the measures implemented is crucial to the success of sustainable supply chain management.

A systematic approach should be chosen to measure the impact of measures, clarifying what type of measures are to be reviewed, what sources of information are available, and how the effectiveness of the measures will be measured.

To enable internal and external exchange with stakeholders and promote transparency, the company reports on its sustainable supply chain management.

Measure the effectiveness of measures

Key activities

- Recording the measures implemented
- Define information sources and indicators for measuring the effectiveness of measures
- Collect information

Communicate progress internally

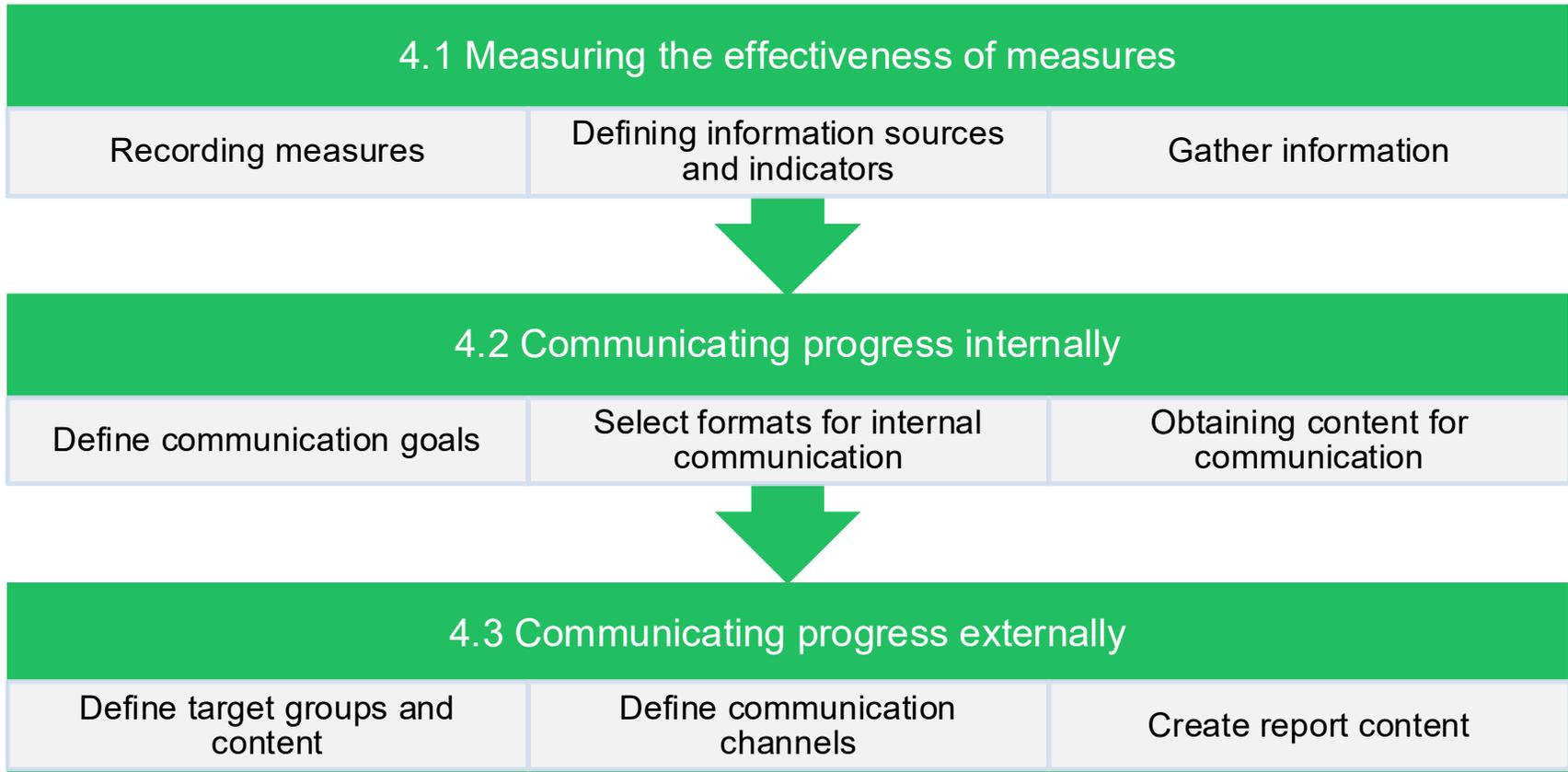
- Gaining an overview of measures and their impact (What worked, what didn't? What are the next steps?)
- Select formats for internal communication
- Define communication goals (Is it purely about conveying information or should there be an exchange?)

Communicate progress externally

- Define target groups and content
- Select communication channels and report format(s)
- Create report content



Phase 4: Measure and communicate the effectiveness of the measures





Phase 4: Measure and communicate the effectiveness of the measures

Key figures are important for measuring, internally controlling, and/or externally reporting on the implementation of corporate due diligence to respect human rights and protect the environment throughout your value chain.

Not every key performance indicator necessarily has to be communicated externally. Especially at the beginning, the focus may be on making progress measurable and comparable internally (e.g., number and date in the action plan).

Embedding in the company	Supplier management	Topic-specific key performance indicators
Training within the company	Locations with high risks	Incidents of discrimination
Complaints received	High-risk purchasing volumes	Threats to freedom of association
NH/MR measures	Supplier categories	Risk of child labor
	Valid supplier self-declaration	Risk of forced and compulsory labor
	Suppliers with management systems	
	Audited suppliers	
	Trained suppliers	

Key figure: audited suppliers and subcontractors	
Key figure	Number of suppliers audited using NHK
Unit	<ol style="list-style-type: none"> Number / all suppliers Number / critical suppliers Number / new suppliers
Target	<ol style="list-style-type: none"> 40 100 100
Notes	All new suppliers undergo a qualification process and are comprehensively audited. See action plan.
Indicators	GRI 308-1: new suppliers according to environmental criteria GRI 414-1: new suppliers according to social criteria DNK criterion 14: employee rights, DNK criterion 17: human rights

Phase 4: Measure and communicate the effectiveness of the measures

**Checklist
Measure/communicate the
impact of measures**

Handlungsfeld: Wirkung der Maßnahmen messen und Unternehmenshandeln kommunizieren	Ziele	Zuständige	Ergebniskriterien
<p>Kennzahlen-Set entwickeln</p> <p>Interne Kommunikationsmaßnahmen umsetzen (z. B. über Newsletter oder Intranet)</p> <p>Systeme von Kennzahlen in Produktdatenbanken / Beschreibungen</p> <p>Nachhaltigkeitsberichte veröffentlichen mit Informationen zu:</p> <ul style="list-style-type: none"> Nachhaltigkeitsbewertung/Risiken entlang der Lieferkette Prozessen der Risikoanalyse Lieferantenbewertung Umsetzungsmaßnahmen <p>Rückverfolgbarkeitssystem für Produkte schaffen (z. B. über QR-Codes)</p>	<ul style="list-style-type: none"> Messung des Umsetzungsstandes von Maßnahmen des nachhaltigen Lieferkettensmanagement Erreichung von erwünschten Messwerten Öffentliche Transparenz zur Nachhaltigkeit der Produkte schaffen Transparenz schaffen über Nachhaltigkeitsengagement in der Lieferkette Identifikation relevanter Anhaltspunkte für Maßnahmen Prüfungsmatrix als nachhaltiges Unternehmen, das das Thema gesellschaftlich angeht Transparenz über die Lieferkette (Produkt, Zusammensetzung der Produkte) für den Kunden schaffen 	<ul style="list-style-type: none"> Nachhaltigkeitsbeauftragter/-Personalabteilung/Kommunikationsabteilung Nachhaltigkeitsbeauftragter/-Vertrieb Nachhaltigkeitsbeauftragter/-Produkt- und Zusammenbau mit Marketing Einkauf/Vertrieb/Marketing 	<ul style="list-style-type: none"> Speziell unternehmensinterne als auch lieferantenspezifische Kennzahlen identifizieren Regelmäßige Analyse aller Nachhaltigkeitsdaten Erklärung der Geschäftsabführung Konkrete Erfolge kommunizieren? Valides Daten nutzen Schrittweise genau bestimmen Erweitertes Lieferkettensystem nutzen Valides Daten nutzen

**Sustainability
KPI scorecard**

Bereich	KPI Beispiele
Umweltbezogene Nachhaltigkeit	% Anteil der Lieferanten mit Umwelt- oder Arbeitsschutzmanagementsystemen
	% Anteil der Lieferanten, die anhand von Umweltkriterien überprüft wurden
	% Anteil der Lieferanten mit laufenden CO2-Reduktionsmaßnahmen
	% Anteil der Lieferanten, die ihre Nachhaltigkeitsleistung bei einer Folgebewertung verbessert haben
Soziale Nachhaltigkeit	% Anteil der Lieferanten, die ein bestimmtes Kriterium (z. B. Zertifikat) erfüllen
	% Anteil z.B. der natürlichen Ressourcen (Papierprodukte, Lebensmittel, Metalle), die aus nachhaltigen Quellen eingekauft werden
	% Anteil der Lieferanten, die dem Verhaltenskodex (Code of Conduct – CoC) zugestimmt haben
	% Anteil der Lieferanten, die anhand von Sozialkriterien überprüft wurden
Finanzielle Nachhaltigkeit	% Anteil der Lieferanten, für die bestimmte Audits (z.B. Social-Audits) durchgeführt wurden
	% Anteil des relevanten Einkaufsvolumens, die das „Conflict Minerals Reporting“ Template ausfüllen (bzw. die entsprechenden Anforderungen erfüllen)

**Review
SIEMENS Gamesa
RENEWABLE ENERGY**



**Reporting Standards
CSRD (EFRAG)**



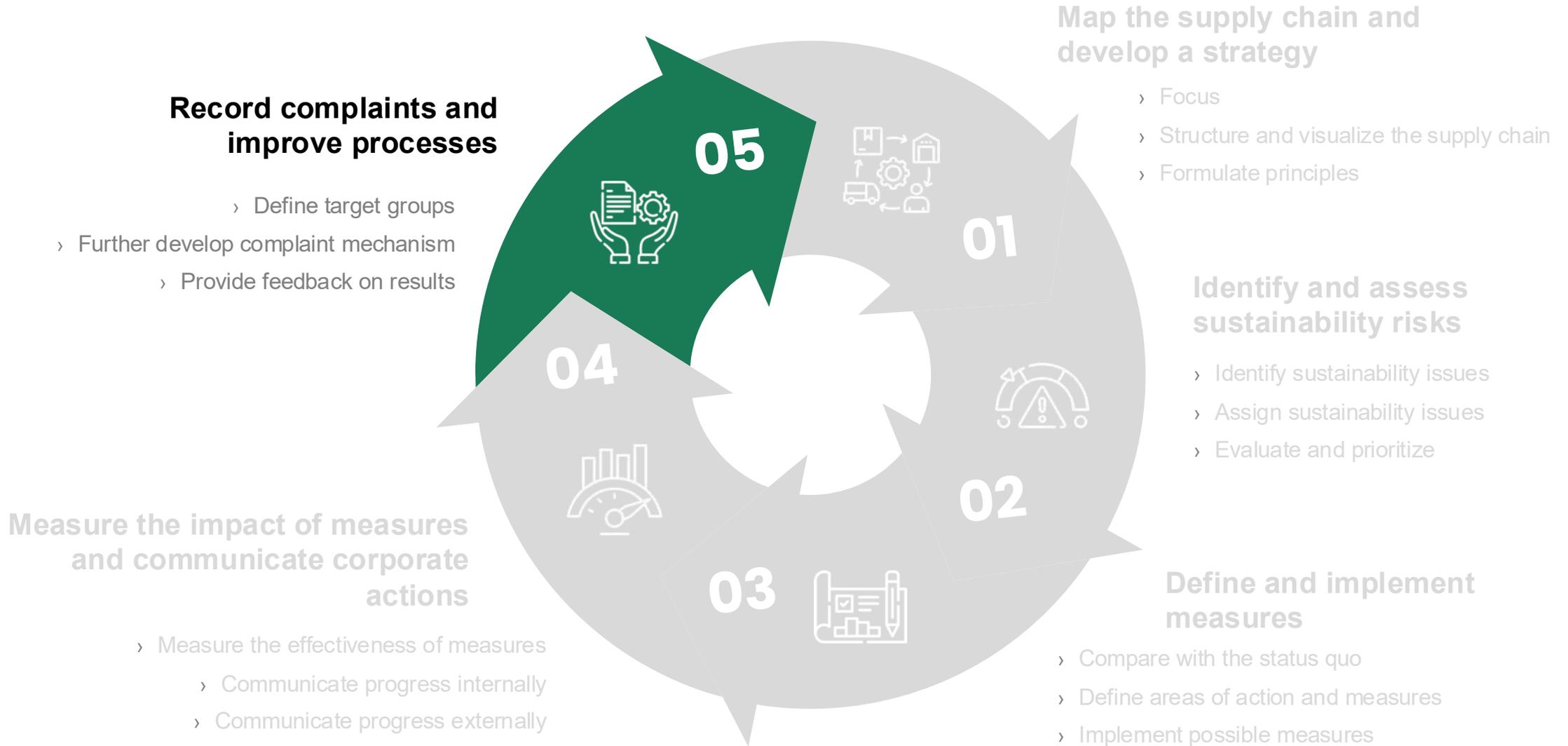
Omnibus Update



**Voluntary Sustainability
Reporting Standard
(VSME) for non-listed SMEs**

VSME: VOLUNTARY SME STANDARD
(finalized 12/17/24)

- Originally intended scope of application: Small and medium-sized enterprises with up to 250 employees.
- Voluntary standard that helps small businesses provide ESG data in a clear and straightforward manner.
- The development took place in close cooperation with market participants from various sectors—including banks, SMEs, and investors—accompanied by a cost-benefit analysis and the involvement of relevant standard-setting organizations.
- Prepared by EFRAG (European Financial Reporting Advisory Group)



Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5



Overview of key process steps and activities

Sustainable supply chain management should help **improve the situation of those affected along the supply chain as well as the environmental performance of suppliers**. For this to succeed, **those (potentially) affected in the supply chain must be given the opportunity to complain**.

It can be particularly challenging for smaller companies to record complaints in the supply chain – they should first and foremost strive to **establish channels for direct suppliers** and **use central mechanisms** for the **wider supply chain**, for example within the framework of **industry initiatives**.

Define target groups

- Identify potential users (e.g., own employees, workers at direct and upstream suppliers, neighbors of production sites abroad)
- Record and document complaints

Further develop the complaint mechanism

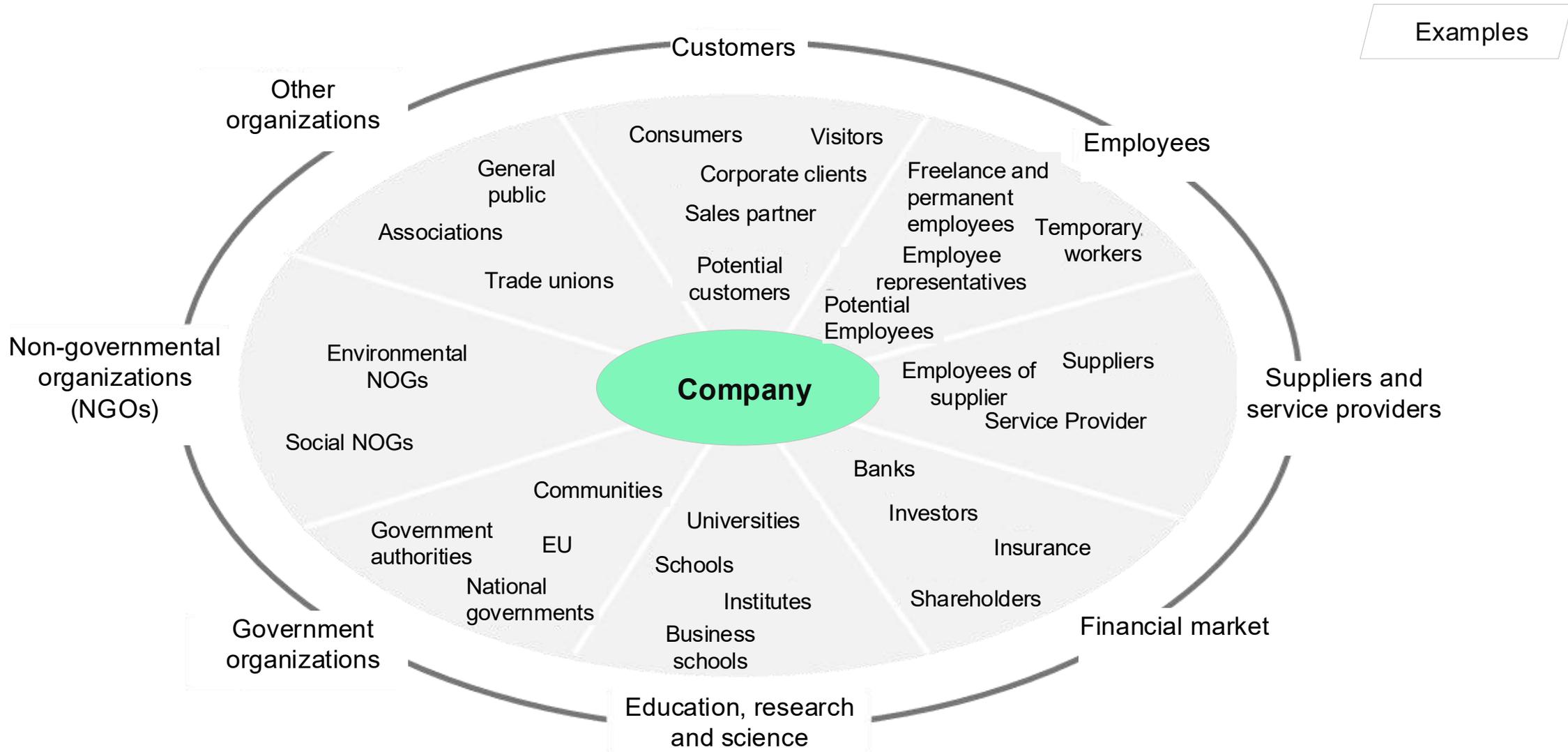
- Record existing complaint channels and mechanisms
- Check whether existing mechanisms are effective
- Identify areas where action is needed

Feed back results into the sustainable supply chain management process

- Evaluate which process steps should be adapted and improved
- Conduct training within the company
- Continuously improve processes

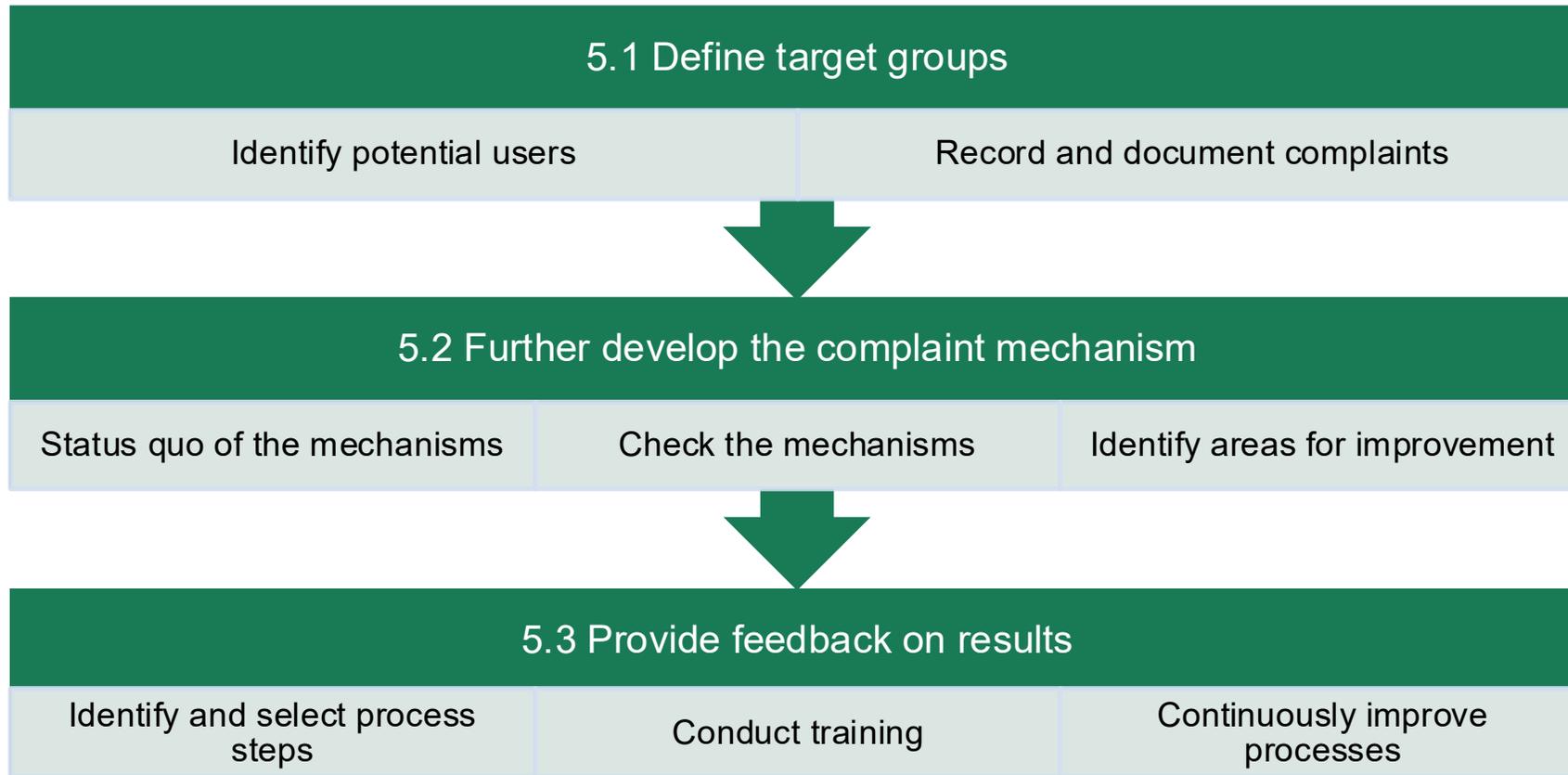
- Implement
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Phase 5

Phase 5: Target group





Phase 5: Record complaint and improve process





Phase 5: Record complaints and improve processes

Checklist Record complaints and improve processes

Implement	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Checklist
Area of action: Record complaints and improve processes (1/1)						Recording complaints and improving processes
Action	Objective(s)	Responsibility			Success	
<ul style="list-style-type: none"> • Evaluate the results of the risk analysis to identify groups of people who should be covered by the complaint system. 	<ul style="list-style-type: none"> • Set up a complaint mechanism tailored to the target audience 	<ul style="list-style-type: none"> • Sustainability officer • Human resources • Compliance • Customer relations and service departments 			<ul style="list-style-type: none"> • Check whether particularly vulnerable groups are among those (potentially) affected 	
<ul style="list-style-type: none"> • Record and document complaints 	<ul style="list-style-type: none"> • Obtain an overview of the various (possible) complaints in order to establish appropriate channels 	<ul style="list-style-type: none"> • Sustainability officer • Human resources • Compliance • Customer relations and service departments 			<ul style="list-style-type: none"> • Also proactively address potential complaint issues • Results should be documented in such a way that complaints can be assigned to specific issues, groups and channels 	
<ul style="list-style-type: none"> • Review existing complaint mechanisms 	<ul style="list-style-type: none"> • Build complaint management on existing processes 	<ul style="list-style-type: none"> • Sustainability officer • Human resources • Compliance • Customer relations and service departments 			<ul style="list-style-type: none"> • Check whether mechanisms have been established at association level or at multi-stakeholder level that can be used 	
<ul style="list-style-type: none"> • Review the effectiveness of existing grievance mechanisms 	<ul style="list-style-type: none"> • Improve the effectiveness of complaint mechanisms 	<ul style="list-style-type: none"> • Sustainability officer • Human resources • Compliance • Customer relations and service departments 			<ul style="list-style-type: none"> • Use of effectiveness criteria for systematic review • See also Working Aid from the NAP Helpdesk for Business and Human Rights: "Measures complaints effectively" 	

Tuesday, February 10th
Day 1 – Morning: Module 5

09:00 –
12:00

1	Fit for Sustainable Supply Chain in Europe – welcome & introduction	09:00 – 09:15	
2	Module 5 - introduction SUS supply chain analysis – 5-phase methodology	09:15 – 10:45	
3	M5 - Sprint  SUS supply chain analysis – Team SaraCook & Team BosnaCool	10:45 - 11:00 	11:00 – 12:00

Tuesday, February 10th
Day 1 – Afternoon: Module 6

13:00 –
17:00

4	Module 5 - Sprint review Team Presentations – Team SaraCook & Team BosnaCool	13:00 – 13:45	
5	M6 - introduction ToolMap Taxonomy and Tool introduction	13:45 – 14:45	
6	M6 - Sprint  Tool prioritization & selection – Team SaraCook & Team BosnaCool	14:45 –15:00 	15:00 – 16:00
7	M6 – Sprint review Team Presentations – Team SaraCook & Team BosnaCool Wrap-up Day 1 & Outlook Day 2	16:00 – 17:00	



Questions & comments



Coffee break



All times given are indicative and may vary.



Sprint

**Supply Chain
Sustainability**

Risk Assessment

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

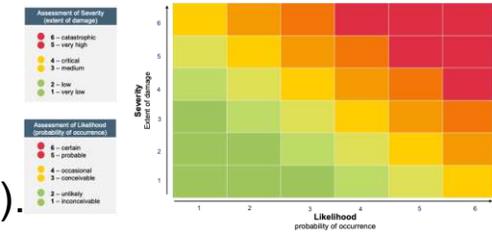
Supply Chain – SC Sustainability Risk Assessment



SC Sustainability Risk Assessment

Step 1: Prioritize SC Risks (Heat Map)

- The company obtains an overview of relevant sustainability issues (e.g., greenhouse gas emissions, water consumption, occupational health and safety).



Step 2: Derive appropriate risk mitigation measures for Top 3 prioritized risks

- Select Top 3 optimization levers
- Define appropriate actions for prioritized Top3 lever

20 strategic purchasing levers for sustainability – overview

Improvement of specifications

- S1 Changing specifications to promote sustainability
- S2 Changing product design (e.g. through modularity, standardization, lightweight construction) for greater sustainability
- S3 Innovations: Actively pursuing sustainability innovations (choice of suppliers)
- S4 Demand management: Reduction of demand (Choice of product groups with high sustainability, sustainability mix - e.g. reduction of raw material quantity in the scope through less use)
- S5 Reducing presence use: The proportion of primary raw materials in the scope through the use of recycled and secondary materials
- S6 Extending service life: Extending the service life of external components and products through maintenance and repair as well as overhaul and reconditioning ("Planer")
- S7 Intensity use: Get more value from the same amount of material through reuse, substitution, and sale of materials, components, and products ("Planer")
- S8 Mapping of products: Check on sustainable use of all used materials, and products, and products at the end of their useful life to consider new products of higher value or better quality ("Planer")
- S9 Recycling: Parts or materials are recovered from the product or from ("Planer")
- S10 Dematerialization: Physical materials, components, and products are replaced by non-physical (primary digital) products or services

"Develop advantages"

- W1 Make the entire value creation process more efficient (live with sustainability goals)
- W2 Make together more sustainable, e.g. better processes, better materials, etc. (e.g. from global to local sourcing)
- W3 Change supply chain, e.g. "vertical integration", to increase product sustainability
- W4 Supplier qualification: Implement qualification measures for sustainability
- W5 Identify supplier relationships: Get to know suppliers better and build relationships that are based on sustainability
- W6 Performance-based contracting: Programs that offer suppliers incentives to develop more sustainable concepts
- W7 Labelling: Introduction and enforcement of new criteria (measures) to promote sustainable behavior
- W8 New procurement markets: Moving away from geographical sustainability history
- W9 Cooperative partnerships for sustainability with suppliers
- W10 Focus on certifications and sustainability standards in purchasing

Joint value creation

- W11 Make the entire value creation process more efficient (live with sustainability goals)
- W12 Make together more sustainable, e.g. better processes, better materials, etc. (e.g. from global to local sourcing)
- W13 Change supply chain, e.g. "vertical integration", to increase product sustainability
- W14 Supplier qualification: Implement qualification measures for sustainability
- W15 Identify supplier relationships: Get to know suppliers better and build relationships that are based on sustainability
- W16 Performance-based contracting: Programs that offer suppliers incentives to develop more sustainable concepts
- W17 Labelling: Introduction and enforcement of new criteria (measures) to promote sustainable behavior
- W18 New procurement markets: Moving away from geographical sustainability history
- W19 Cooperative partnerships for sustainability with suppliers
- W20 Focus on certifications and sustainability standards in purchasing

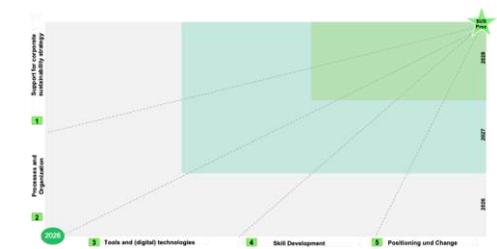
Legend: Green = Suitable for ABC, Red = Top 3 levers for ABC

Step 3: Define appropriate KPIs to measure success

- Select appropriate sustainability KPIs for measuring success on the implementation of corporate due diligence actions

Area	KPI examples	Selection
Environmental sustainability	% of suppliers with environmental or occupational health and safety management systems	
	% of suppliers that have been assessed based on environmental criteria	
	% of suppliers with ongoing CO2 reduction measures	
	% of suppliers that have improved their sustainability performance in a follow-up assessment	
Social sustainability	% of suppliers that need a specific criterion (e.g., certificate)	
	% share of e.g. natural resources (paper products, food, metals) purchased from sustainable sources	
	% of suppliers who have agreed to the Code of Conduct (CoC)	
	% of suppliers that have been assessed against social criteria	
Financial sustainability	% of suppliers for whom specific audits (e.g., social audits) have been carried out	
	% Share of assessed purchasing volume	
	% of relevant suppliers who complete the Conflict Minerals Reporting Template (or meet the corresponding requirements)	
	% Share of purchasing volume with local suppliers	

Step 4: Derive necessary projects/initiatives and place them in your Procurement 4.0 Roadmap.



A top-down view of a wooden cutting board with a sandwich, tomatoes, and herbs on a dark grey background. The sandwich is on the left, filled with lettuce, tomato, onion, and cheese. To the right of the board are several fresh tomatoes and green herbs. The text 'Lunch Break' is written in white, chalky font on the dark background.

Lunch Break

We'll be back soon!

Tuesday, February 10th
Day 1 – Morning: Module 5

09:00 –
12:00

1	Fit for Sustainable Supply Chain in Europe – welcome & introduction	09:00 – 09:15	
2	Module 5 - introduction SUS supply chain analysis – 5-phase methodology	09:15 – 10:45	
		10:45 - 11:00	
3	M5 - Sprint  SUS supply chain analysis – Team SaraCook & Team BosnaCool	11:00 – 12:00	

Tuesday, February 10th
Day 1 – Afternoon: Module 6

13:00 –
17:00

4	Module 5 - Sprint review Team Presentations – Team SaraCook & Team BosnaCool	13:00 – 13:45	
5	M6 - introduction ToolMap Taxonomy and Tool introduction	13:45 – 14:45	
		14:45 –15:00	
6	M6 - Sprint  Tool prioritization & selection – Team SaraCook & Team BosnaCool	15:00 – 16:00	
7	M6 – Sprint review Team Presentations – Team SaraCook & Team BosnaCool Wrap-up Day 1 & Outlook Day 2	16:00 – 17:00	



Questions & comments



Coffee break



All times given are indicative and may vary.

Team 1 «SaraCook»

**Sprints
M5 – M7**

Team 2 «BosnaCool»

	Name	Last Name
--	------	-----------

1 Semir Bjelak



2 Haris Ohran



3 Elvir Ćatić



4 Merima Osmić



5 Nerma Salihović



	Name	Last Name
--	------	-----------

1 Enis Brigić



2 Esad Lemes



3 Kenan Starčević



4 Zijah Jelkić



5 Amina Koljić-Hujić



Facilitator Team

<https://app.mural.co/t/ipg7290/m/ipg7290/1770546177561/f92ab6090dcd937315f5b0d23d452e4937fc1561>

Facilitator Team 2

<https://app.mural.co/t/ipg7290/m/ipg7290/1762931388821/2863cc15e1e78ab52d9866ebcecb25b41b22a096>

G5. NH SUPPLY CHAIN ANALYSIS

Reflection

*Questions?
Comments?*





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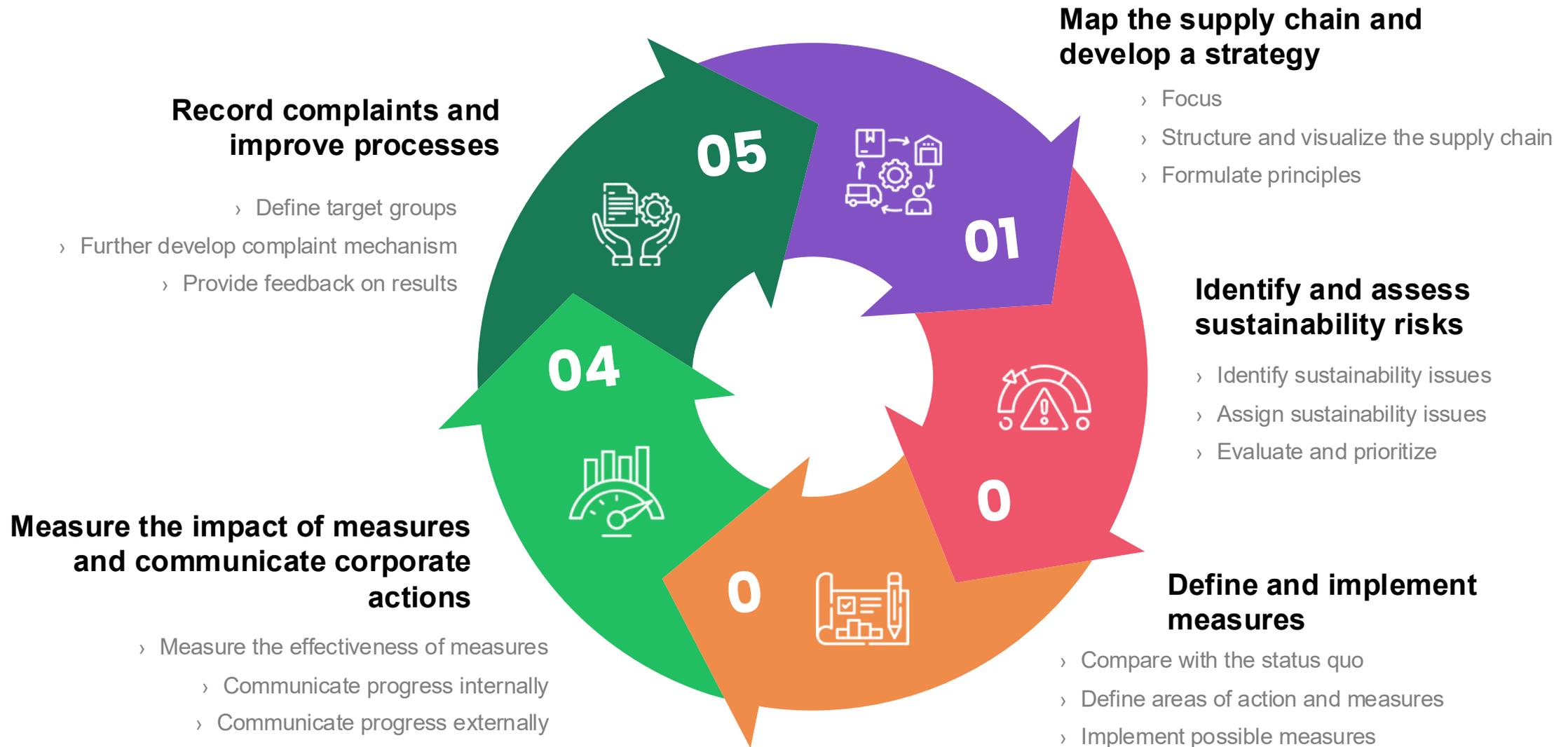
Step 1 - Map the supply chain and develop a strategy

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Overview of the five phases of supply chain analysis as a continuous improvement process



Introduction

Phase 1

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Step 1 of the supply chain analysis involves **recording and mapping the entire supply chain**.

Here is the most important information you will need:

1. Supplier and company information

- **Direct and indirect suppliers:** Identification of business partners at every stage of the supply chain.
- **Company name, location, and legal structure:** Basic data on suppliers.
- **Industry and product types:** Description of the goods or services supplied.
- **Contact details and responsibilities:** Who is the contact person for sustainability and compliance?

3. Supply chain structure

- **Stages of the supply chain:** Classification into **raw material extraction, production, further processing, transport, and final delivery**.
- **Geographical distribution:** Overview of supplier locations and transport and logistics routes.
- **Material flows and product movements:** Documentation of which raw materials or intermediate products come from which suppliers.
- **Manufacturing process at each stage:** Production steps, production technologies used, production facilities, production/working conditions, etc.

5. Data sources for supply chain visualization

- **ERP systems (e.g., SAP, Oracle, Coupa):** Integration with existing purchasing and supplier management systems.
- **Sustainability platforms:** Databases such as **EXI-Mediathek from BMUV** (supply chain structure), **EcoVadis, CDP Supply Chain, Sedex**, which provide sustainability assessments of suppliers.
- **Geodata and mapping tools:** Use of **geoinformation (GIS) systems** for geographical analysis of supply chain locations.
- **Blockchain or traceability systems:** Technologies for real-time monitoring and documentation.

2. Contract and compliance data

- **Contractual agreements:** Existing supply contracts and their requirements regarding environmental and social standards.
- **Certifications and audit reports:** Proof of environmental and social standards (e.g., ISO 14001, SA8000, FSC, Fairtrade).
- **Existing due diligence measures:** What monitoring or risk analysis processes are already in place?

4. Risk factors in the supply chain

- **Risk assessments by country of origin:** Use of external data sources such as **BAFA guidelines, OECD guidelines, UN Global Compact, or Transparency International**.
- **Human rights and environmental risks:** Identification of possible violations, e.g., child labor, environmental pollution, lack of occupational safety.
- **Supply chain dependencies:** Identification of critical suppliers or raw materials with high risk.

The EXI media library contains information on the structure of supply chains in selected industries

<https://www.exportinitiative-umweltschutz.de/en/media-library/>
<https://www.exportinitiative-umweltschutz.de/en/>



The EXI media library provides links to databases, country profiles on recycling and water management, publications for download, and videos about projects or areas of activity covered by the funding program

[Startseite](#) > [Mediathek](#)

Mediathek

In der EXI-Mediathek finden Sie Hinweise auf Datenbanken, Länderprofile zum Themenbereich Kreislauf- und Wasserwirtschaft, Publikationen zum Download und Videos über Projekte oder Handlungsfelder des Förderprogramms.

[Datenbanken](#)

Wir stellen Ihnen verschiedene Datenbanken und Websites zur Vernetzung von Akteur*innen im In- und Ausland vor. Diese sind innerhalb der „Exportinitiative Umweltschutz“ entstanden.

[Länderprofile](#)

Zum Themenschwerpunkt Kreislauf- und Wasserwirtschaft sind im Rahmen der „Exportinitiative Umweltschutz“ Projektergebnisse in Form von Länderprofilen entstanden.

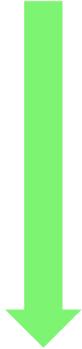
[Publikationen](#)

Wir bieten Ihnen vielfältige Publikationen in deutscher und englischer Sprache zum Download: von Factsheets über thematische Veröffentlichungen bis hin zu Leitfäden.

Data collection according to CRSD – Steps to obtain primary data (1/2)

Access to **primary data** is crucial to fully comply with the requirements of the Corporate Sustainability Reporting Directive (CSRD). This data **comes directly from the processes, suppliers, or locations involved** and is much more accurate and specific than secondary data.

Here are the most important steps companies can take to obtain primary data in a targeted manner:



1. Strengthen cooperation with suppliers

Goal: Obtain direct information from the supply chain.

- **Supplier self-disclosure:** Develop standardized questionnaires or self-assessments for suppliers to complete. Ask for specific data on CO₂ emissions, energy consumption, water consumption, or material sources.
- **Supplier Code of Conduct:** Integrate sustainability requirements and reporting obligations into supplier contracts.
- **Digital platforms:** Use digital (AI) tools that facilitate the collection of data from the supply chain.

2. Segment and prioritize the supply chain

Goal: Collect primary data from relevant actors in a focused manner.

- **Hot spot analysis:** Identify the critical points in your supply chain that have the greatest impact on sustainability metrics (e.g., CO₂-intensive processes, high-risk raw materials).
- **Focus on key suppliers:** Work with the suppliers who are responsible for the majority of the environmental impact and collect primary data from them in a targeted manner.

3. Internal audits and inspections

Goal: Collect reliable data directly on site.

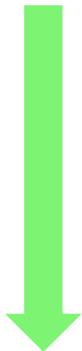
- **On-site audits:** Visit suppliers or production facilities to directly measure primary data such as energy consumption, working conditions, or environmental impacts.
- **External service providers:** Bring in external auditors or certification bodies to ensure the quality and accuracy of the primary data collected.

4. Establish your own data collection processes

Objective: Ensure independent data collection.

- **Direct data collection:** Collect data directly at your production sites or offices, for example through energy bills, waste logs, or direct consumption measurements.
- **Standardized tools:** Use software solutions (e.g. SpheraCloud or thinkstep) to collect data centrally and evaluate it consistently.

Data collection according to CRSD – Steps to obtain primary data (2/2)



5. Training and motivation of stakeholders

Goal: Empower and motivate suppliers and partners to provide primary data.

- **Training programs:** Train your suppliers in the use of data collection tools and CSRD requirements.
- **Incentive systems:** Offer incentives, such as long-term partnerships or financial benefits, for the provision of accurate primary data.

6. Integration into digital platforms

Goal: Ensure efficient and automated data collection.

- **Supply chain management platforms:** Use digital tools specifically designed for data collection in the supply chain (e.h. IntegrityNext, OSAPIENS, SAP Sustainability Control Tower or Preware)
- **Data validation:** Ensure that the data collected is automatically checked and validated by the platforms.

7. Direct measurement using technology

Goal: Collect real-time data and accurate information from processes.

- **IoT sensors:** Install sensors to directly measure energy consumption, water consumption, emissions, and waste in production facilities or along the supply chain.
- **Blockchain technology:** Use blockchain solutions to securely and transparently document information on the origin of raw materials or products.
- **Satellite monitoring:** For agricultural products or forest resources, satellite data can be used to monitor deforestation, land use, or water consumption.

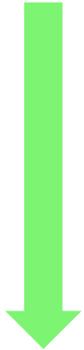
Conclusion

- **Primary data offers the highest accuracy** and is essential for CSRD compliance.
- **Companies should use this time to make supply chains more transparent**, implement data collection technologies, and work closely with partners.
- The **long-term benefits** include better reporting, lower regulatory risks, and a clear competitive advantage through demonstrable sustainability performance.

Data collection according to CRSD – Categories of secondary data (1/1)

Secondary data is data that has already been collected and published and can be used by companies for their own purposes.

It can be divided into different categories:



1. Internal secondary data

- **Past company reports:** Old sustainability reports, financial reports, or internal analyses.
- **Operational data:** Data from ERP or CRM systems, e.g., on material procurement, production, or supplier performance.
- **Archive data:** Historical data from previous projects or analyses.

2. External secondary data

- **Statistical data:** Reports and statistics from public authorities (e.g., Eurostat, Federal Statistical Office).
- **Industry data:** Data from industry studies, market analyses, or reports from industry associations.
- **Research data:** Results from academic studies or publications by universities and research institutions.
- **Reports from international organizations:** Data from organizations such as the UN, World Bank, OECD, or WTO.
- **Databases:** Access to paid or freely accessible databases such as World Bank Data, ProQuest, Scopus, or SpringerLink.

3. Industry and market data

- **Market research results:** Studies by market research institutes such as Nielsen, Gartner, or Statista.
- **Competitive analyses:** Published data from competitors or information from their annual reports.
- **Forecasts:** Future forecasts on markets, technologies, or social developments.

4. Legal and regulatory data

- **Regulatory requirements:** Publications on legal requirements, e.g., from the EU, national governments, or other regulatory authorities.
- **Guidelines:** White papers and compliance guides from consulting firms or NGOs.

5. Geographic and environmental data

- **Satellite data:** Data from organizations such as NASA, ESA, or Google Earth Engine.
- **Climate data:** Information from national weather services or global initiatives such as the Climate Data Store.
- **Biodiversity data:** Reports from initiatives such as IUCN or WWF.

Data collection according to CRSD – Sources for secondary data (1/1)

1. Public institutions

- **Federal Statistical Office (DESTATIS)**
- **Eurostat**
- **World Bank**
- **OECD**

2. Industry and trade organizations

- **Industry associations:** Federation of German Industries (BDI), industry organizations such as the VDA (automotive) or GD Holz (wood).
- **Chambers of commerce:** Chambers of Industry and Commerce (IHKs) or Chambers of Foreign Commerce.

3. Scientific and academic institutions

- **Universities:** Databases of universities and research institutions.
- **Open access databases:** PulPGd, ResearchGate, SpringerOpen.

4. Commercial providers

- **Market research companies:** Gartner, Nielsen, Forrester, Statista.
- **Databases:** Refinitiv, Bloomberg, FactSet.

5. NGOs and international organizations

- **UN and UN initiatives:** UN Global Compact, UNFCCC.
- **WWF, Greenpeace, IUCN:** Environmental and biodiversity data.
- **Amnesty International:** Data on social issues and human rights.

6. Digital platforms and tools

- **Satellite data platforms:** Google Earth Engine, Copernicus (ESA).
- **Supply chain tools:** EcoVadis, Sedex, IntegrityNext.

7. Media and trade journals

- **Trade media:** Industry magazines such as Handelsblatt and Wirtschaftswoche.
- **Online platforms:** LexisNexis, ProQuest for specific market and industry data.

Conclusion

- Secondary data offers a cost-effective way to gather information for sustainability reports or strategic decisions.
- Companies should use a combination of internal and external data sources to create the most comprehensive and accurate data basis possible.
- It is important to critically review the data to ensure that it is up to date and relevant.

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Short, simple descriptions of the four sustainability standards:

1) ISO 14001 – Environmental Management

ISO 14001 is an international standard that helps companies build an effective environmental management system. It guides organizations in reducing environmental impacts, improving resource efficiency, and complying with environmental laws.

2) SA8000 – Social Accountability

SA8000 is a global standard for fair and ethical working conditions. It focuses on workers' rights, including fair wages, safe working environments, no forced or child labor, and freedom of association.

3) FSC – Forest Stewardship Council

FSC certifies wood and paper products that come from responsibly managed forests. It ensures sustainable forestry practices that protect biodiversity, respect local communities, and prevent illegal logging.

4) Fairtrade – Ethical Trade & Better Prices for Producers

Fairtrade certifies products that are sourced under fair economic, social, and environmental conditions. It guarantees minimum prices, fair wages, safer working conditions, and sustainable farming practices for producers in developing countries.

Comparison Table: ISO 14001 vs. SA8000 vs. FSC vs. Fairtrade

Standard	Focus Area	Main Objective	Key Requirements	Applicable To	Type of Certification
ISO 14001	Environmental Management	Reduce environmental impact and improve environmental performance	Environmental management system, compliance with laws, resource efficiency, pollution prevention	Any organization, any industry	Management system certification
SA8000	Social & Labor Rights	Ensure ethical and fair working conditions	No child/forced labor, fair wages, safe workplace, working hours, freedom of association	Manufacturers, factories, suppliers	Social accountability certification
FSC	Sustainable Forestry	Promote responsible forest management	Protection of biodiversity, legal harvesting, rights of Indigenous peoples & workers	Forest owners, wood & paper supply chains	Product & chain-of-custody certification
Fairtrade	Ethical Trade & Producer Welfare	Improve livelihoods of farmers/workers in developing countries	Minimum price guarantee, fair wages, community development, sustainable farming	Agricultural producers, traders, food & textile companies	Product certification



Initiative for a global supply chain database – Measuring the economic world

A global supply chain database could help predict supply shortages caused by natural disasters. Thanks to digitalization, the global economy could be analyzed more accurately than ever before.

What is needed to achieve this is a database of the global supply chain network.

A researcher (Dr. Anton Pichler, Institute of Transport Economics and Logistics) at the Vienna University of Economics and Business (WU) is working on this together with scientists from various disciplines.

- The global economy consists of more than 300 million companies linked by a supply chain network with a total of 13 billion connections.
- For a long time, it was unthinkable to record and analyze these global flows of money and goods in their entirety—until now: Thanks to digitalization, there is suddenly a wealth of data available for entire economies.

A new data era

- A consortium of relevant institutions and scientists is making it possible for the first time to create a database of the global economy with a large part of its supply chains.
- Such a database would make it possible, for example, to better predict supply bottlenecks caused by natural disasters.
- Supply chains for essential goods such as food and medicine could be analyzed in detail and made more resilient to crises.
- A transparent supply chain network would also be an important building block for the transition from fossil fuels to renewable energy sources.



Push for a global supply chain database – Measuring the economic world

Value added tax as the key

- **But where will all this data come from?**
 - First and foremost, it will be **VAT data**, which is being collected at the company level in more and more countries, for example **through comprehensive e-invoicing**, i.e., electronic invoicing.
 - It is expected that **in the future, more and more countries will levy VAT in such a way that individual supply links can be reconstructed.**
 - **The EU Commission** is working on **setting an international digital standard**: With the **ViDA** ("VAT in the Digital Age") **initiative**, there has been an initiative for **EU-wide modernization of VAT** since 2022.
-
- Nevertheless, there will **always** be **gaps in the data network**, explains Dr. Anton Pichler (Institute for Transport Economics and Logistics).
 - The situation is more complex in the **US**, the world's largest economy, because there is **no uniform VAT** there.
 - And then there is **China**, the world's second-largest economy, which is usually uncooperative on such issues.
 - It is therefore necessary **to reconstruct data gaps – for example, using transaction data from payment service providers and banks, which can be analyzed with the help of artificial intelligence.**



How VAT Data Can Help Build a Global Supply Chain Database



VAT (Value Added Tax) systems record every taxable transaction between companies — meaning **every sale and purchase leaves a digital trace**.

- With the global shift toward **electronic invoicing (e-invoicing)** and harmonized reporting standards (e.g., the EU's ViDA initiative), VAT data is becoming a rich, structured, machine-readable data source.
- Because each invoice contains **buyer, seller, product type, price, and date**, VAT records effectively map the **supply chain link between two companies**.
- When millions of VAT transaction links across countries are aggregated, researchers can **reconstruct large parts of the global supply chain network**.

Why VAT Data Is So Powerful for Supply Chain Mapping

1. **VAT data is universal:** Almost every company worldwide is required to submit VAT information.
2. **Transaction-level detail** shows direct supply relationships (Company A → Company B).
3. **Digitized invoices (e-invoicing)** create standardized, high-quality datasets.
4. **Mandatory reporting** prevents gaps — companies must register their suppliers and customers.
5. **Real-time or near-real-time reporting** allows dynamic monitoring of supply flows.

What This Enables

Using VAT data, researchers can build a global supply chain database that allows:

- **Reconstruction of billions of supply links** across the world's 300+ million companies
- **Better forecasting of supply chain disruptions** (e.g., natural disasters, pandemics)
- **Analysis of critical supply chains** (food, medicine, energy)
- **Improved crisis resilience** and risk management
- **Transparency for the energy transition**, identifying dependencies on fossil-fuel value chains
- **Policy and economic modeling** based on real transaction flows

- VAT data serves as a universal digital footprint of economic activity.
- By aggregating and analyzing VAT transactions across countries, scientists can construct the first comprehensive, global supply chain network.

Details

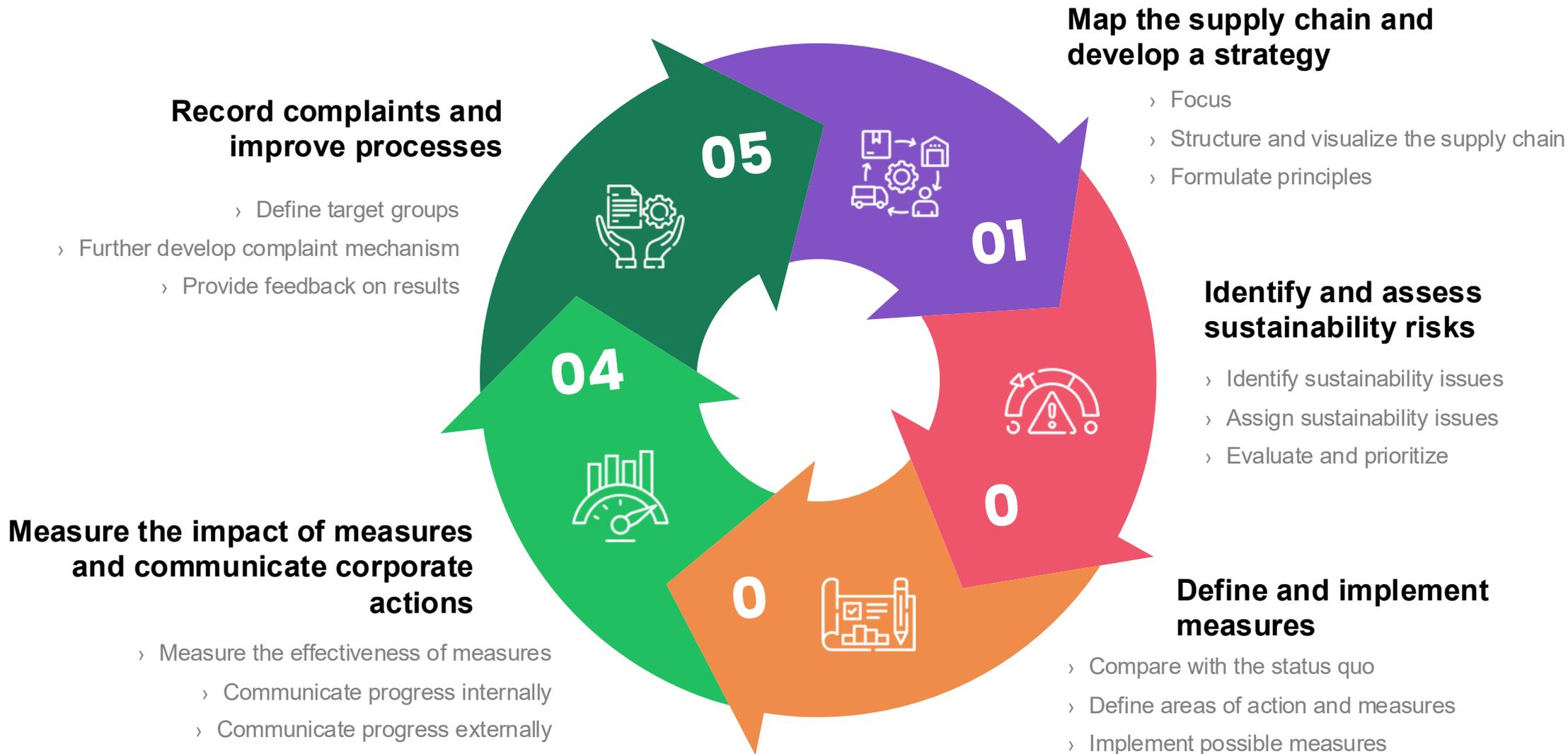
Step 2 - Identify and assess sustainability risks

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Overview of the five phases of supply chain analysis as a continuous improvement process



Introduction

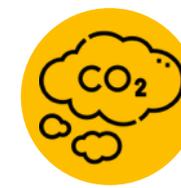
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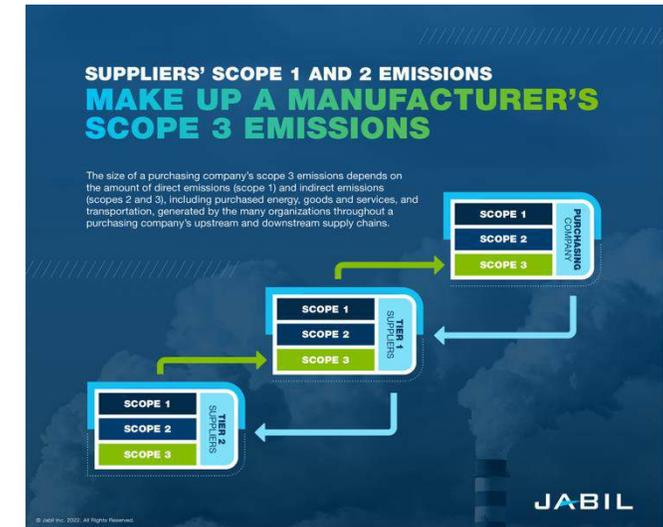
Phase 5

Challenges
CO2 calculation

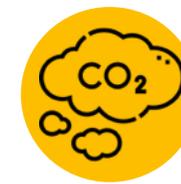
The challenges of reducing Scope 3 emissions

Collect accurate data to start measuring and benchmarking

- When it comes to emissions, you can't reduce what you can't measure and control
- **The first challenge for most companies is therefore to collect data - which is often outdated and isolated**—and obtain an accurate measurement of current emissions
- To support this process, **primary and secondary data** should be collected from **various sources along a company's value chain**
- **Companies often start their Scope 3 inventories by using secondary data**
- **Using primary data provides a more accurate, truthful picture of their emissions.** This is done by working with their suppliers and customers to obtain their actual emissions data rather than using industry averages – a process that requires time, effort and relationship building
- **Challenges in reporting** include **working with suppliers who may not be as far along in their emissions reduction journey**



- **Primary data** is considered to be known, specific emissions data for a particular product – this means that your company or a supplier can use existing data to accurately calculate how much carbon was emitted during the entire life cycle of a product or commodity, or at a specific step in the life cycle. (Basis: suppliers)
- **Secondary data** refers to figures that must be extrapolated from known data or estimated using equations that use emission factors and energy consumption data. (Source: databases)



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What data does the purchasing department need to calculate the carbon footprint of a procurement item?

1. Raw materials & materials

- Type and quantity of materials used (e.g., steel, plastic, wood)
- Origin & extraction method (e.g., recycled material vs. primary material)
- Emissions from raw material production (e.g., energy use in manufacturing)

2. Production & processing

- Energy consumption during production (electricity mix, renewable energies)
- Production process emissions (e.g., chemical reactions, heat treatment)
- Waste & by-products (quantities & disposal methods)

3. Transportation & logistics

- Means of transport & distance (e.g., truck, rail, ship, plane)
- Fuel consumption & emission factors (e.g., diesel consumption per km)
- Packaging materials & their carbon footprint

4. Use & service life

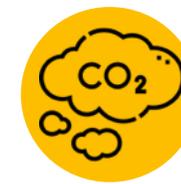
- Energy consumption during use (e.g., machine power consumption)
- Durability & repairability (life cycle vs. disposable product)
- Spare parts requirements & maintenance costs

5. Disposal & recycling

- End-of-life scenario (recycling, landfill, thermal recycling)
- CO₂ emissions from recycling or disposal
- Possibilities for reuse or circular economy

6. Data sources & calculation models

- Emissions from environmental and CO₂ databases (e.g., Ecoinvent, GaBi, DEFRA)
- Supplier information & environmental certificates (e.g., Product Carbon Footprint, LCA reports)
- Standardized CO₂ factors for transport, production, and energy



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Checklist for supplier inquiries (primary data) regarding CO₂ footprint

1. General product information

- ✓ Product name & item number
- ✓ Material composition (percentage of raw materials)
- ✓ Country of origin of materials

2. Production-related data

- ✓ Energy consumption per unit (kWh, gas, oil)
- ✓ Proportion of renewable energies in production
- ✓ Production waste & its recycling
- ✓ Water consumption & chemical emissions

3. Transport & logistics

- ✓ Production location & transport routes
- ✓ Means of transport (truck, rail, ship, plane)
- ✓ Packaging materials & their carbon footprint

4. Use & cycle

- ✓ Estimated service life of the product
- ✓ Energy consumption during use (if relevant)
- ✓ Maintenance requirements & spare parts requirements

5. Disposal & recycling

- ✓ Product recyclability (%)
- ✓ End-of-life scenario (landfill, incineration, reuse)
- ✓ Disposal costs & environmental standards

6. Certificates & reference values

- ✓ Existing **CO₂ certificates** (e.g., Product Carbon Footprint, ISO 14067)
- ✓ Use of environmental and climate databases (e.g., Ecoinvent, GaBi, DEFRA)
- ✓ Comparative values from similar products



Scope3 analyzer – Tool for recording CO2 emissions in the supply chain according to scope 3

Does your company know the greenhouse gas emissions in its own value chain? Find out with the free "scope3analyzer" tool.

- › Determining emissions through a corporate carbon footprint is the first important step in implementing climate protection measures in companies. At the same time, measuring CO2 emissions in the supply chain, the upstream Scope 3, poses a major challenge for these companies.
- › The scope3analyzer is a web-based tool that can be used to determine emissions in the upstream supply chain. The scope3analyzer provides an easy entry point into climate protection for companies: The tool is free of charge and can calculate emissions directly based on existing company data (consumption and purchasing data).
- › The tool is also report-compliant – common standards such as the Greenhouse Gas Protocol and CDP, as well as the Science Based Targets Initiative, accept the methodology used by scope3analyzer.
- › The scope3analyzer was developed through a collaboration between Sustain Consulting GmbH, THINKTANK Industrial Resource Strategies, and the Institute for Industrial Ecology at Pforzheim University with funding from the Baden-Württemberg Ministry of the Environment.

<https://sustain.com/news-und-views/der-scope3analyzer-ein-kostenfreies-carbon-footprinting-tool-fuer-scope-3/>

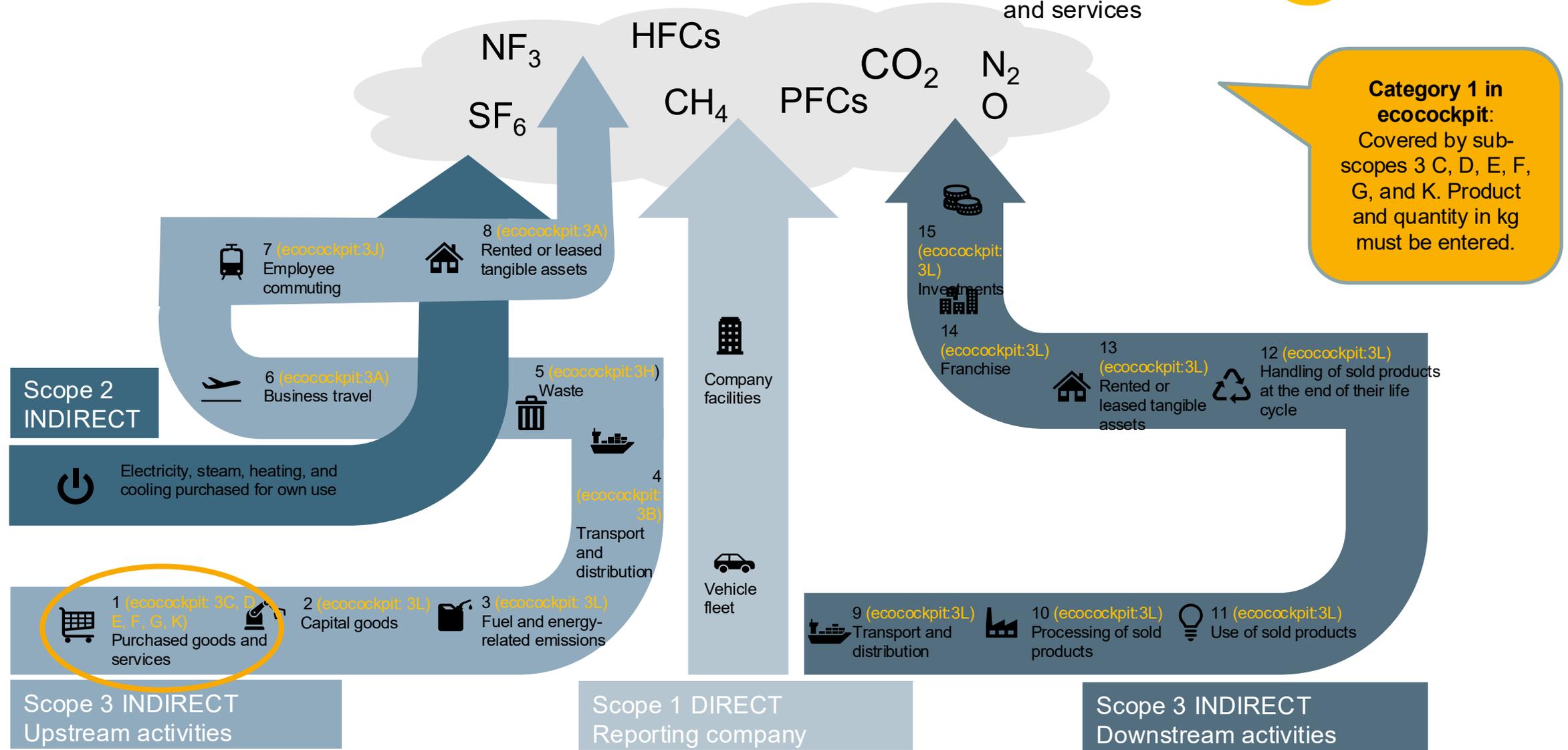
<https://scope3analyzer.pulse.cloud/>

Source: IPG Research

CONTENTS INTENDED FOR IPG MASTERCLASS PAI



Scope 3 emissions measurement -
 Category 1:
 Purchased goods and services



CONTENTS INTENDED FOR IPG MASTERCLASS PARTICIPANTS



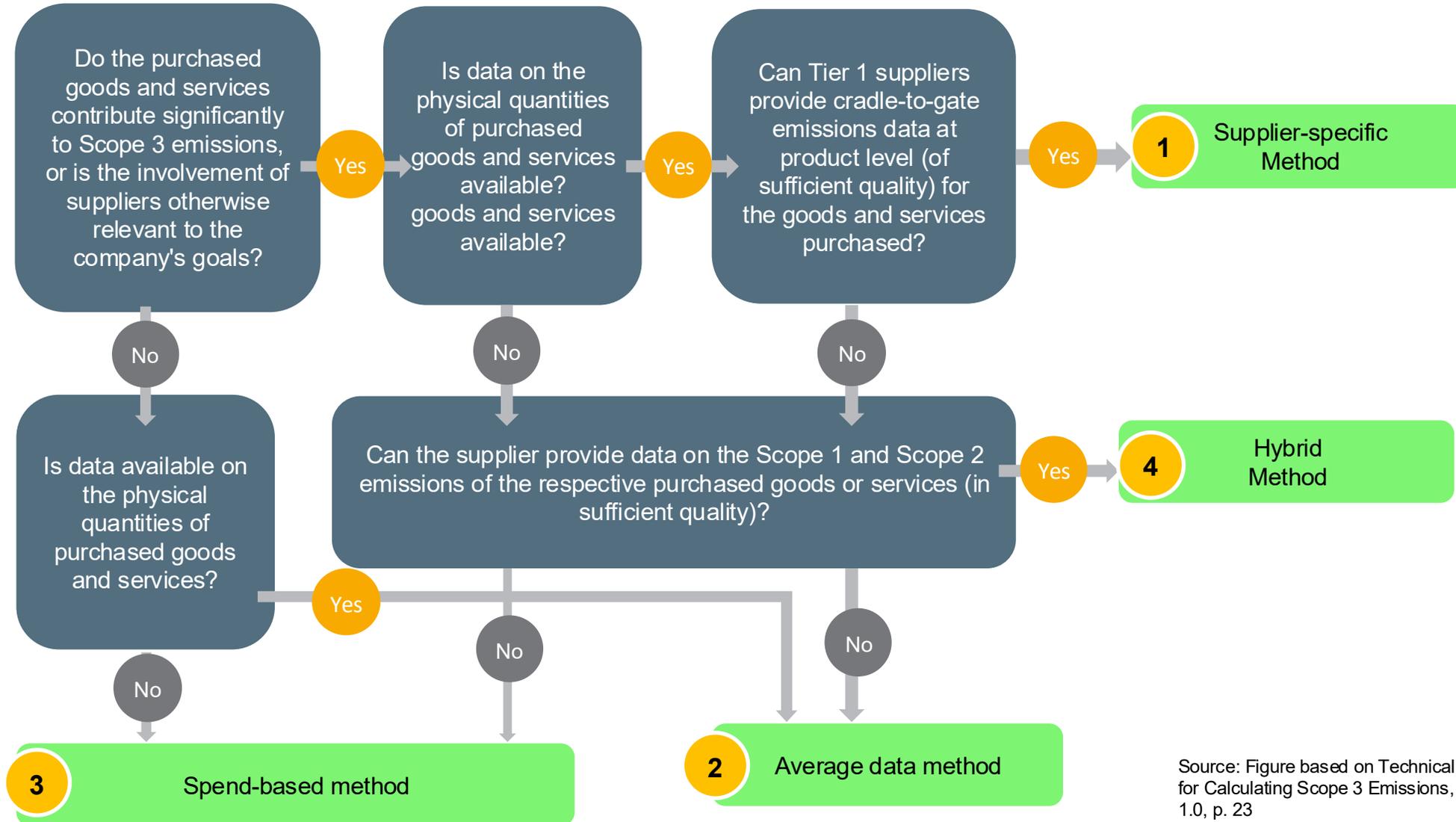
Method	Description	Procedure	Comments
Supplier-specific	GHG inventory data at product level Cradle-to-Gate from suppliers	<ol style="list-style-type: none"> 1. Identification of Tier 1 suppliers of "essential" raw materials/materials 2. Query of specific emissions from suppliers 3. Calculation of associated emissions <p>Note on the data: All data (upstream emissions and Scope 1 and 2 of suppliers) are specific to the suppliers' products.</p>	Challenges may include: <ul style="list-style-type: none"> • Depth of the value chain • High number of suppliers • Lack of knowledge or experience of suppliers with regard to accounting • Lack of transparency regarding the quality of supplier data • Language barriers
Average data	Emissions estimate based on the mass (eps. Weight) or other relevant units of the purchased goods or services multiplied by secondary emission factors	<ol style="list-style-type: none"> 1. Determination of the weight of 90% of the purchased materials 2. Research and application of cradle-to-gate emission factors for the materials 3. Extrapolation to 100% <p>Note: Emissions are based on secondary process data.</p>	The search for suitable emission factors is the biggest challenge here. The general guidance refers to public and fee-based databases.
Spend-based	Emissions estimate based on the economic value of purchased goods and services multiplied by secondary emission factors (e.g., average emissions per monetary value of goods)	<ol style="list-style-type: none"> 1. Determination of the amounts spent on purchased goods and services by product group, taking into account the market value (e.g., €) 2. Research and application of cradle-to-gate emission factors for the materials 3. Extrapolation to 100% <p>Note: Emissions are based on secondary process data.</p>	This method provides an initial and rough estimate of emissions.

Specific

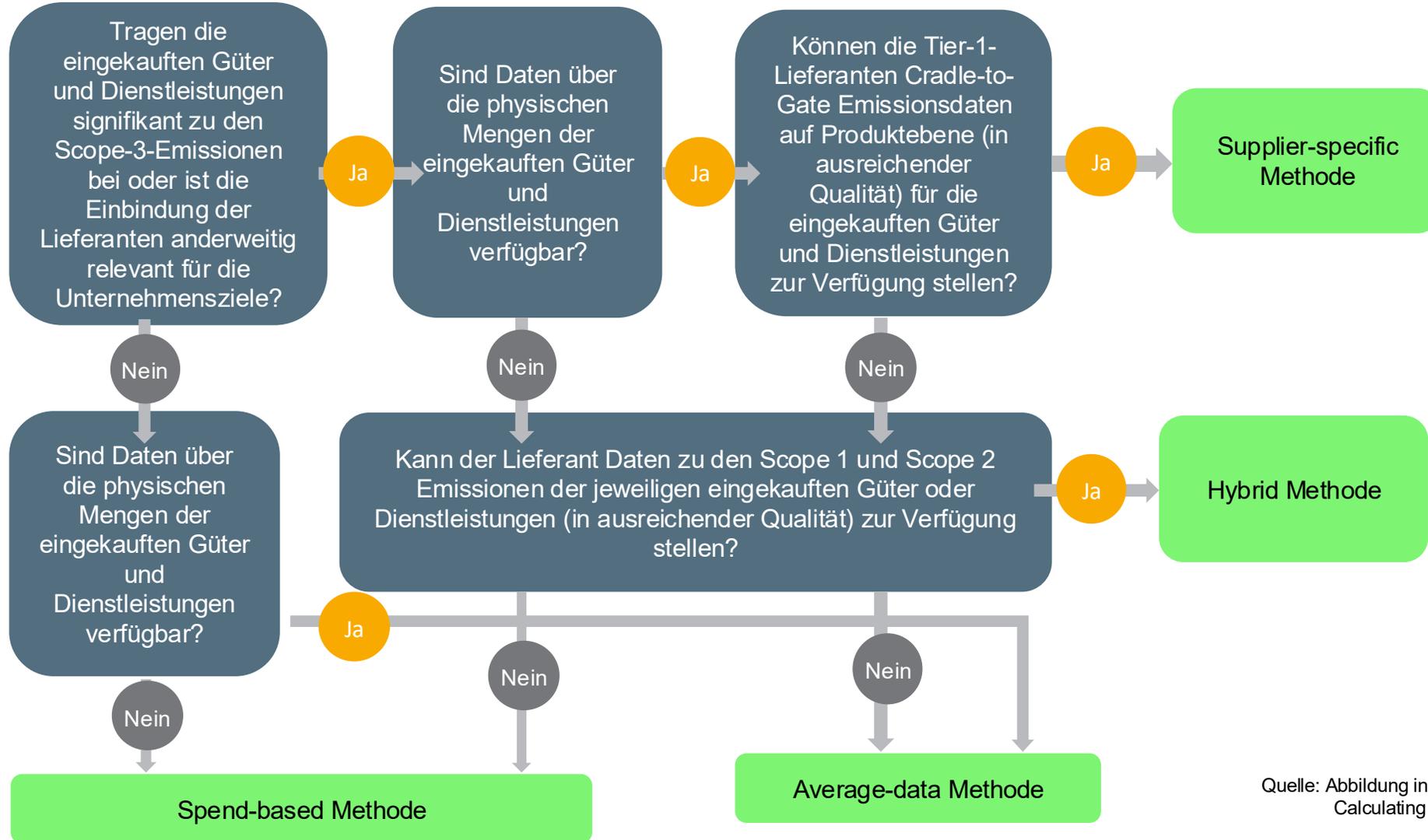
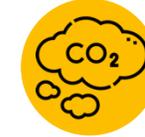
Mix of methods: The calculation can be performed by combining the methods (hybrid method).



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Source: Figure based on Technical Guidance for Calculating Scope 3 Emissions, version 1.0, p. 23



Weiterführende Informationen zur Berechnung finden Sie im Dokument [„Technical Guidance for Calculating Scope 3 Emissions“](#) auf S. 24-35.

Quelle: Abbildung in Anlehnung an Technical Guidance for Calculating Scope 3 Emissions, version 1.0, S. 23



Beschreibung	Mindestanforderungen	Querbeziehung zu anderen Kategorien	Relevant für
<p>Herstellung bzw. Gewinnung, Verarbeitung und Transport von eingekauften Gütern (materielle Produkte) und Dienstleistungen (immaterielle Produkte), soweit nicht in anderen Kategorien erfasst.</p> <p>Umfasst sowohl produktionsbezogene (z. B. eingesetztes Material) und nicht produktionsbezogene Produkte (z. B. Bürobedarf)</p> <p>In der Produktion eingesetzte Zwischenprodukte und Endprodukte</p>	<p>Cradle-to-Gate-Emissionen, die im Lebenszyklus der gekauften Produktionsrohstoffen und Betriebsmitteln bis zum Eingang beim berichtenden Unternehmen entstehen.</p> <p>Inkl. Emissionen aus vorgelagerten Recyclingprozessen</p>	<ul style="list-style-type: none"> Inkl. Transport, wenn dieser durch Lieferanten erfolgt (Cradle-to-Gate) Exkl. Transport, wenn dieser durch das Unternehmen separat beauftragt wird (→ Kategorie 4 Transport) <p><u>Abgrenzung zu:</u></p> <ul style="list-style-type: none"> <u>3.2 Kapitalgüter:</u> Für Produktion erforderliche Kapitalgüter (Maschinen, Gebäude, Anlagen) → Siehe Finanzbuchhaltung: diese Güter werden beschrieben 	<ul style="list-style-type: none"> Produzierende Gewerbe mit hohem Materialeinsatz und/oder mit energieintensiven eingekauften Dienstleistungen Online und stationärer Handel (Business-to-Business (B2B) und Business-to-Consumer (B2C)) Dienstleistungen je nach Intensität des Materialeinsatzes oder eingekaufter Dienstleistungen (z. B. Reinigungsunternehmen)

Weiterführende Informationen finden Sie im Dokument „[Technical Guidance for Calculating Scope 3 Emissions](#)“ auf S. 20-35.



Beispiel: Berechnung der CO₂-Emissionen eines Laptop-Kaufs für ein Unternehmen

Eingangsdaten:

- Anzahl: **100 Stück**
- Durchschnittsgewicht eines Laptops: **2,5 kg**
- Transport: **Luftfracht aus China nach Deutschland (~9.000 km)**
- Energieverbrauch: **50 kWh pro Jahr pro Laptop**
- Nutzungsdauer: **5 Jahre**



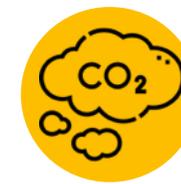
Emissionsfaktoren aus Datenbanken:

- **Herstellung: ~300 kg CO₂e pro Laptop** (Quelle: Ecoinvent)
- **Transport (Luftfracht): 0,7 kg CO₂e pro Tonne & km** (Quelle: DEFRA)
- **Stromverbrauch (Deutschland): 0,4 kg CO₂e pro kWh** (Quelle: GHG Protocol)
- **End-of-Life-Recycling: -50 kg CO₂e pro Laptop** (Kompensation durch Recycling, Quelle: GaBi)

CO₂-Emissionen eines Laptop-Kauf (100 Stück)

Phase	CO ₂ -Emissionen (kg CO ₂ e)
Berechnung der Herstellungsemissionen (Scope 3 – Kategorie 1 „Purchased Goods & Services“) Formel: CO ₂ -Emissionen = Anzahl der Laptops × Emissionen pro Gerät = 100 × 300 kg CO ₂ e = 30.000 kg CO ₂ e (30 Tonnen CO ₂ e)	30.000 kg CO₂e (30 Tonnen CO ₂ e)
Berechnung der Transportemissionen (Scope 3 – Kategorie 4 „Upstream Transportation & Distribution“) Formel: CO ₂ -Emissionen = Transportdistanz × Emissionsfaktor × Frachtgewicht = 9.000 km × 0,7 kg CO ₂ e/Tonnen-km × (100 × 2,5 kg) / 1.000 kg = 9.000 × 0,7 × 0,25 = 1.575 kg CO ₂ e (1,58 Tonnen CO ₂ e)	1.575 kg CO₂e (1,58 Tonnen CO ₂ e)
Berechnung der Nutzungsphase (Scope 3 – Kategorie 11 „Use of Sold Products“) Formel: CO ₂ -Emissionen = Anzahl × Energieverbrauch pro Jahr × Jahre × Emissionsfaktor Strom = 100 × 50 kWh × 5 Jahre × 0,4 kg CO ₂ e/kWh = 100 × 50 × 5 × 0,4 = 10.000 kg CO ₂ e (10 Tonnen CO ₂ e)	10.000 kg CO₂e (10 Tonnen CO ₂ e)
Berechnung der End-of-Life-Emissionen (Scope 3 – Kategorie 12 „Disposal & Recycling“) Formel: CO ₂ -Einsparung durch Recycling = Anzahl × Reduktion pro Laptop = 100 × -50 kg CO ₂ e = -5.000 kg CO ₂ e (-5 Tonnen CO ₂ e)	= -5.000 kg CO₂e (-5 Tonnen CO ₂ e)
Gesamtbilanz CO₂-Fußabdruck	36.575 kg (36,6 Tonnen CO₂e)





Databases
CO2 calculation

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Emissions factors from specialized databases containing industry-specific values for various materials, processes, transport, and end-of-life scenarios are required to calculate Scope 3 emissions

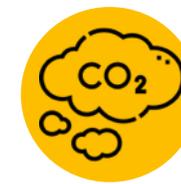
The screenshot shows the Data.gov website interface. At the top, there's a navigation bar with 'DATA', 'METRICS', 'OPEN GOVERNMENT', and 'CONTACT'. Below that, a banner promotes the next-generation Data Catalog. The main content area displays a dataset page for 'Supply Chain Greenhouse Gas Emission Factors v1.2 by NAICS-6' published by the U.S. Environmental Protection Agency. The page includes a description of the dataset, metadata (updated April 20, 2023), and access information. The description states that the dataset consists of 1,016 U.S. commodities with GHG emission factors based on 2019 data, categorized by NAICS. It details three factor types: Supply Chain Emissions without Margins (SEF), Margins of Supply Chain Emissions (MEF), and Supply Chain Emissions with Margins (SEF+MEF). It also provides information on the units (kg CO2e per USD) and the supporting file for documentation.

<https://data.gov/user-guide/>

<https://catalog.data.gov/dataset/supply-chain-greenhouse-gas-emission-factors-v1-2-by-naics-6>

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Emissions factors from specialized databases containing industry-specific values for various materials, processes, transport, and end-of-life scenarios are required to calculate Scope 3 emissions

Ecoinvent (Switzerland)

- Most comprehensive global database for environmental and life cycle assessments (LCA)
- Contains emission factors for **materials, transport, energy, processes, and disposal**
- Used in software tools such as SimaPro and GaBi
- **Website:** www.ecoinvent.org
- **Cost:** License required

EXIOBASE (EU)

- Multi-Regional Input-Output Database (MRIO)
- Calculates environmental impacts along the entire value chain
- Contains data for **raw materials, transport, production, and waste management**
- **Website:** www.exiobase.eu
- **Cost:** Open source

DEFRA/BEIS (UK Government)

- Contains detailed emission factors for **CO₂, CH₄, N₂O & other greenhouse gases**
- Includes emissions values for **transport, energy use, materials & supply chains**
- Particularly useful for **UK companies and supply chain analysis**
- **Website:** DEFRA Emissions Factors
- **Cost:** Free

US EPA Emission Factors Hub

- Official database of the US Environmental Protection Agency
- Contains values for **industrial processes, energy consumption & supply chain emissions**
- Particularly relevant for **US-based companies**
- **Website:** [US EPA Factors](https://www.epa.gov/emission-factors)
- **Cost:** Free

GHG Protocol Emissions Factors

- Standardized factors for calculating **Scope 1, 2 & 3 emissions**
- Used worldwide for corporate carbon footprinting (CCF)
- Includes industry-specific benchmarks
- **Website:** www.ghgprotocol.org
- **Cost:** Free

GaBi LCA Database

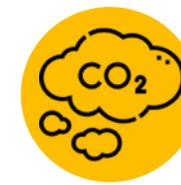
- High-quality data for **life cycle assessments (LCA)**
- Contains detailed values for **materials, production, transport, and recycling**
- Available in Sphera's GaBi software
- **Website:** www.gabi-software.com
- **Cost:** License required

OpenLCA Nexus

- Open source database for environmental assessments & CO₂ calculations
- Contains various emission factors from international sources
- Supports life cycle assessment (LCA) for companies
- **Website:** www.openlca.org/nexus
- **Cost:** Partially free

Climatiq API

- API-based emission factors for digital calculations
- Automatic CO₂ tracking integration for companies
- Includes values for **energy, transport, and supply chains**
- **Website:** www.climatiq.io
- **Cost:** Partially free



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Use specialized material-sustainability databases for your material criticality assessment

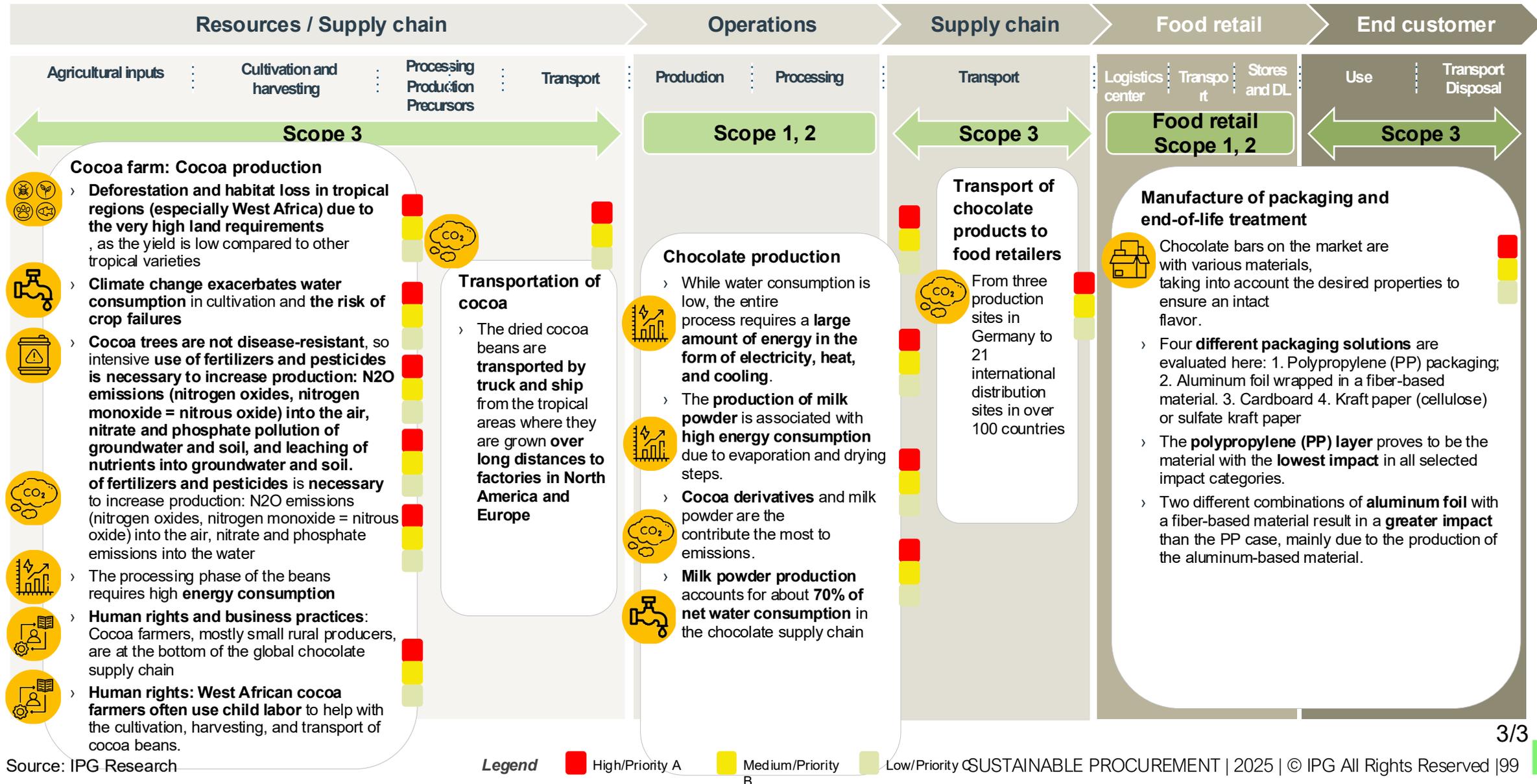
No.	Database / Website	Focus & Description	Access Notes
1	US Life-Cycle Inventory (USLCI) Database (NREL, USA)	Life cycle inventory (LCI) data for materials, components & processes (cradle-to-gate etc.). (nrel.gov)	Free (registration required)
2	openLCA / openLCA Nexus	Open-source LCA software + repository of free + commercial datasets for materials & processes. (openlca.org)	Free core software; datasets may vary
3	ecoinvent	Large global LCI database covering many sectors and materials; high quality but license required. (ecoinvent)	Freemium/licensed
4	Federal LCA Commons	U.S. repository linking multiple LCA datasets for materials, processes and energy flows. (lcacommons.gov)	Free access
5	GHG Protocol – Life Cycle Databases page	Overview & links to many free LCI datasets across materials & sectors. (ghgprotocol.org)	Free links
6	Materials Project	Scientific database with material properties & compositions (useful for sustainability screening). (Wikipedia)	Free access
7	LCA Commons (USDA)	Open access dataset repository for materials, agricultural & industrial processes. (agdatacommons.nal.usda.gov)	Free access
8	WIPO GREEN	Database of sustainable technologies and innovations — helpful for finding low-impact materials/solutions. (Wikipedia)	Free registration
9	Environmental Working Group (EWG)	Chemical/material hazard information for consumer goods — supports material risk screening. (EWG)	Free access
10	OECD / World Bank Data Portals	Macro data on resource use, material flows, waste — useful background for material assessment. (library.csueastbay.edu)	Free access

Sustainability risk analysis



Risk analysis using the
example of
**value chain
chocolate**

Sustainability along the entire food value chain – example: chocolate



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Good Practice Beispiel

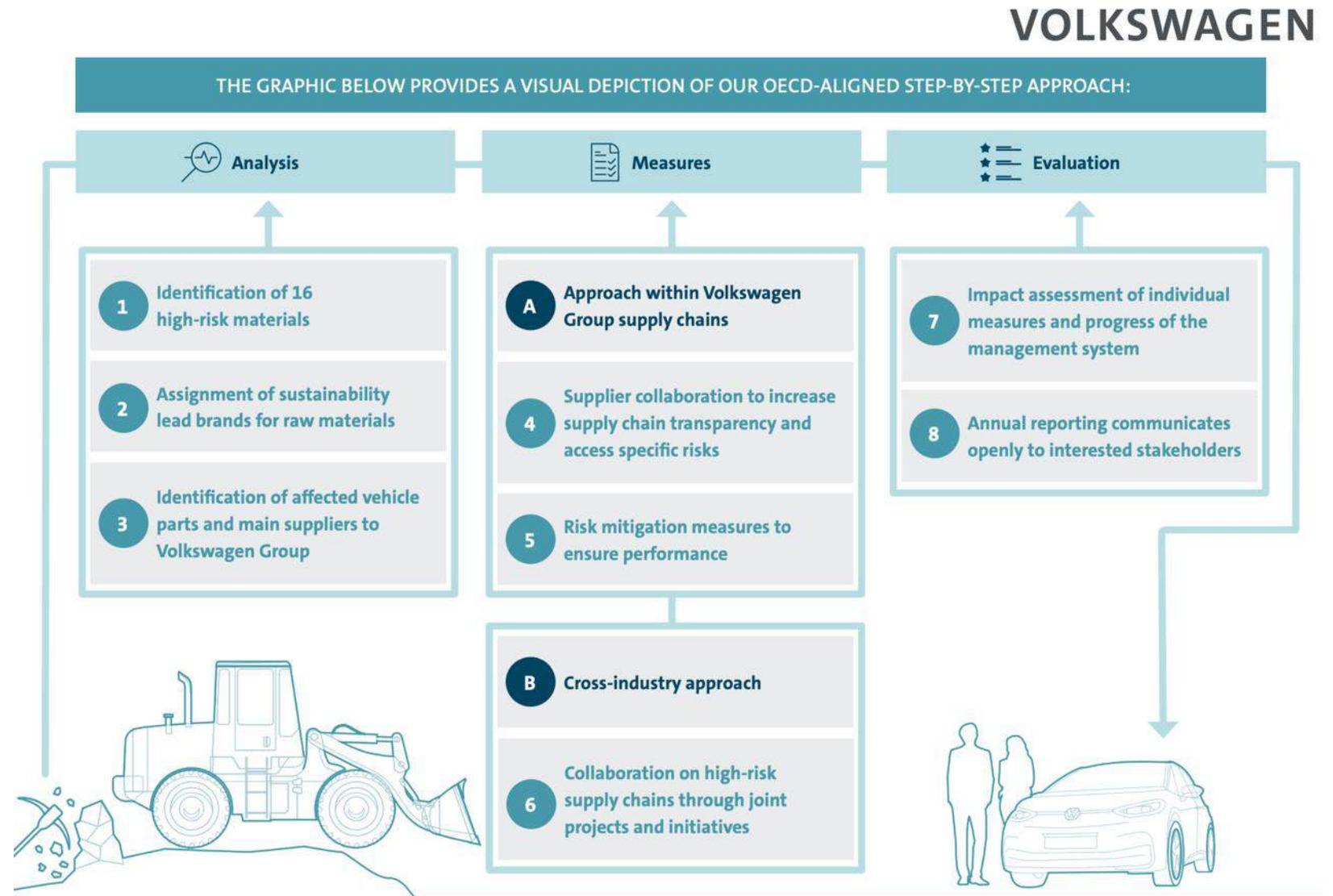


VOLKSWAGEN

Good Practice Beispiel Supply Chain Analysis for critical raw materials

Volkswagen – Development of sustainable WG strategy – Risk and Audit Approach

- › In 2020 and 2021, Volkswagen Group implemented different approaches⁶ for the identification of risks in different raw material supply chains
- › Risk assessment and selection of initial risk mitigation efforts did begin in 2020;
- › however, the majority of this work was carried out in 2021 and is currently ongoing and continuously evolving



Volkswagen – Responsible Raw Material Report 2021

VOLKSWAGEN

	 Risks to workers' occupational health and safety	 Adverse environmental impacts								
	 Child Labor	 Modern Slavery	 Systematic or widespread human rights abuses	 Human rights abuses committed by public or private security forces	 Support to non-state armed groups or public or private security forces	 Risks to workers' occupational health and safety	 Adverse environmental impacts	 Infringement on labor rights	 Discrimination and harassment	
	 Child Labor	 Modern Slavery	 Systematic or widespread human rights abuses	 Human rights abuses committed by public or private security forces	 Support to non-state armed groups or public or private security forces	 Risks to workers' occupational health and safety	 Adverse environmental impacts	 Infringement on labor rights	 Discrimination and harassment	 Threats to indigenous people and communities
	 Human rights abuses committed by public or private security forces		 Risks to workers' occupational health and safety	 Adverse environmental impacts	 Infringement on labor rights	 Threats to indigenous people and communities				
	 Child Labor	 Modern Slavery	 Systematic or widespread human rights abuses	 Human rights abuses committed by public or private security forces	 Support to non-state armed groups or public or private security forces	 Risks to workers' occupational health and safety	 Adverse environmental impacts	 Infringement on labor rights	 Discrimination and harassment	 Threats to indigenous people and communities

Volkswagen – Responsible Raw Material Report 2021

VOLKSWAGEN

	 Child labor	 Modern slavery	 Systematic or widespread human rights abuses	 Adverse environmental impacts	 Threats to indigenous people and communities				
	 Adverse environmental impacts	 Threats to indigenous people and communities							
	 Adverse environmental impacts	 Risks to workers' occupational health and safety	 Child labor	 Modern Slavery	 Discrimination and harassment, including against vulnerable groups	 Infringement on labor rights			
	 Threats to indigenous people and communities								
	 Child Labor	 Modern Slavery	 Systematic or widespread human rights abuses	 Human rights abuses committed by public or private security forces	 Support to non-state armed groups or public or private security forces	 Risks to workers' occupational health and safety	 Adverse environmental impacts	 Infringement on labor rights	 Discrimination and harassment
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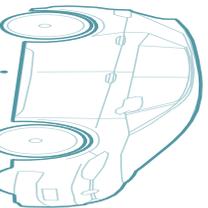
Volkswagen Supply Chain Analysis for critical raw materials – Example Cobalt



KEY APPLICATION

OUR APPROACH: RISK IDENTIFICATION AND RISK ASSESSMENT RESULTS

Given the complexity of the cobalt supply chain, yet relatively high leverage Volkswagen Group has as a downstream customer, we chose the following approaches to risk identification and assessment:



Hi battery

The Volkswagen Group does not source any of the battery raw materials - lithium, cobalt, nickel or graphite - directly. Therefore, we work closely with battery cell producers to engage with the upstream sector, increase supply chain transparency and make sure that battery raw minerals are produced and sourced responsibly. Since 2020, we have incorporated binding requirements into all new battery supply contracts to disclose upstream information up to the mine. In 2021, we combined our direct engagement with battery cell producers to collect this data through supply chain mapping questionnaires, analyze and assess it to identify responsible sourcing risks.

- We continued working closely with battery suppliers to collect information on the origin of raw materials. This process has been facilitated by contractual requirements for all new suppliers since 2020 to regularly disclose details of sub-suppliers up to the mine site. By the end of 2021, 4 suppliers had disclosed this information to us.

- Since 2019, Volkswagen Group launched a mapping and audit program for responsible sourcing in close cooperation with two major battery suppliers. The results of the initial assessments defined further audit activities in 2021, which were focused on high-volume battery and automotive projects and high-risk suppliers, as well as on monitoring corrective actions.



We identified the following countries of origin in our supply chain: Australia, China, DR Congo, Russia, Turkey,

- Through the global mapping and auditing program, over 200 suppliers have been identified. In a risk-based approach, we prioritized 25 suppliers including battery and cathode manufacturers, refiners and treatment units to undergo OECD-aligned responsible sourcing audits by the end of 2021. No critical breaches of human rights risks were identified through the audits; however, suppliers are encouraged to improve their policies and systems for preventing and managing risks. In terms of their alignment to OECD Mineral Guidance, the majority of suppliers performed better in demonstrating a due diligence

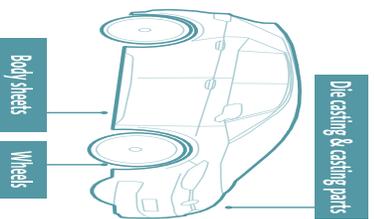
KEY MATERIAL-SPECIFIC RISKS

	Child labor		Modern slavery		Systemic or widespread human rights abuses		Human rights abuses committed by public or private security forces		Support to non-state armed groups or public or private security forces		Risks to workers' occupational health and safety		Adverse environmental impacts		Mismanagement on labor rights		Discrimination and harassment
--	-------------	--	----------------	--	--	--	--	--	--	--	--	--	-------------------------------	--	-------------------------------	--	-------------------------------

Volkswagen Supply Chain Analysis for critical raw materials – Example Aluminium



KEY APPLICATION



OUR APPROACH: RISK IDENTIFICATION AND RISK ASSESSMENT RESULTS

RISK MITIGATION ACTIONS TAKEN: FACTS AND FIGURES

Volkswagen Group's approach focused on engagement in the Aluminium Stewardship Initiative (ASI), a global multi-stakeholder standard-setting organization focused on responsible production, sourcing and stewardship of aluminium.

As early as 2018, Audi AG, as a member of Volkswagen Group became the first car manufacturer to be awarded the Performance Standard certificate

By the end of 2021, ASI had 108 members involved in the production and transformation of aluminium, of which 70 had been audited against and received certification for the ASI Performance Standard.



from the ASI (re-certified in 2021) and was certified against the ASI Chain of Custody Standard in 2020. As a result, Audi AG supports the responsible sourcing enhanced recycling and material stewardship of aluminium. This certification applies to the German facilities and will be continuously rolled out over further entities, brands, new vehicle projects and further aluminium products.

KEY MATERIAL-SPECIFIC RISKS



Child labor

Based on the information gathered via audits, stakeholder engagement and research, the ASI provides valuable insights for our risk identification and assessment in the aluminium supply chain.

The Group hosted two internal training sessions for the raw material working group, with focus on sustainable aluminium, ASI certification, process adoption and an exchange with the CEO of ASI. As a result of this internal capacity building, the purchasing of ASI-certified material was rolled out in a pilot to another Volkswagen brand with approximately 10,000 tons of ASI COC-certified material.



Modern slavery

Countries of origin of ASI-certified Bauxite production include

Australia, Brazil, Greece, Russia and Saudi Arabia.



OUTLOOK 2022

Sustainability standards and certification schemes for aluminium only recently began to gain traction in the upstream and midstream sector. Therefore, the availability of certified material on the market is still limited. The roll-out of ASI certifications can be especially challenging in certain markets due to the local regulatory environment. Volkswagen Group will continue to promote the ASI certification and support suppliers in improving their responsible sourcing performance.

In the near future, Volkswagen Group aims to introduce a specification document for its aluminium suppliers. For certain types of products, it will include a binding requirement for ASI certification or ASI membership of the suppliers.



Adverse environmental impacts

Aluminium is one of the critical raw materials covered in the Drive

Sustainability Raw Material Outlook, which provides data for risk identification and assessment of the material in our supply chains. In 2021, we began reviewing this data and will continue to assess it in 2022.



Threats to indigenous people and communities

Good Practice Beispiel



Mercedes-Benz

Good Practice Beispiel Supply Chain Analysis for critical raw materials

Mercedes Supply Chain Analysis for critical raw materials – Example Battery cells

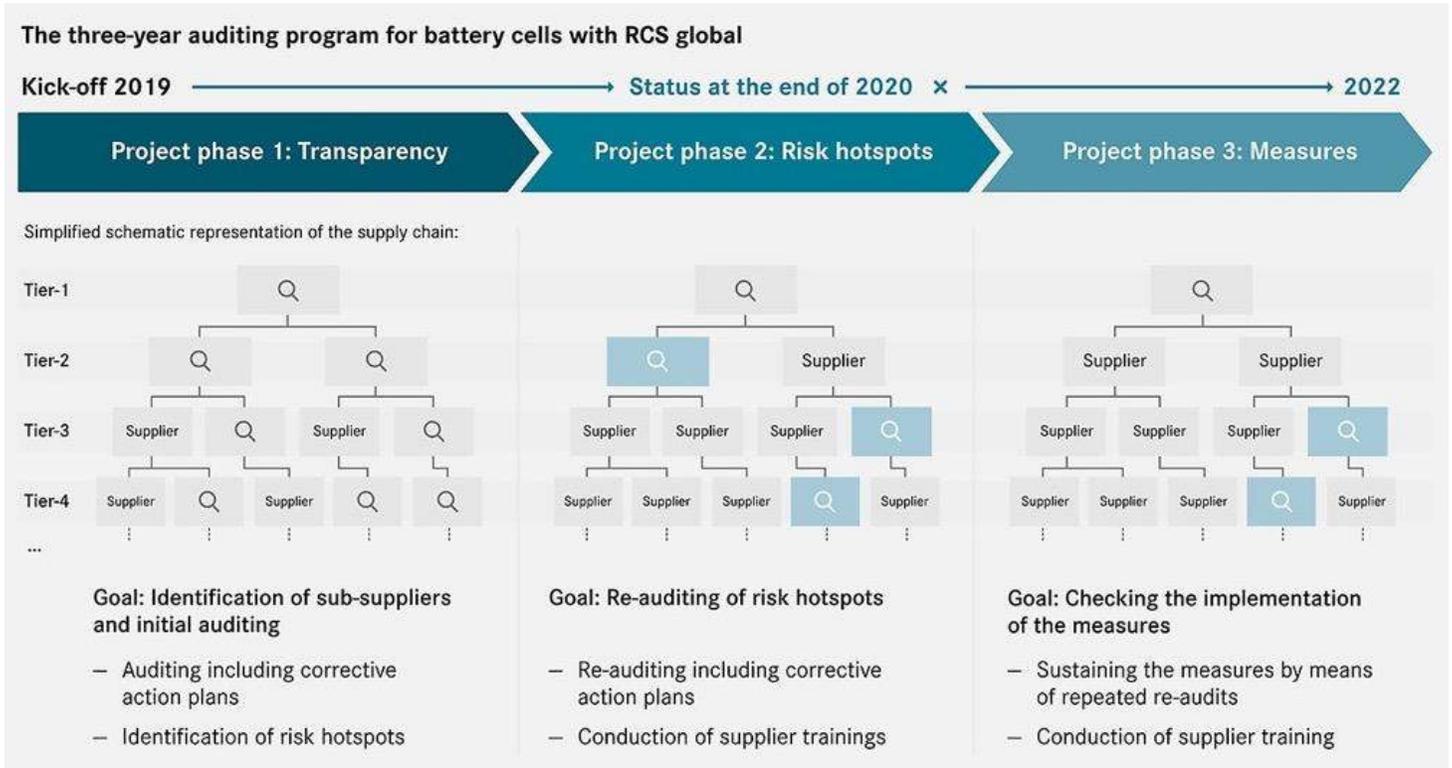
- › The supply chains of battery cell suppliers to Mercedes-Benz are assessed at all tiers, from battery cell supplier to mine site, by RCS Global.
- › This assessment includes aspects such as the prevention of child labour and forced labour, health and safety at work, material control and due diligence systems. Where necessary individual corrective action plans are agreed with the suppliers and their implementation is continuously monitored.
- › The aim of this corrective action and regular monitoring is to ensure that a continuous improvement process takes place in the supply chain. This ultimate aim is that the cobalt for battery cells comes from responsible sources of supply that meet the requirements of Mercedes-Benz AG.

The program's aims are as follows:

- › Creating transparency and auditing of the company's cobalt supply chain at every tier from the battery cell supplier down to mine level
- › Auditing the due diligence management systems and procurement practices of suppliers in the cobalt supply chain
- › Initiate a process of continuous improvement by monitoring the implementation of corrective action plans and providing auditee trainings.

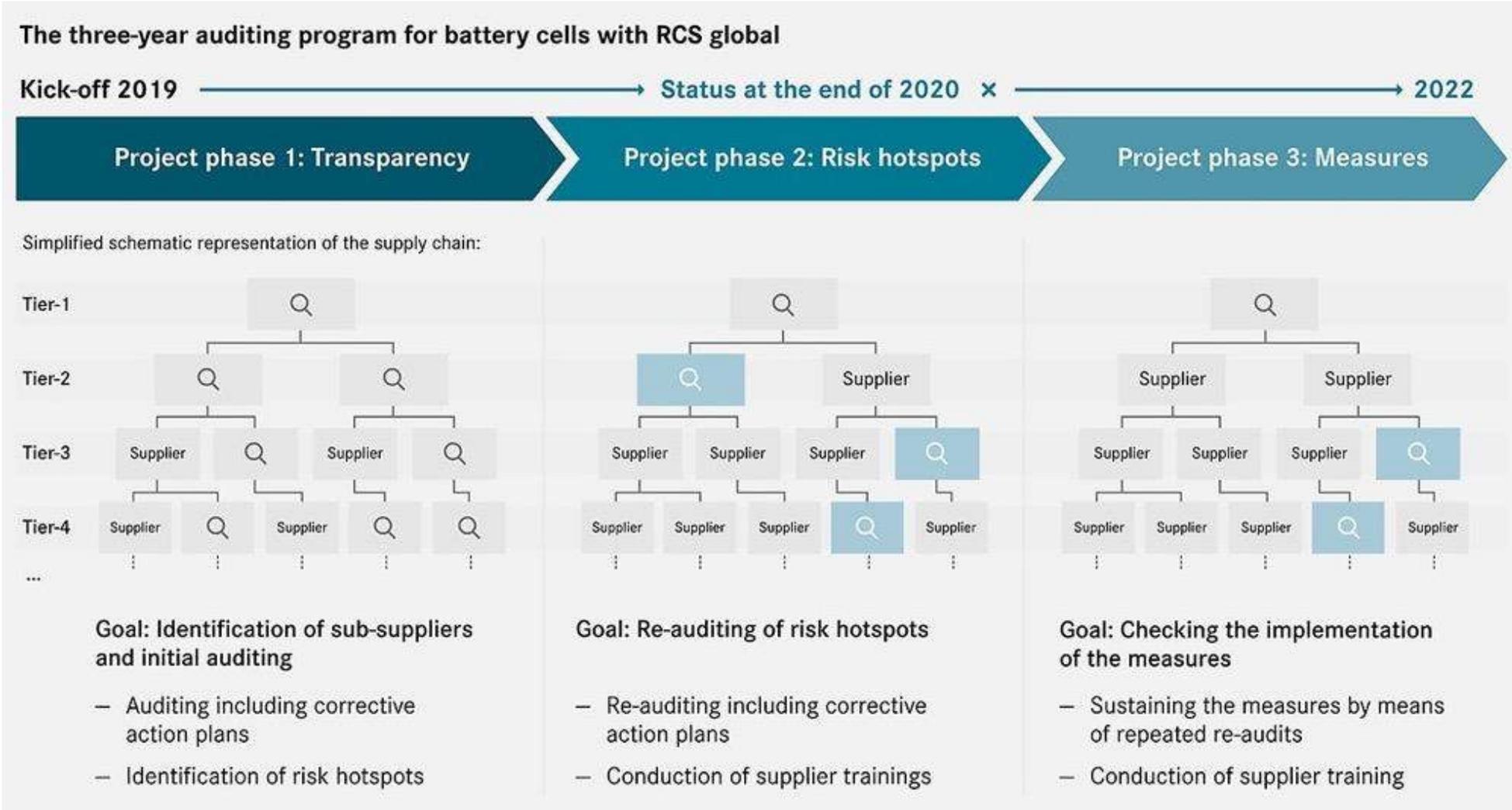


Auditing of the cobalt chain according OECD guidelines



Mercedes Supply Chain Analysis for critical raw materials – Example Battery cells

Auditing of the cobald chain according OECD guidelines



Details

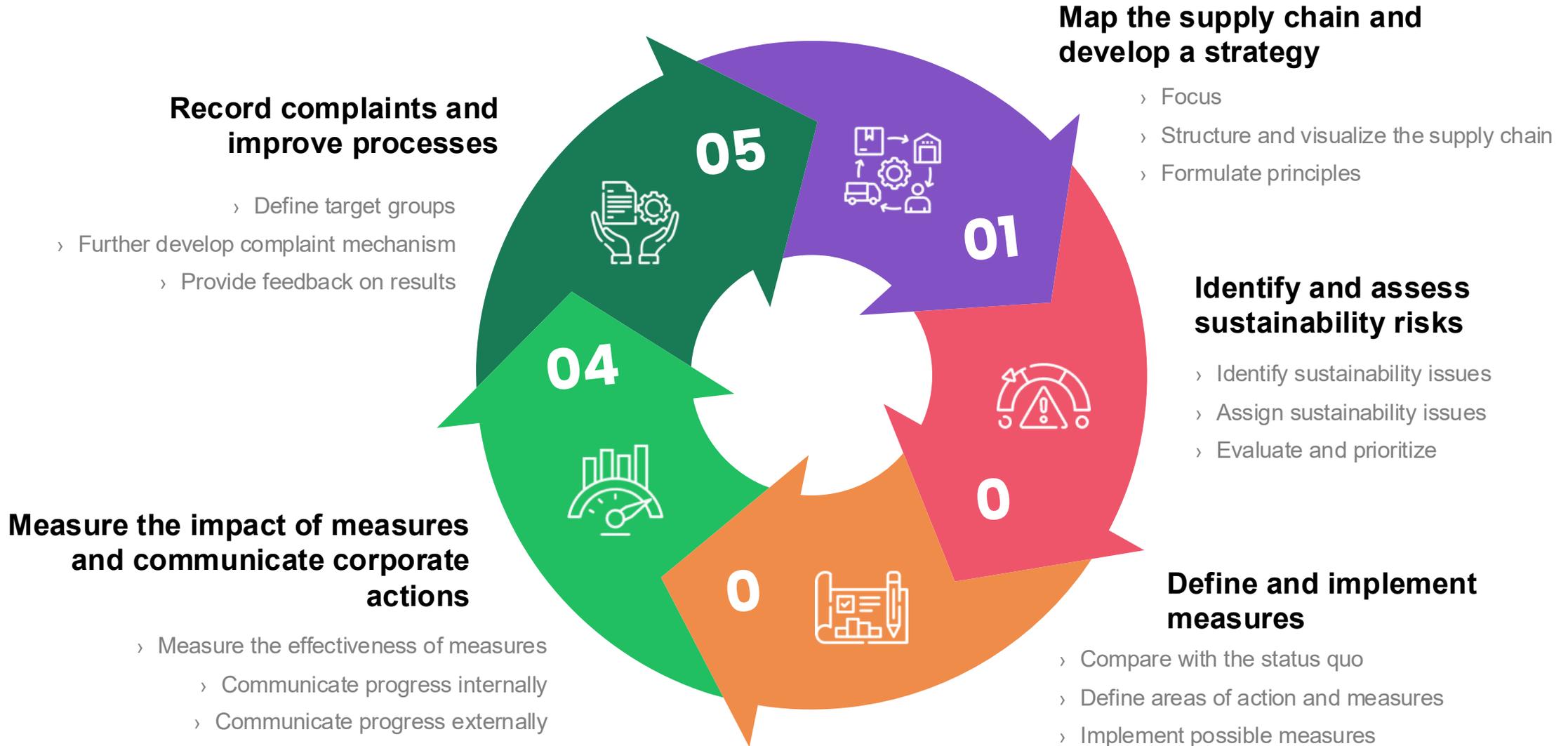
Step 3 - Define and implement measures

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Overview of the five phases of supply chain analysis as a continuous improvement process



Introduction

Phase 1

Phase 2

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Phase 5

Strategies for reducing sustainability risks in the supply chain

1. Preventive strategies for risk avoidance

These measures aim to **minimize or avoid risks from the outset, before violations occur.**

A. Supplier code of conduct and contract clauses

- Introduction of a **code of conduct** with binding social and environmental standards
- Incorporation of **sustainability criteria** into supplier contracts (e.g., requirements regarding labor rights, environmental protection)
- Requiring suppliers to **report regularly** on sustainability measures

B. Supplier evaluation and audits

- **Risk-based supplier selection:** Only suppliers with proven sustainability performance receive orders
- **Regular sustainability audits** (e.g., BSCI, SA8000, SEDEX) to verify environmental and social standards
- Use of **supplier rating platforms** (e.g., EcoVadis, IntegrityNext)

C. Training and awareness-raising for suppliers

- **Training programs** on sustainable production, occupational safety, and compliance
- Establishment of **partnerships with NGOs** and industry associations for knowledge transfer
- Promotion of **local capacities** to strengthen sustainable alternatives on site

2. Long-term sustainability strategies

Sustainability risks can only be minimized through **systematic change** and **sustainable strategies.**

A. Diversification of the supply chain

- Avoiding **dependencies on high-risk countries** through sourcing strategies (e.g., nearshoring or reshoring)
- Establishing **alternative suppliers** with better ESG standards
- Promoting **regional supply chains** to reduce transport routes and CO₂ emissions

B. Implementation of circular economy models

- Promoting **recycling and take-back systems** to reduce waste and environmental impact
- Procuring **sustainable materials** with a low carbon footprint
- Collaborating with **certified producers** who implement circular economy principles

C. Use of technology for greater transparency

- **Blockchain technology** for the traceability of raw materials
- Use of **IoT-based systems** to monitor environmental and working conditions in real time
- Use of **artificial intelligence (AI)** for risk analysis and fraud detection in the supply chain

3. Corrective measures in the event of identified violations

If violations are identified in the risk analysis, **immediate countermeasures** must be taken.

A. Immediate measures in the event of serious violations

- **Risk-based escalation levels** (e.g., warnings, time frames for corrections, emergency plans)
- **Setting deadlines for remedying deficiencies** and regular follow-up
- **Sanctions or termination of contract** if suppliers fail to improve despite measures taken

B. Supplier development instead of immediate termination

- Supporting suppliers in implementing improvement measures
- Providing **technical advice** or investing in more sustainable production methods
- Establishing **long-term partnerships** to support sustainable transformations

Introduction

Phase 1

Phase 2

Phase 3

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Phase 5

1. Preventive strategies for risk avoidance

These measures aim **to minimize or avoid risks from the outset, before violations occur.**

A. Supplier code of conduct and contract clauses

- Introduction of a **code of conduct** with binding social and environmental standards
- Incorporation of **sustainability criteria** into supplier contracts (e.g., requirements regarding labor rights, environmental protection)
- Requiring suppliers to **report regularly** on sustainability measures

B. Supplier evaluation and audits

- **Risk-based supplier selection:** Only suppliers with proven sustainability performance receive orders
- **Regular sustainability audits** (e.g., BSCI, SA8000, SEDEX) to verify environmental and social standards
- Use of **supplier rating platforms** (e.g., EcoVadis, IntegrityNext)

C. Training and awareness-raising for suppliers

- **Training programs** on sustainable production, occupational safety, and compliance
- Establishment of **partnerships with NGOs** and industry associations for knowledge transfer
- Promotion of **local capacities** to strengthen sustainable alternatives on site

2. Long-term sustainability strategies

Sustainability risks can only be minimized through **systematic change** and **sustainable procurement strategies**.

A. Diversification of the supply chain

- Avoiding **dependencies on high-risk countries** through sourcing strategies (e.g., nearshoring or reshoring)
- Establishing **alternative suppliers** with better ESG standards
- Promoting **regional supply chains** to reduce transport routes and CO₂ emissions

B. Implementation of circular economy models

- Promoting **recycling and take-back systems** to reduce waste and environmental impact
- Procuring **sustainable materials** with a low carbon footprint
- Collaborating with **certified producers** who implement circular economy principles

C. Use of technology for greater transparency

- **Blockchain technology** for the traceability of raw materials
- Use of **IoT-based systems** to monitor environmental and working conditions in real time
- Use of **artificial intelligence (AI)** for risk analysis and fraud detection in the supply chain

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3. Corrective measures in the event of identified violations

If violations or abuses are identified in the risk analysis, **immediate countermeasures** must be taken.

A. Immediate measures in the event of serious violations

- **Risk-based escalation levels** (e.g., warnings, time frames for corrections, emergency plans)
- **Setting deadlines for remedying deficiencies** and regular follow-up
- **Sanctions or termination of contract** if suppliers fail to improve despite measures taken

B. Supplier development instead of immediate termination

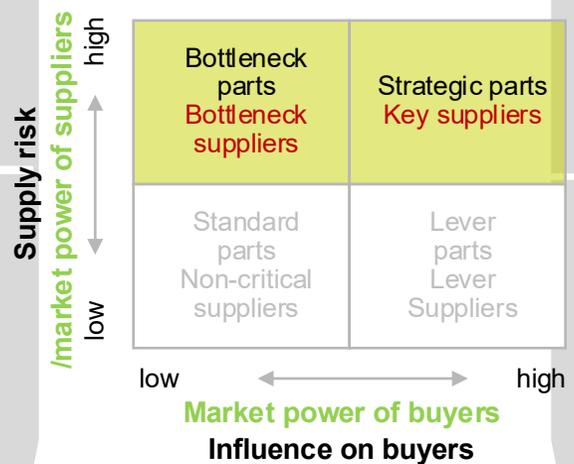
- **Supporting suppliers in implementing** improvement measures
- Providing **technical advice** or investing in more sustainable production methods
- Establishing **long-term partnerships** to support sustainable transformations

20 strategic purchasing levers for sustainability – overview

Improvement of specifications

- S1 **Changing specifications** to promote sustainability
- S2 **Changing product design** (e.g. through modularity, reparability, lightweight construction) for greater sustainability
- S3 **Innovations**: Actively pursuing sustainability innovations among our suppliers
- S4 **Demand management**: Reduction of demand ("reduce") in product groups with high criticality/high sustainability risks > Reduction of total material quantity in the cycle through less use
- S5 **Reducing resource use**: The proportion of primary raw materials will be reduced through the use of recycled and renewable materials ("Reduce")
- S6 **Extending service life**: Extending the service life of materials, components, and products through maintenance and repair as well as overhaul and reconditioning ("Reuse")
- S7 **Intensify use**: Get more output from the same amount of materials through reuse, redistribution, and sale of materials, components, and products ("Reuse")
- S8 **Upcycling of products**: Creative and sustainable use of old and used materials, components, and products at the end of their useful life to create new products of higher value or better quality ("Recycle")
- S9 **Recycling**: Parts or materials are recovered from the product for reuse ("recycle").
- S10 **Dematerialization**: Physical materials, components, and products are replaced by non-physical (primarily digital) products or services

"Develop advantages"



Joint value creation

- W1 Make **the entire value creation process** more efficient in line with sustainability goals
 - W2 Make **logistics** more sustainable, e.g., fewer emissions, fewer kilometers, etc. (e.g., from global to local sourcing)
 - W3 **Change supply chains**, e.g., vertical integration*, to achieve greater transparency
 - W4 **Supplier qualification**: Implement qualification measures for sustainability
 - W5 **Intensify supplier relationships**: Get to know suppliers better and build relationships that are more focused on sustainability
 - W6 **Performance-based contracting**: Programs that offer suppliers incentives to develop more sustainable concepts
 - W7 **Lobbying**: Introduction and enforcement of new political measures to promote sustainable behavior
 - W8 **New procurement markets**: Moving away from geographical sustainability hotspots
 - W9 **Cooperative partnerships** for sustainability with suppliers
 - W10 Focus on **certifications** and sustainability standards in **purchasing**
- * **Vertical integration** refers to a form of corporate concentration in which the vertical range of manufacture is increased by merging several companies with successive stages of processing or trade. Vertical integration is therefore also referred to as vertical corporate concentration.

- Suitable for ABC
- Top 3 levers for ABC



20 strategic purchasing levers for sustainability – Improvement of specifications 1/2

No.	Improvement of specifications 1/2	Description
S1	Changing specifications to promote sustainability	<ul style="list-style-type: none"> • Changing specifications to promote sustainability means reviewing and adjusting product or material requirements to reduce environmental and social impact. • For example, it can include switching to recycled materials, reducing packaging, using energy-efficient components, or designing products for longer life and easier recycling. This lever helps companies make their procurement and production more sustainable without compromising functionality or quality.
S2	Changing product design (e.g. through modularity, reparability, lightweight construction) for greater sustainability	<ul style="list-style-type: none"> • Changing product design for greater sustainability means improving how a product is built to reduce its environmental impact over its entire life cycle. • This can include using modular designs for easy repair or upgrade, lightweight construction to save materials and energy, and designing for durability or recyclability. The goal is to make products that use fewer resources, last longer, and create less waste.
S3	Sustainability innovations: Actively pursuing sustainability innovations among our suppliers	<ul style="list-style-type: none"> • Innovations: Actively pursuing sustainability innovations among our suppliers means working closely with suppliers to develop new, more sustainable materials, technologies, and processes. • This can include co-creating low-carbon solutions, improving resource efficiency, or introducing circular products. The goal is to drive continuous improvement and make sustainability a shared source of innovation and competitive advantage across the supply chain.
S4	Demand management: Reduction of demand ("reduce"), Reduction of total material quantity	<ul style="list-style-type: none"> • Demand management: Reduction of demand ("reduce") means lowering the total amount of materials or products used — especially in categories with high environmental or social risks. • This can be achieved by using products more efficiently, extending their lifespan, or avoiding unnecessary consumption. The goal is to reduce the overall material flow in the value chain and minimize negative sustainability impacts.
S5	Reducing resource use: The proportion of primary raw materials will be reduced through “secondary material” (recycled and renewable)	<ul style="list-style-type: none"> • Reducing resource use means lowering the amount of primary (new) raw materials needed by using recycled or renewable materials instead. • This approach helps to save natural resources, decrease waste, and cut carbon emissions — supporting a more circular and sustainable material cycle.





20 strategic purchasing levers for sustainability – Improvement of specifications 2/2

No.	Improvement of specifications 2/2	Description
S6	Extending service life: Extending the service life of materials, components, and products ("Reuse")	<ul style="list-style-type: none"> • Extending service life means keeping materials, components, and products in use for as long as possible through regular maintenance, repair, refurbishment, or reconditioning. • This reduces waste, conserves resources, and lowers environmental impact by avoiding the need for new production ("Reuse").
S7	Intensify use: Get more output from the same amount of materials through reuse, redistribution, and sale of materials, components, and products ("Reuse")	<ul style="list-style-type: none"> • Intensify use means maximizing the value and usage of materials, components, and products by reusing, redistributing, or reselling them. • This approach ensures that existing resources deliver more output over their lifetime, reducing waste and the need for new raw materials ("Reuse").
S8	Upcycling of products: Creative and sustainable use of old and used materials, components, and products at the end of their useful life ("Recycle")	<ul style="list-style-type: none"> • Upcycling of products means transforming old or used materials, components, and products into new items of higher value or improved quality. • This creative process extends product life, reduces waste, and supports sustainability by turning what would be discarded into something useful and valuable ("Recycle").
S9	Recycling: Parts or materials are recovered from the product for reuse ("Recycle").	<ul style="list-style-type: none"> • Recycling means recovering valuable parts or materials from used products and processing them for reuse. This reduces waste, saves natural resources, and helps close the material loop by turning discarded items into new raw materials ("Recycle").
S10	Dematerialization: Physical materials, components, and products are replaced by non-physical (primarily digital) products or services	<ul style="list-style-type: none"> • Dematerialization means replacing physical materials, components, and products with digital or non-physical alternatives. • This reduces resource use, waste, and emissions by shifting from material-intensive production to digital solutions or services.





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20 strategic purchasing levers for sustainability – Joint value creation 1/2

No.	Joint value creation 1/2	Description
W1	Make the entire value creation process more efficient in line with sustainability goals	<ul style="list-style-type: none"> • Making the entire value creation process more efficient means optimizing all stages of production, logistics, and sourcing to reduce waste, energy use, and emissions. • The goal is to create more value with fewer resources while aligning business operations with sustainability objectives.
W2	Make logistics more sustainable, e.g., fewer emissions, fewer kilometers, etc. (e.g., from global to local sourcing)	<ul style="list-style-type: none"> • Making logistics more sustainable means reducing the environmental impact of transportation and supply chains. • This can include cutting emissions, shortening transport distances, and shifting from global to local sourcing to lower the carbon footprint and improve efficiency.
W3	Change supply chains , e.g., vertical integration*, to achieve greater transparency	<ul style="list-style-type: none"> • Changing supply chains means restructuring sourcing and production networks — for example, through vertical integration — to improve transparency, traceability, and control over environmental and social impacts throughout the value chain. • This can include shortening supply chains, working with certified suppliers, implementing digital traceability systems, and improving collaboration across all tiers.
W4	Supplier qualification : Implement qualification measures for sustainability	<ul style="list-style-type: none"> • Supplier qualification means developing and implementing training, assessment, and improvement programs to ensure that suppliers meet defined sustainability standards in areas such as environment, labor, and ethics. • This can include supplier audits, sustainability certifications, on-site training, and continuous performance monitoring.
W5	Intensify supplier relationships : Get to know suppliers better and build relationships focused on sustainability	<ul style="list-style-type: none"> • Intensifying supplier relationships means building closer, long-term partnerships with suppliers to improve collaboration, transparency, and shared commitment to sustainability goals. • This can include regular audits, joint innovation projects, sustainability workshops, and open data sharing to drive continuous improvement.



20 strategic purchasing levers for sustainability – Joint value creation 2/2

No.	Joint value creation 2/2	Description
W6	Performance-based contracting: Programs that offer suppliers incentives to develop more sustainable concepts	<ul style="list-style-type: none"> • Performance-based contracting means creating agreements where suppliers are rewarded based on achieving specific sustainability outcomes rather than just delivering products or services. • This can include incentives for reducing emissions, improving energy efficiency, using eco-friendly materials, or meeting circular economy targets.
W7	Lobbying: Introduction and enforcement of new political measures to promote sustainable behavior	<ul style="list-style-type: none"> • Lobbying means actively engaging with policymakers and industry associations to advocate for regulations and policies that promote sustainable production and consumption. • This can include supporting environmental standards, social responsibility laws, or incentives for green innovation.
W8	New procurement markets: Moving away from geographical sustainability hotspots	<ul style="list-style-type: none"> • New procurement markets means sourcing from regions or suppliers with lower environmental and social risks to reduce exposure to sustainability hotspots. T • his can include shifting production to areas with stronger environmental regulations, fair labor practices, or better access to renewable resources.
W9	Cooperative partnerships for sustainability with suppliers	<ul style="list-style-type: none"> • Cooperative partnerships for sustainability with suppliers means working closely with suppliers to jointly develop and implement sustainable solutions. • This can include sharing knowledge, setting common sustainability goals, co-investing in green technologies, or improving social and environmental performance across the supply chain.
W10	Focus on certifications and sustainability standards in purchasing	<ul style="list-style-type: none"> • Focus on certifications and sustainability standards in purchasing means prioritizing suppliers and products that meet recognized environmental, social, and ethical standards. • This can include certifications such as ISO 14001, Fair Trade, FSC, or EcoVadis ratings to ensure responsible sourcing and continuous improvement in sustainability performance.



Checklist
Suppliers and supply chain
Measures

Area of action: Ensure supervision, coordination, and operational implementation within the company (1/2)

Action	Objective	Responsibility	Success
1. Analyze existing processes and structures within the company with regard to sustainable supply chain management	<ul style="list-style-type: none"> Identify opportunities for establishing sustainable supply chain management within the company in terms of organization and processes Make the best possible use of established processes and existing knowledge 	<ul style="list-style-type: none"> Sustainability officer 	<ul style="list-style-type: none"> Early involvement of specialist departments to avoid resistance
2. Survey the level of knowledge/existing skills on the topic of "sustainable supply chain management" in various departments of the company	<ul style="list-style-type: none"> Make the best possible use of existing knowledge Identify potential for improvement in sustainable supply chain management in the departments 	<ul style="list-style-type: none"> Sustainability Officer 	<ul style="list-style-type: none"> Explain why it is relevant for the company to focus more on this issue
3. Conducting an inventory/risk analysis with regard to sustainability in the supply chain	<ul style="list-style-type: none"> Gain a better understanding of the risks (and opportunities) that currently exist (without sustainable supply chain management) Identify key issues 	<ul style="list-style-type: none"> Sustainability officer Involvement of all relevant employees 	<ul style="list-style-type: none"> Use existing knowledge (publications, industry knowledge, etc.) See also: Working aid LfU Starter Kit
4. Define responsibilities for the topic at management level	<ul style="list-style-type: none"> Ensure and express the importance of the topic within the company Establish a supervisory function 	<ul style="list-style-type: none"> Management Sustainability officer 	<ul style="list-style-type: none"> Direct involvement of management
5. Inclusion of sustainability-related elements in the risk management information process	<ul style="list-style-type: none"> Implementation of sustainability issues within risk analysis 	<ul style="list-style-type: none"> Sustainability officer Purchasing 	<ul style="list-style-type: none"> Equal treatment of sustainability issues alongside other issues
6. Formation of a team for sustainable supply chain management	<ul style="list-style-type: none"> Promote cooperation between individual departments on the topic of sustainable supply chain management Pooling expertise from different areas 	<ul style="list-style-type: none"> Management Company/product development Purchasing Logistics Sustainability Officer 	<ul style="list-style-type: none"> Assign roles to those involved and highlight their importance in the design of the sustainable supply chain
7. Training specialist departments and product group purchasers on topics related to sustainable supply chain management	<ul style="list-style-type: none"> Raise employee awareness of the topic Assign roles 	<ul style="list-style-type: none"> Sustainability officer Human resources External coaches 	<ul style="list-style-type: none"> Communicate in such a way that the relevance to the work in the departments is clear



Implement	Phase 1	Phase 2	Phase	Phase 4	Phase 5	Notes
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Checklist
Suppliers and supply chain
Measures

Area of action: Ensure supervision, coordination, and operational implementation within the company (2/2)

Measure	Objective	Responsibility	Success
8. Develop and document a mission statement for sustainable supply chain management	<ul style="list-style-type: none"> Provide guidance for company management, employees, and suppliers on the importance of sustainable supply chain management 	<ul style="list-style-type: none"> Management Sustainability officer 	<ul style="list-style-type: none"> Integration into the existing corporate mission statement (if available) Communication to employees and other stakeholders
9. Integrate sustainability criteria into product development processes	<ul style="list-style-type: none"> Sustainability criteria are taken into account right from the product development stage Use of more sustainable product components (avoid certain raw materials, use complementary products, recycled materials, etc.) 	<ul style="list-style-type: none"> Product development Purchasing Sustainability officer Production department 	<ul style="list-style-type: none"> Alternatives for product components/materials must be available Involvement of the development department
10. Link sustainability targets to existing remuneration and incentive systems	<ul style="list-style-type: none"> Achieve more sustainable behavior among employees 	<ul style="list-style-type: none"> Sustainability officer Human resources department Controlling 	<ul style="list-style-type: none"> Establish measurable and transparent indicators
11. Participation in supply chain-specific sustainability competitions	<ul style="list-style-type: none"> Promote motivation among employees by recognizing their achievements 	<ul style="list-style-type: none"> Sustainability officer Marketing 	<ul style="list-style-type: none"> Check which competitions are relevant/targeted
12. Review corporate principles	<ul style="list-style-type: none"> Integrate sustainability issues (including human rights issues) into the company's principles 	<ul style="list-style-type: none"> Sustainability Officer Communications department 	<ul style="list-style-type: none"> Determine whether it makes more sense to create a separate document or integrate it into an existing document

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Checklist
Suppliers and supply chain
Measures

Area of action: Review and support suppliers (1/3)

Action	Objective(s)	Responsibility	Success
1. Formulate a code of conduct (CoC) for suppliers	<ul style="list-style-type: none"> Provide guidance for company management, employees, and, above all, suppliers on the importance of sustainable supply chain management Make the company's sustainability requirements clear to suppliers 	<ul style="list-style-type: none"> Management Sustainability officer Purchasing department 	<ul style="list-style-type: none"> The code of conduct should be demanding and achievable at the same time The requirements should be binding and consequences should follow in the event of non-compliance
2. Integrate sustainability criteria into the procurement process	<ul style="list-style-type: none"> Create greater transparency regarding the origin of materials and existing environmental standards, which in turn enables the implementation of targeted measures to improve environmental performance on site Conflict-free and lower-risk procurement 	<ul style="list-style-type: none"> Management Purchasing Sustainability Officer Production department 	<ul style="list-style-type: none"> With management Disclose conflicting goals (price vs. sustainability) and discuss approach See also: Working aid "<u>Supplier evaluation – recommended guidelines</u>"
3. Inclusion of sustainability issues in the supply contract	<ul style="list-style-type: none"> Make sustainability binding 	<ul style="list-style-type: none"> Contract management 	<ul style="list-style-type: none"> Use the code of conduct (as a legally binding appendix or by adopting key elements) See also: Working aid "<u>Code of Conduct for Suppliers – a sample</u>"



Implement	Phase 1	Phase 2	Phase	Phase 4	Phase 5	Notes
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Checklist
Suppliers and supply chain
Measures

Area of action: Review and support suppliers (2/3)

Action	Objective(s)	Responsibility	Success
4. Obtain self-disclosure from suppliers	<ul style="list-style-type: none"> Obtain information about how sustainable suppliers are and how they deal with risks (and whether steps to improve their performance or further review processes need to be established) Reflection on the supplier's own situation, initiation of improvement measures if necessary 	<ul style="list-style-type: none"> Sustainability officer Purchasing department 	<ul style="list-style-type: none"> Establish internal processes that enable analysis of the information Compare with the results of your own assessment See also: Starter Kit
5. Conduct sustainability audits with suppliers	<ul style="list-style-type: none"> Obtain a meaningful picture of the sustainability performance of suppliers Identify precise starting points for potential improvements 	<ul style="list-style-type: none"> Sustainability officer Purchasing department Auditors (external if necessary) 	<ul style="list-style-type: none"> Consider the results of the inventory when deciding which suppliers should be audited (focus on "risk" suppliers if necessary) See also: Starter Kit
6. Participation in/use of industry initiatives	<ul style="list-style-type: none"> Centralize/bundle supplier reviews via an industry initiative 	<ul style="list-style-type: none"> Sustainability officer Purchasing department Company representative in industry initiatives 	<ul style="list-style-type: none"> Availability of an industry initiative that covers this service



Implement	Phase 1	Phase 2	Phase	Phase 4	Phase 5	Notes
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Checklist
Suppliers and supply chain
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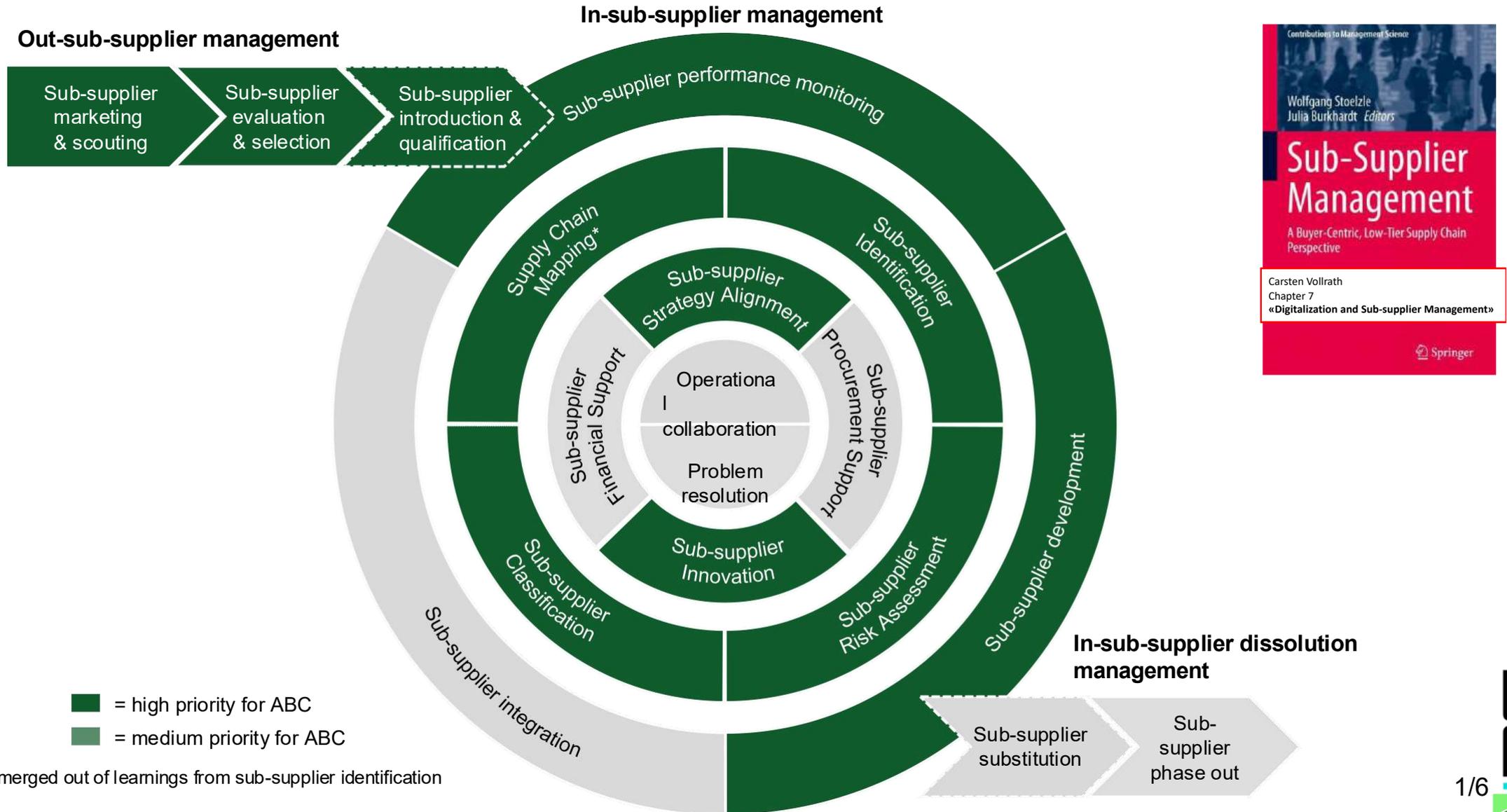
Area of action: Review and support suppliers (3/3)

Measure	Objective(s)	Responsibility	Success factors
7. Organize information events on the topic of sustainability for suppliers	<ul style="list-style-type: none"> Introduce suppliers to the topic 	<ul style="list-style-type: none"> Management Sustainability officer External coaches 	<ul style="list-style-type: none"> Support from management
8. Develop a corrective action plan for/with suppliers	<ul style="list-style-type: none"> Improve the sustainability performance of suppliers based on the potential identified in the assessment system 	<ul style="list-style-type: none"> Sustainability officer Purchasing External coaches 	<ul style="list-style-type: none"> Ability to influence suppliers (e.g., based on procurement volume)
9. Conduct risk analyses together with suppliers	<ul style="list-style-type: none"> Identification of risks in the supply chain beyond the direct supplier level 	<ul style="list-style-type: none"> Sustainability officer External coaches 	<ul style="list-style-type: none"> Pragmatic approach Use existing publications and databases Good contact with suppliers
10. Technical support for process optimization (e.g., to reduce emissions; implementation of product-related standards, including in the paper or wood sector)	<ul style="list-style-type: none"> Achieve concrete results through pilot projects 	<ul style="list-style-type: none"> Sustainability officer External coaches 	<ul style="list-style-type: none"> Initiatives should lead to measurable successes (e.g., improved energy efficiency)
11. Training for suppliers (e.g., on sustainability standards)	<ul style="list-style-type: none"> Build capacity at the supplier so that they can improve their sustainability performance independently 	<ul style="list-style-type: none"> Sustainability officer External coaches 	<ul style="list-style-type: none"> Develop appealing formats Collaborate with suppliers

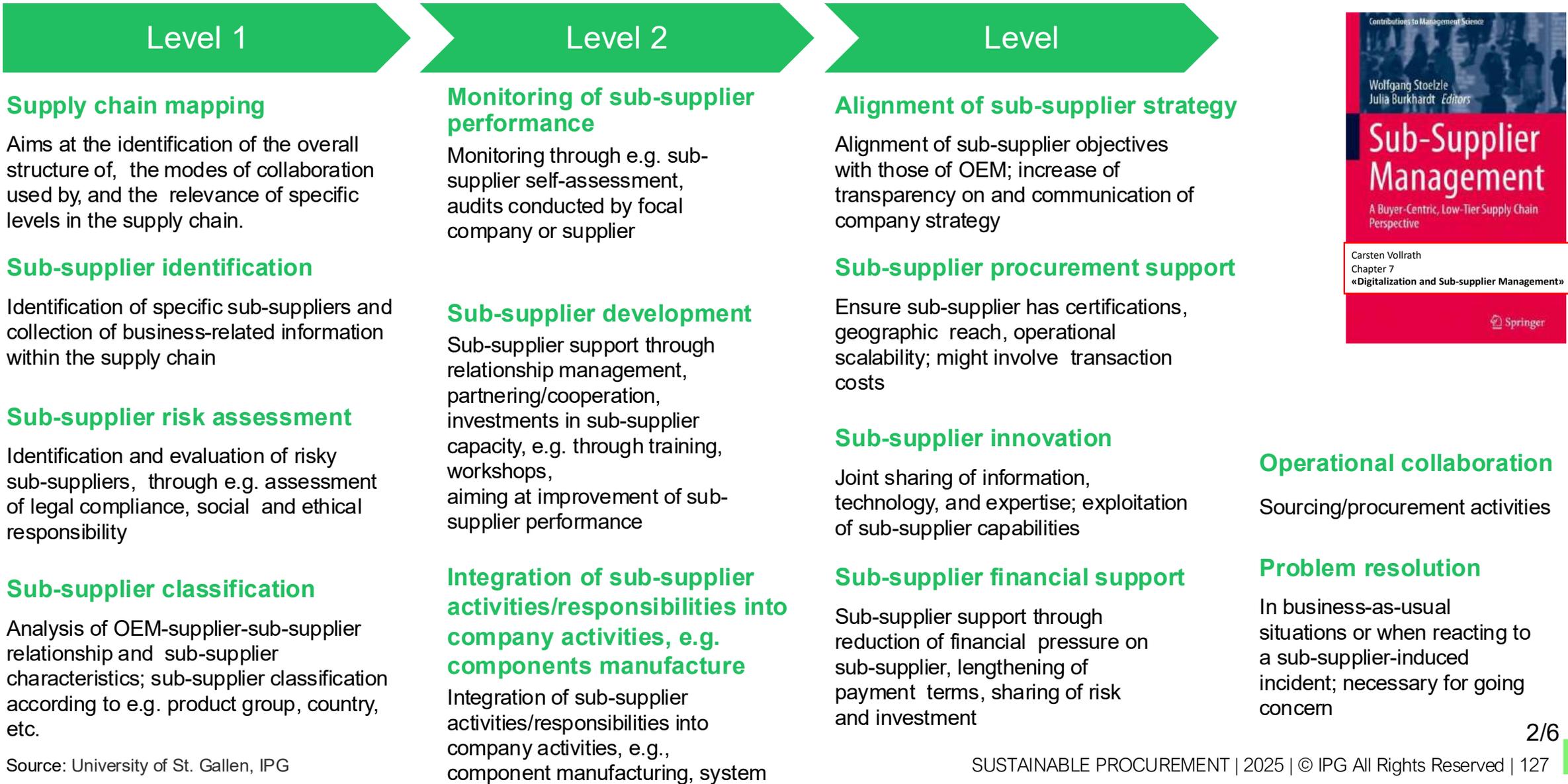
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Supplier management | A new, previously unknown skill in purchasing – process overview



Supplier management | Description of interaction processes with suppliers (1/2)



Source: University of St. Gallen, IPG

Upstream supplier management | Description of interaction processes with upstream suppliers (2/2)

Sub-supplier marketing & scouting

Attracting sub-suppliers outside the supply chain; potentially involving B2B marketing measures, e.g., networking, promotion

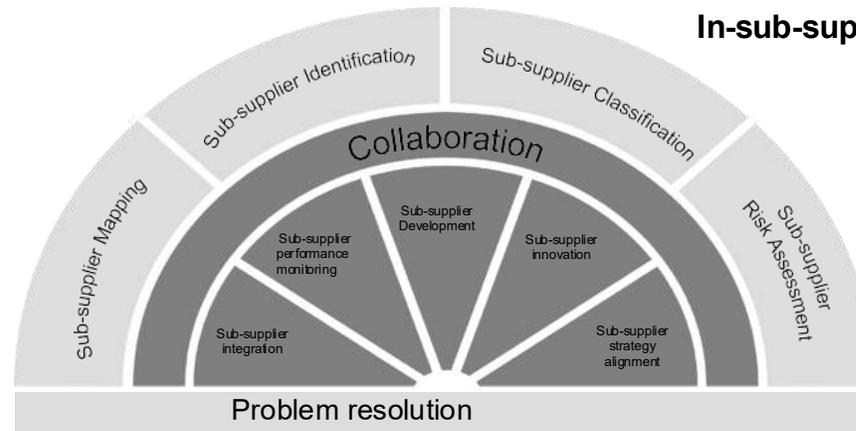
Sub-supplier evaluation & selection

Assessment of sub-suppliers outside the supply chain and their performance through e.g. evaluation of operational performance, financial performance, reputation

Sub-supplier introduction & qualification

Communication of Code of Conduct, company strategy, company requirements, e.g. through pre-scanning, questionnaires

Out-sub-supplier management



In-sub-supplier management

In-sub-supplier Dissolution management

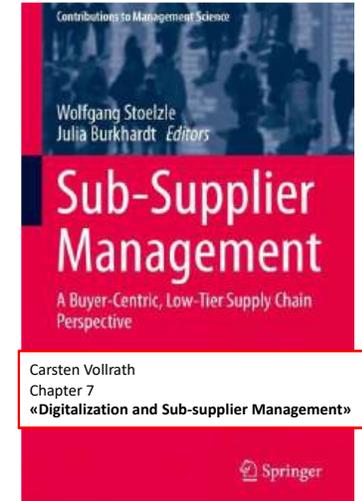


Sub-supplier substitution

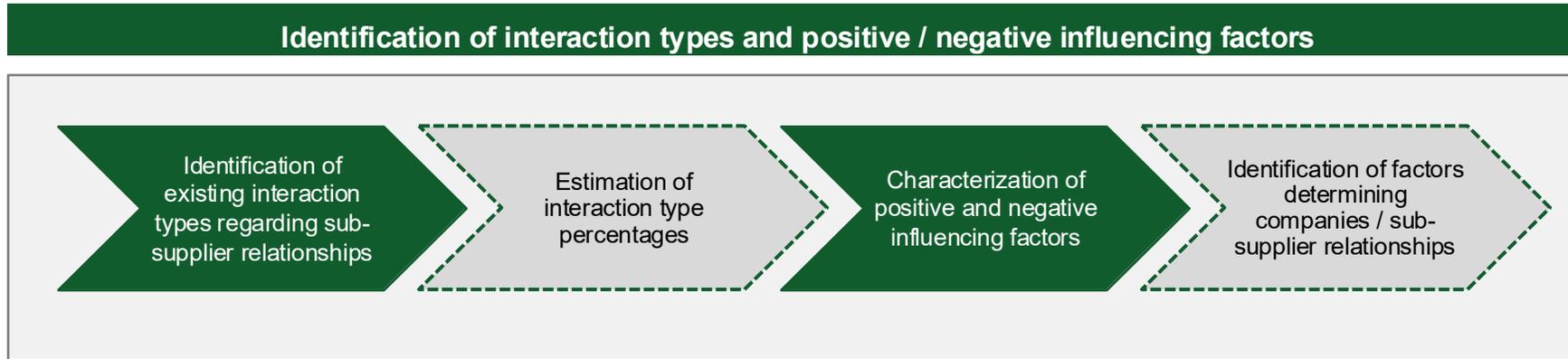
Replacement of existing sub-supplier with new sub-supplier, potentially involving out-sub-supplier management processes or sub-supplier identification

Sub-supplier phase out

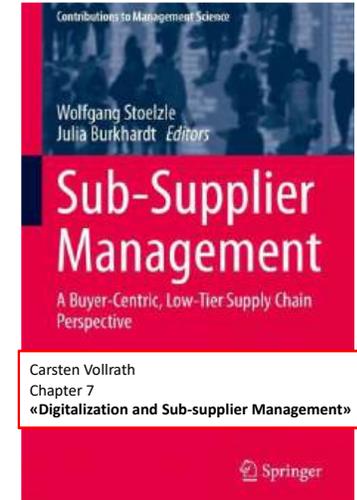
Termination of the relationship: Removing sub-supplier from the supply chain



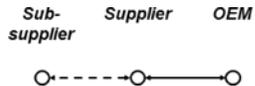
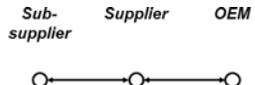
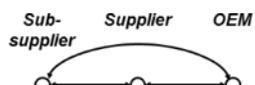
Supplier management | Description of interaction types with suppliers (3/3)



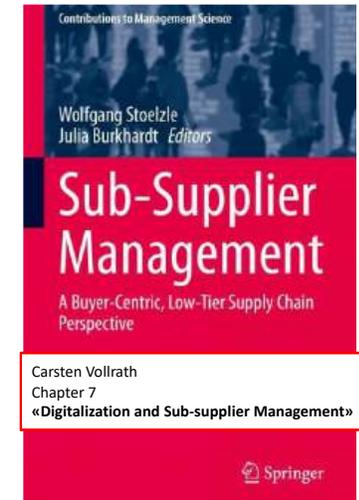
Type of interaction		Characteristics	Positive reasons*	Negative reasons*
Competition		<ul style="list-style-type: none"> Main type of interaction in business-as-usual situation 	<ul style="list-style-type: none"> Used for tendering No management necessary, because of irrelevant supply chain / market buying is sufficient 	<ul style="list-style-type: none"> Lack of long-term collaboration Lack of market transparency
Certification		<ul style="list-style-type: none"> In selected individual cases 	<ul style="list-style-type: none"> Meet product-specific requirements Option for sub-supplier development High flexibility In selected cases, for traders 	<ul style="list-style-type: none"> Lack of influence on direct supplier



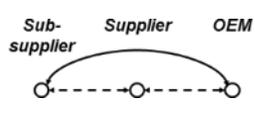
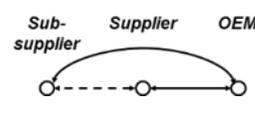
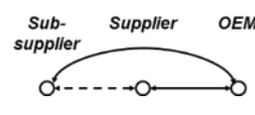
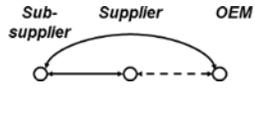
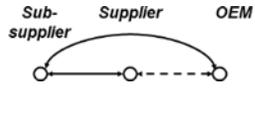
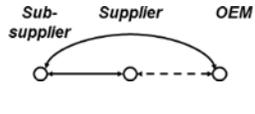
Supplier management | Description of interaction types with suppliers (2/3)

Type of interaction	Characteristics	Positive-related reasons*	Negative reasons*
Delegation 	<ul style="list-style-type: none"> Main type of interaction in business-as-usual situation Reactive sub-supplier management 	<ul style="list-style-type: none"> Reduction of complexity High degree of control, enabled through high degree of specification and declaration of conformity Balance of power of big sub-suppliers, enabled through cooperation with big direct suppliers with the ability to influence the sub-suppliers 	<ul style="list-style-type: none"> Power relations, i.e. power potential of large sub-suppliers (Sub-)supplier unknown / no willingness to get to know No direct control if supplier passes on company's specific policies and requirements
Commitment 	<ul style="list-style-type: none"> For selected individual cases For trustful, long-term relationships 	<ul style="list-style-type: none"> Personal contact with and resulting long-term relationship with producers/growers Fair pricing Role as main customer of direct supplier, improving supplier potential at sub-supplier level Request for commitment at supplier level for sub-supplier control in terms of audits, supply of materials, etc. 	<ul style="list-style-type: none"> Difficult to implement and maintain Time-consuming and resource-intensive Increased responsibility, e.g. in case of deterioration of relationship, supply problems Critical concerning impact of suppliers
Cooperation 	<ul style="list-style-type: none"> For selected individual cases / critical supply chains For trustful, long-term relationships 	<ul style="list-style-type: none"> Development of long-term relationships Support through consultation and fair pricing, with the intention of supporting sub-supplier independence, increasing (sub-) supplier motivation Existing relationship with sub-suppliers, e.g. through direct supply relationship in other aspects Explicit strive for cooperation, through joint development with suppliers and sub-suppliers Long-term commitment 	<ul style="list-style-type: none"> Very time- and resource-consuming Requires proactive sub-supplier management Dependence on sub-supplier through type of relationship, i.e. compulsory sourcing independent of requirements Relationship problems between suppliers and sub-suppliers, e.g. through power differences

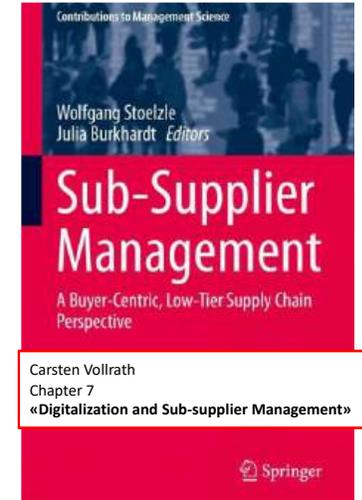
*): Reasons for current type of interaction to ensure potential benefits (positive related)
 Reasons for avoiding type of interaction to bypass potential risks (negative-related)



Supplier management | Description of interaction types with suppliers (3/3)

Type of interaction		Characteristics	Positive-related reasons*	Negative-related reasons*
Bypass		<ul style="list-style-type: none"> ▪ Exceptional case: rarely found 	<ul style="list-style-type: none"> ▪ n/a 	<ul style="list-style-type: none"> ▪ n/a
				
Parallel		<ul style="list-style-type: none"> ▪ Exceptional case: rarely found 	<ul style="list-style-type: none"> ▪ Open communication 	<ul style="list-style-type: none"> ▪ Different power relations ▪ Cultural differences
				
Back door		<ul style="list-style-type: none"> ▪ Exceptional case: rarely found ▪ Option when working with large sub-suppliers with great power potential 	<ul style="list-style-type: none"> ▪ Direct suppliers unwilling to cooperate 	<ul style="list-style-type: none"> ▪ High level of complexity
				

*) Reasons for current type of interaction to ensure potential benefits (positive-related) Reasons for avoiding type of interaction to bypass potential risks (negative-related)



Details

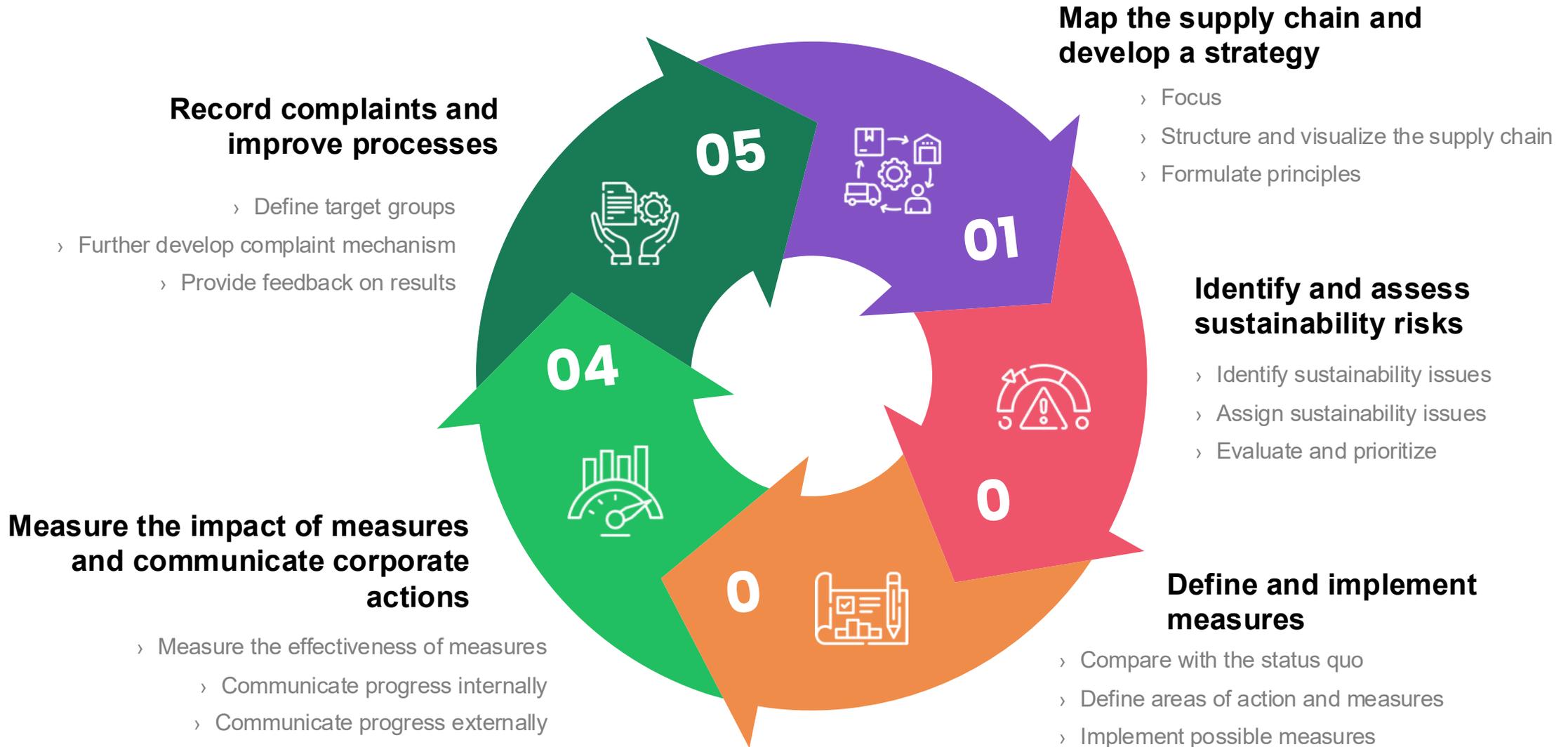
Step 4 - Measure the impact of measures and communicate corporate actions

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Overview of the five phases of supply chain analysis as a continuous improvement process





Area of action: Measuring the impact of measures and communicating corporate actions (1/1)				Checklist Measure/communicate the impact of measures
Measure	Objective(s)	Responsibility	Success factors	
Develop a set of key performance indicators	<ul style="list-style-type: none"> Measure the implementation status of measures for sustainable supply chain management 	<ul style="list-style-type: none"> Sustainability officer Purchasing 	<ul style="list-style-type: none"> Select both internal and supplier-specific key performance indicators Consistent analysis of all sustainability issues 	
Implement internal communication measures (e.g., via newsletters or intranet)	<ul style="list-style-type: none"> Raise awareness of the topic within the company Highlight milestones achieved 	<ul style="list-style-type: none"> Sustainability officer Human resources Communications department 	<ul style="list-style-type: none"> Involvement of management Communicating concrete successes 	
Inclusion of key figures in product declarations/descriptions	<ul style="list-style-type: none"> Creating public transparency regarding the sustainability of products 	<ul style="list-style-type: none"> Sustainability officer Sales 	<ul style="list-style-type: none"> Use valid data 	
<p>Publish sustainability reports with information on:</p> <ul style="list-style-type: none"> Sustainability impacts/risks along the supply chain Risk analysis processes Supplier evaluation Implementation measures 	<ul style="list-style-type: none"> Create transparency about sustainability commitments in the supply chain Identification of further starting points for measures Positioning as a sustainable company that takes a holistic approach to the issue 	<ul style="list-style-type: none"> Sustainability officer Purchasing in cooperation with marketing 	<ul style="list-style-type: none"> Precisely define target audience Use established reporting systems 	
Create a traceability system for products (e.g., via QR code)	<ul style="list-style-type: none"> Creating transparency about the supply chain (origin, composition of products) for customers 	<ul style="list-style-type: none"> Purchasing Sales Marketing 	<ul style="list-style-type: none"> Use valid data 	



Sustainability in the procurement process – Key figures

In order to manage the implementation of the sustainable procurement strategy and activities and to measure and report on progress, it is necessary to define suitable key performance indicators.

Selection



Area	KPI examples
Environmental sustainability	% of suppliers with environmental or occupational health and safety management systems
	% of suppliers that have been assessed based on environmental criteria
	% of suppliers with ongoing CO2 reduction measures
	% of suppliers that have improved their sustainability performance in a follow-up assessment
	% of suppliers that meet a specific criterion (e.g., certificate)
	% share of e.g. natural resources (paper products, food, metals) purchased from sustainable sources
Social sustainability	% of suppliers who have agreed to the Code of Conduct (CoC)
	% of suppliers that have been assessed against social criteria
	% of suppliers for whom specific audits (e.g., social audits) have been carried out
	% Share of risk-assessed purchasing volume
	% of relevant suppliers who complete the Conflict Minerals Reporting Template (or meet the corresponding requirements)
	% Share of purchasing volume with local suppliers
	% Share of purchasing volume with diverse suppliers
Financial sustainability	% share of purchasing volume for sustainable products (based on defined criteria)
	% of expenditure on products with a life cycle of less than twelve months

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Top 10 key figures for sustainable purchasing (1/2)

1. Suppliers with sustainability assessment/ESG rating (in %)

Percentage of active suppliers with available ratings (internal or via external platforms).

→ Basis for risk analysis and targeted further development.

2. Percentage of sustainable suppliers

Percentage of suppliers that can demonstrate compliance with environmental, social, and governance criteria (e.g., through audits, self-disclosure, or certification).

→ Indicator of broad impact and integration of ESG in the supply chain.

3. Suppliers with documented human rights and labor standards (in %)

Recording of suppliers who comply with, for example, ILO standards, SA8000, or company-specific codes of conduct.

→ Relevance for due diligence obligations under LkSG or CSDDD.

4. Proportion of "green contracts" or contracts with ESG clauses (in %)

Contracts that integrate binding environmental and social criteria (e.g., CO₂ targets, audit obligations, material requirements).

→ Anchoring sustainability in legal supplier commitments.

5. Number of awareness training sessions conducted with suppliers per year

Measure of the active involvement of suppliers in sustainability programs.

→ Indicator of implementation quality and partnership.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Top 10 key figures for sustainable purchasing (2/2)

6. Average sustainability score per product group/category

Internal score based on ESG criteria for evaluating sustainable performance per product group.

→ Enables benchmarking and product group strategy.

7. Percentage of certified materials/products

Proportion of purchased materials with recognized environmental/social labels (e.g., FSC, Fairtrade, Cradle2Cradle, ISO 14001).

→ Proof of sustainable procurement practices.

8. CO₂ footprint of purchased goods and services (Scope 3.1)

Recorded greenhouse gas emissions of purchased goods in accordance with the GHG Protocol.

→ Key performance indicator for climate-related purchasing impacts.

9. Proportion of circular/recycled materials in total purchases (in %)

Proportion of materials that are reusable, recyclable, or biodegradable.

→ Key figure for promoting the circular economy in purchasing.

10. Share of sustainable procurement in total purchases (in %)

Proportion of the purchasing volume that relates to sustainably classified services.

→ Measure of the economic impact of sustainability.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Other recommended metrics for sustainable purchasing (1/4)

Environmental indicators

- **Average CO₂ emissions per purchasing volume (e.g., kg CO₂ / 1,000 €)**
→ Measures emission intensity independently of purchasing volume.
- **Proportion of low-emission logistics partners (in %)**
→ Provides information about sustainable transport decisions.
- **Water consumption of purchased products (liters/unit or \$)**
→ Particularly relevant for water-intensive product groups (textiles, food, chemicals).
- **Waste generation along the supply chain (in kg/€)**
→ Supports zero-waste strategies in purchasing.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Other recommended metrics for sustainable purchasing (2/4)

Social indicators

- **Suppliers from risk areas with documented risk analysis (in %)**
→ Basis for legally compliant due diligence.
- **Percentage of suppliers with training on human rights/labor rights (in %)**
→ Evidence of active risk management.
- **Certification rate for critical product groups (e.g., cocoa, cotton, metals)**
→ Focus on particularly sensitive raw materials.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Other recommended metrics for sustainable purchasing (3/4)

Process and governance indicators

- **Supply chain transparency rate (Tier 1 to Tier n in %)**
→ Measures visibility across the entire supply chain.
- **Proportion of tenders with ESG criteria (in %)**
→ Measures how deeply sustainability is integrated into operational purchasing.
- **Degree of fulfillment of ESG target agreements with suppliers (in %)**
→ Basis for targeted management and bonus/penalty systems.
- **Time to implementation of sustainability measures (in days)**
→ Indicator of response speed and agility.

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Other recommended metrics for sustainable purchasing (4/4)

Reputation and impact indicators

- **Percentage of suppliers actively improving their sustainability ratings**
→ Measures willingness to change in the supply chain.
- **Number of reported sustainability violations per year**
→ Early warning indicator for reputation risks.
- **Contributions to the SDGs (e.g., number of UN goals supported)**
→ Qualitative but increasingly sought-after KPI for reporting (e.g., GRI, CSRD).

Implement

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Recommendations for selection & implementation

- 1. Actively manage a maximum of 15–20 KPIs at any one time.** Focus is more important than completeness.
- 2. Differentiate key figures according to risk profile and product group.** Not all KPIs are equally relevant for all categories.
- 3. Use technological support.** An ESG cockpit or reporting tool facilitates transparency, comparability, and progress measurement.
- 4. Embed key figures in target systems.** Linking them to internal and external incentive models, scorecards, and supplier evaluations increases their impact.
- 5. Provide stakeholder-friendly visualization.** Internally (purchasing management, CSR team, compliance) and externally (audits, investors, customers).

Details

Step 5 - Record complaints and improve processes

Carsten Vollrath, IPG Partners Group

IPG-Masterclass

Sustainable Procurement

Phase 5.1 – Beschwerden erfassen und Prozess verbessern | **Herangehensweise**

Implement Phase 1 Phase 2 Phase 3 Phase 4 **Phase 5**

Checklist
Recording complaints and
improving processes

Area of action: Record complaints and improve processes (1/1)

Action	Objective(s)	Responsibility	Success
Evaluate the results of the risk analysis to identify groups of people who should be covered by the complaint system.	<ul style="list-style-type: none"> Set up a complaint mechanism tailored to the target audience 	<ul style="list-style-type: none"> Sustainability officer Human resources Compliance Customer relations and service departments 	<ul style="list-style-type: none"> Check whether particularly vulnerable groups are among those (potentially) affected
Record and document complaints	<ul style="list-style-type: none"> Obtain an overview of the various (possible) complaints in order to establish appropriate channels 	<ul style="list-style-type: none"> Sustainability officer Human resources Compliance Customer relations and service departments 	<ul style="list-style-type: none"> Also proactively address potential complaint issues Results should be documented in such a way that complaints can be assigned to specific issues, groups, and channels
Review existing complaint mechanisms	<ul style="list-style-type: none"> Build complaint management on existing processes 	<ul style="list-style-type: none"> Sustainability officer Human resources Compliance Customer relations and service departments 	<ul style="list-style-type: none"> Check whether mechanisms have been established at association level or at multi-stakeholder level that can be used
Review the effectiveness of existing grievance mechanisms	<ul style="list-style-type: none"> Improve the effectiveness of complaint mechanisms 	<ul style="list-style-type: none"> Sustainability officer Human resources Compliance Customer relations and service departments 	<ul style="list-style-type: none"> Use of effectiveness criteria for systematic review See also: Working aid from the NAP Helpdesk for Business and Human Rights <u>"Managing complaints effectively"</u>

CONTENTS INTENDED FOR IPG MASTERCLASS PARTICIPANTS

