

June 2024

SUSTAINABLE PROCUREMENT PERFORMANCE INDICATOR (SPPI) SCORECARD

TABLE OF CONTENTS

1	Introduction	3
2	Methodology	6
3	Results	9
4	Use of indicators based on materiality	50
5	Benchmarking Tool	54
6	About us	56
	Glossary	59
	Bibliography	65
	Imprint / Copyright	69

1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

INTRODUCTION **1**

1 Introduction

The Corporate Social Responsibility Disclosure, or CSRD (EU 2022/2464), the Sustainable Finance Disclosure Regulation (EU 2019/2088) and the Taxonomy Regulation (EU 2020/852) are the cornerstones of the EU Sustainable Finance Strategy and will form the central elements of sustainability reporting in future.

This legal framework is intended to create a standardized and thus comparable flow of information on corporate sustainability performance along the financial value chain (German Sustainability Code – GSC 2022).

These requirements must also be transposed into national law in Germany and the CSR Directive Implementation Act (CSR-RUG) must be amended accordingly. From January 1, 2025, the first companies will then have to report in accordance with the CSRD for the 2024 financial year and transfer the content to a separate section of the management report. This will initially affect around 550 companies and will be systematically extended to 15,000 companies in Germany in the following years.

In this context, the ESRS (Environmental, Social, and Governance Reporting Standards) play a decisive role. These standards set clear guidelines for the preparation of sustainability reports. The ESRS define what information a company should provide in order to enable comprehensive and comparable reporting. They therefore provide a structure that companies can use to collect and present relevant information. The CSRD, in combination with the ESRS reporting standards, is therefore crucial for an effective sustainability strategy. They create trust and transparency between companies and their stakeholders. This trust is crucial for the long-term success of a company, as it influences its image, customer loyalty and willingness to invest.

It is essential that companies integrate these principles into their business strategy in order to operate successfully and responsibly in the long term.



A holistic view of environmental impact, social responsibility and responsible corporate governance is the key to a sustainable future for companies and society as a whole.

Key figures are a central component of CSRD reports. They provide quantitative measures to quantify a company's performance in relation to social and environmental issues. Key figures such as the ecological footprint, CO2 emissions, employee diversity and impact on the community can be of great importance here. These indicators enable stakeholders to evaluate and compare a company's sustainability performance. A basic prerequisite for effective and comparable indicators is appropriate contextualization within threshold values (Ilcheong Y. et al. 2022).

Purchasing has always been measured by key figures. Delivery reliability, quality and savings are still the top 3 indicators used to determine purchasing performance (Jamal, Y. et al. 2023).



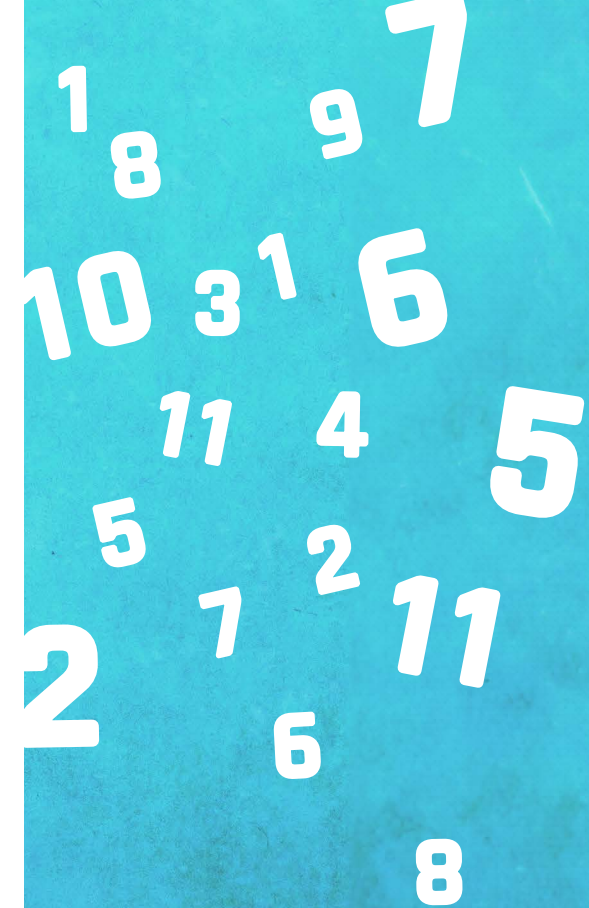
The importance of sustainable procurement for a company's sustainability rating is still underestimated.

It not only helps to reduce environmental impacts, promote social responsibility and establish long-term partnerships in the supply chain.

Rather, it is a decisive driver for the future viability of the organization.

It improves the brand value, the conditions on the capital market, the attractiveness as an employer, the cost structure and, of course, the resilience of the supply chain in particular. It is therefore time to add the sustainability dimension to the set of key purchasing figures. This will not only enable procurement to better achieve its own sustainability goals, but will also have a positive impact on the company as a whole.

In cooperation with its members, the JARO Institute has therefore derived sustainability indicators for the procurement function in 2023 based on the system of the SDPI User Manual Authentic Assessment of Sustainability from UNRISD. This is intended to increase the transparency and importance of procurement performance, particularly with regard to the German Supply Chain Duty of Care and the European Supply Chain Directive. To this end, a digital tool was also developed with the start-up kiresult to support companies in determining the indicators and to enable benchmarking between the participants in anonymized form.



1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

METHODOLOGY **2**

2 Methodology

This section will discuss in detail the methodology used in detail. In preparation for the workshops, a literature review was carried out to identify the theoretical background to the topics and to assist in the development of relevant key figures.

A total of nine moderated digital workshops were held, each lasting two hours. Focus groups consisting of 5-10 participants, made up of members of the JARO Institute, were used. The workshops took place once a month from March to December 2023. They were divided according to the chapters of the ESRS:

- **ESRS 1&2** ***Comprehensive groups & requirements***
- **ESRS E1** ***Climate change, ESRS E2 Environmental pollution***
- **ESRS E3** ***Water and marine resources***
- **ESRS E4** ***Biodiversity and Ecosystems***
- **ESRS E5** ***Resource utilization & circular economy***
- **ESRS S1&2** ***Own workforce & workforce in the value chain***
- **ESRS S3** ***Affected groups***
- **ESRS S4** ***Consumers and end users***
- **ESRS G1** ***Corporate Governance***

A kick-off event was also held before the workshop series, in which the participants were introduced to the UNRISD user manual by Ralph Thurm, Managing Director of NGO R3.0, and the underlying methodology was explained.

In the individual workshops, after a brief introduction to the respective topic, the participants were able to ask and discuss open questions in a Q&A session. This was followed by individual work in which each participant thought about suitable procurement KPIs for the respective topic and recorded them on a shared virtual whiteboard.

The collected key figures were processed in the group with the aim of answering the following questions:

1 SIGNIFICANCE:

Are the key figures significant for the sustainable development of the procurement function in the respective topic?

2 CONTROL EFFECT:

Can they be used to specifically promote sustainable procurement?

3 DATA AVAILABILITY:

Is the data required for the indicator available or can it be determined by the purchasing department?

Furthermore, the most important indicators were selected and prioritized from the large number of key figures collected. All participants had three votes each to allocate to the most relevant indicators. The three or four key figures with the most votes were then selected as indicators. The 38 indicators thus identified are described in more detail in Chapter 3 and each is accompanied by a small practical example. The data sources, tools and company departments or external organizations that can provide support were also taken into account. In addition, there was a short expert presentation in three workshops to introduce the topic. All topics, discussions and results of the workshops were recorded in minutes.

The results of the previous workshops were presented and discussed at a final event on January 22, 2024 as part of a stakeholder dialog. In order to obtain additional input for the discussion, external experts from science, civil society, politics and business were invited to the event and asked for feedback. The invited experts included PowerShift e.V., B.A.U.M. e.V., Engagement Global (Berlin), r3-0.org, WEED, Helpdesk for Business and Human Rights, Federal Office of Economics and Export Control (BAFA), World Wildlife Fund (WWF),

Südwind Institute, femnet, Berlin Senate Department, Electronics Watch, Ayni e.V., Institute for Human Rights and the Helmholtz Institute Berlin. Only two of the experts were available for feedback (Berlin Senate Department and B.A.U.M. e.V.), for which we would like to take this opportunity to express our gratitude.

The 23 participants in the stakeholder dialog were able to share their experiences, both positive and negative, and formulate their suggestions for the final white paper. The indicators developed in the workshops were also used to create a **benchmarking tool**, which was developed together with the start-up kiresult in spring 2024 (see chapter 5). This should enable companies to determine their indicators more quickly in future and compare their purchasing figures with those of other companies.



1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

RESULTS **3**

3 Results

This chapter presents the results of the work in detail. All 38 indicators are summarized in an overview, the SPPI scorecard. A profile was also created for each indicator and provided with an example.

These indicators are then used to calculate scores for each ESRS subtopic. All indicators per sub-theme are weighted equally. In order to determine the scores, the indicators for which the target value has been achieved are set as a percentage of the total number of indicators used. For example, if a sub-topic has 4 indicators that have all been processed and the target value has been achieved for two of the indicators, this results in a score of 50%. If the target value was achieved for only one of three indicators in another sub-topic, the score is 33%.

The overall score of the organization is calculated at the end from all the scores of the sub-topics. Here, too, all sub-themes are weighted equally. If a company selects

all indicators, it divides the total of all sub-topic scores by 11 (the total number of sub-topics). In the overview, the examples were taken from the respective indicator descriptions in order to determine an example score.

The materiality analysis, which forms the core of the reporting and which we will discuss in more detail in the following chapter, is decisive for the selection of indicators.

It should be added that the reporting should cover the current year and at least the four previous years in order to be able to present the development consistently and therefore credibly.



ESRS Topic	ESRS Subtopic	KPI No.	JARO procurement indicators for sustainable development	ESRS Data points	Actual Capital Impacts (Numerators) - As Is	Normative Capital Impacts (Denominators) - To Be	Maturity level evaluation	SPPI Total evaluation per ESRS Subthema	
GENERAL	2 General disclosure	1	2.01 Procurement volume with sustainable primary data	ESRS_2_BP-2_10	15	100	0,15	67%	
		2	2.02 Bonuses for sustainability performance compared to savings performance	ESRS_2_GOV-3_29	114	100	1,14		
		3	2.03 Annual expenditure for the sustainable procurement program compared to procurement volume	ESRS_2_MDR-A_69	6	5	1,2		
ENVIRONMENTAL	E1 Climate change	4	E1.01 Suppliers with Corporate Carbon Footprint (CCF)	ESRS_E1-7_56a	91	100	0,91	0%	
		5	E1.02 Internal carbon pricing in procurement decisions (in tenders)	ESRS_E1-7_AR61	46	100	0,46		
		6	E1.03 True cost accounting (TCA) for procurement decisions (in tenders)	ESRS_E1-6_AR53	9	100	0,09		
		7	E1.04 Products with Carbon Footprint (PCF)	ESRS_E1-7_58a	38	100	0,38		
	E2 Pollution	8	E2.01 Suppliers with an environmental management system (EMS)	ESRS_E2-4_AR_25 c-d	72	100	0,72	0%	
		9	E2.02 Waste rate in the manufacture of procured products	ESRS_E2-5_34	25	0	0,04		
		10	E2.03 Hazardous substances in the procurement volume	ESRS_E2-4_AR 23 c	5,6	0	0,15		
		11	E2.04 Training rate among suppliers	ESRS-2_MDR-P65f	65	100	0,65		
	E3 Water & marine resources	12	E3.01 Suppliers with water resource management in areas with water risk	ESRS_E3-3_23a-c	85	100	0,85	0%	
		13	E3.02 Procurement volume with fair net water consumption	ESRS_E3-4_AR31-32	52	100	0,52		
		14	E3.03 Products with a water footprint (PWF)	ESRS_E3-5_AR33	16	100	0,16		
	E4 Biodiversity & ecosystems	15	E4.01 Suppliers with biodiversity program in areas at risk for biodiversity	ESRS_E4-1_13a	47	100	0,47	0%	
		16	E4.02 Collaborative measures for biodiversity in areas at risk for biodiversity	ESRS_E4_IRO-1_19b	33	100	0,33		
		17	E4.03 Biodiversity-friendly procurement volume	ESRS_E4_IRO-1_17a	14	100	0,14		
	E5 Resource use and circular economy	18	E5.01 Circularity of suppliers	ESRS_E5_IRO-1_AR7e	28	100	0,28	0%	
		19	E5.02 Circular innovations with suppliers	ESRS_E5-2_AR11	80	100	0,8		
		20	E5.03 Secondary raw materials in tendered products	ESRS_E5-4_31c	75	100	0,75		
	SOCIAL	S1 Own workforce	21	S1.01 Gender pay gap in the procurement organization	ESRS_S1-16_97a	0,98	1	0,98	100%
22			S1.02 Gender quota at every level of procurement management	ESRS_GOV-1_21	0,92	1	0,92		
23			S1.03 Investments in training for procurement employees	ESRS_S1-1_AR17c	5,2	5	1,04		
S2 Workers in the value chain		24	S2.01 Suppliers with a management system for occupational health and safety	ESRS_S2-1_17,17a,17b	83	100	0,83	0%	
		25	S2.02 Suppliers with living wages for all full-time employees	ESRS_S2-4_AR37	6	100	0,06		
		26	S2.03 Suppliers with compliant social audits	ESRS_S2-1_18	56	100	0,56		
		27	S2.04 Suppliers with works council	ESRS_S2-2_22a	62	100	0,62		
S3 Affected communities		28	S3.01 Sourcing countries with active cooperation with external, supply chain-specific stakeholders	ESRS_2_SBM-2_45	37	100	0,37	0%	
		29	S3.02 Incidents of human rights violations in the supply chain in affected communities	ESRS_S3-1_16	3	0	0,25		
		30	S3.03 Suppliers without tax gap	ESRS_G1-6_33b	77	100	0,77		
		31	S3.04 Suppliers with local NGO involvement	ESRS_2_SBM-2_45	16	100	0,16		
S4 Consumers and end-users		32	S4.01 Products with a digital product passport (DPP)	ESRS_S4-4_AR25a	19	100	0,19	33%	
		33	S4.02 Complaints regarding the supply chain that are resolved by the purchasing department	ESRS_S4-3_AR23	68	100	0,68		
		34	S4.03 Investments in training for procurement employees on customer requirements	ESRS_S4-4_AR34	12,5	10	1,25		
GOVERNANCE		G1 Business conduct	35	G1.01 Payment terms with suppliers < 30 days	ESRS_G1-6_33a-d	66	100	0,66	25%
			36	G1.02 Compliance in the procurement process	ESRS_G1-1_7	80	100	0,8	
	37		G1.03 Responsible contracts with suppliers	ESRS_G1-2_14, 15a	7	100	0,07		
	38		G1.04 Incidents of corruption with suppliers	ESRS_G1-4_25a	0	0	1		



Sustainable Procurement Performance Indicators (SPPI)-

SCORECARD

→ developed by the JARO Institute for Sustainability and Digitalization e.V. Based on the work of the r3.0 Center for Sustainable Organizations (CSO)

Total Evaluation (Sum of total evaluations per ESRS Subtopic / Number of ESRS Subtopics)

20%

JARO Procurement Indicator 1.2.01

Procurement volume with sustainable primary data

GENERAL | General requirements



ESRS Topic: 2 – General requirements
Link to the ESRS data point: ESRS_2_BP-2_10
Reference to the UNRISSD-Manual: –

EXPLANATION

Primary data is of crucial importance for high-quality and reliable sustainability management. In procurement organisations in particular, it can indicate the quality of supplier management. Estimated emissions data on the procurement volume (spend-based method) or average data on products do not count as primary data.

A tolerance limit of 80 percent was defined (0,8).

$$\text{SCORE} = \frac{\text{Share of procurement volume with sustainable primary data} / \text{Total purchasing volume in \%}}{100 \%} \rightarrow \frac{15 \%}{100 \%} = 0,15 \text{ (not achieved)}$$

Target value: 1 (100 %)
0,8 - 1 achieved
< 0,8 not achieved

Example

The company has an annual procurement volume of 2 billion euros. For products and services totaling 300 million euros, direct sustainability certificates are available from suppliers (e.g. environmental footprints of the respective products):
 $300 \text{ million} / 2 \text{ billion} = 0.15 * 100 = 15\%$

DATA SOURCES

- ERP Data
- Supplier management data (master data)
- CSR department
- External product information from suppliers (e.g. product data sheets on the supplier's website)
- External directories of product certifications (e.g. Blue Angel)

JARO Procurement Indicator 2.2.02

Premiums for sustainability performance compared to savings performance

GENERAL | General requirements



ESRS Topic: 2 – General requirements
Link to the ESRS data point: ESRS_2_GOV-3_29
Reference to the UNRISD-Manual: –

EXPLANATION

The performance of procurement is still strongly linked to clear financial savings targets. In order to increase the sustainability performance of the procurement organization, this should also be rewarded. The sustainability premium (or the value of the premium performance) should have at least the same financial value as the savings premium.

$$\text{SCORE} = \frac{\text{Share of bonuses for sustainability performance} / \text{Bonuses for savings performance in \%}}{100 \%} \rightarrow \frac{114 \%}{100 \%} = 1,14 \text{ (achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

Example

The procurement team receives a bonus of € 1,600 per person for achieving the sustainability targets in purchasing. A further bonus of € 1,400 per person is paid for achieving the savings targets:
 $1,600 \text{ €} / 1,400 \text{ €} = 1,14 * 100 = 114\%$

DATA SOURCES

- ERP data
- Procurement control data
- HR department

JARO Procurement Indicator 3.2.03

Annual expenditure for the sustainable procurement program compared to procurement volume

GENERAL | General requirements



ESRS Topic: 2 – General requirements
Link to the ESRS data point: ESRS_2_MDR-A_69
Reference to the UNRISD-Manual: –

EXPLANATION

The implementation of sustainable procurement processes requires financial investment from companies. The “sustainable procurement must not cost more” approach is not realistic in the short term. This KPI is therefore intended to show how consistently the transformation of procurement is being worked on. A target value of 5% of the annual procurement volume was defined.

$$\text{SCORE} = \frac{\text{Share of annual expenditure for the sustainable procurement program / total procurement volume in \%}}{5 \%}$$



Example

$$\frac{6 \%}{5 \%} = 1,2 \text{ (achieved)}$$

Target value: 1 (5%)
> = 1 achieved
< 1 not achieved

The company has an annual procurement volume of €2 billion. It invests €1,200,000 per year in the sustainable procurement program (e.g. for supplier training, LKSG software, further training for purchasing employees, etc.):
 $1.2 \text{ million} / 2 \text{ billion} = 0.6 * 100 = 6\%$

DATA SOURCES

- ERP Data
- Procurement Controlling
- HR Abteilung
- CSR Abteilung

JARO Procurement Indicator 4.E1.01

Suppliers with Corporate Carbon Footprint (CCF)

ENVIRONMENTAL | Climate Change



ESRS Topic: E1 – Climate Change
Link to the ESRS data point: ESRS_E1-7_56a
Reference to the UNRISD-Manual: UNRISD II.A.2

EXPLANATION

CCF data from suppliers is essential for determining Scope 3 data and for an effective climate protection strategy. They generally represent the largest proportion of emissions. It can demonstrate the quality of supplier management. Good communication practices, incentives and support services are necessary to convince suppliers and achieve good results for this indicator.

DATA SOURCES

- ERP data
- Supplier management data (master data)
- Procurement control data
- CSR department



free CCF Tool for SME:

→ <https://smeclimatehub.org/start-measuring/>

→ <https://businesscarboncalculator.normative.io/en/>

Example

$$\text{SCORE} = \frac{\text{Proportion of relevant suppliers with CCF} / \text{Total of all relevant suppliers in \%}}{100 \%} \rightarrow \frac{91 \%}{100 \%} = 0,91 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with 5,000 suppliers. Of these, 200 suppliers were classified as relevant in the materiality analysis. The company has a CO₂ footprint for 182 suppliers: 182/200 = 0,91*100 = 91%

JARO Procurement Indicator 5.E1.02

Internal carbon pricing in procurement decisions (in tenders)

ENVIRONMENTAL | Climate Change



ESRS Topic: E1 – Climate Change
Link to the ESRS data point: ESRS_E1-7_AR61
Reference to the UNRISD-Manual: –

EXPLANATION

More and more companies are using the instrument of internal carbon pricing to internalize external costs and make more sustainable investment decisions. Purchasing should therefore determine and monetize emissions in all tenders to be able to prove carbon savings. The carbon price to be set should be linked at least to the European Emissions Trading System (EU ETS), but preferably to the recommendations of the Federal Environment Agency or the IPCC.

DATA SOURCES

- ERP data
- Tender and P2P data (procurement control data)
- CSR department



- [EU ETS data viewer](#)
- [The German Environment Agency \(UBA\)](#)

Example

$$\text{SCORE} = \frac{\text{Proportion of procurement decisions based on internal carbon pricing / total of all procurement decisions in \%}}{100 \%} \rightarrow \frac{46 \%}{100 \%} = 0,46 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

The company carried out 89 tenders in the year. Of these, the internal carbon price was used in 41 tenders to compare the offers and take emissions into account in the procurement decision:
 $41/89 = 0,46 \cdot 100 = 46\%$

JARO Procurement Indicator 6.E1.03

True cost accounting (TCA) for procurement decisions (in tenders)

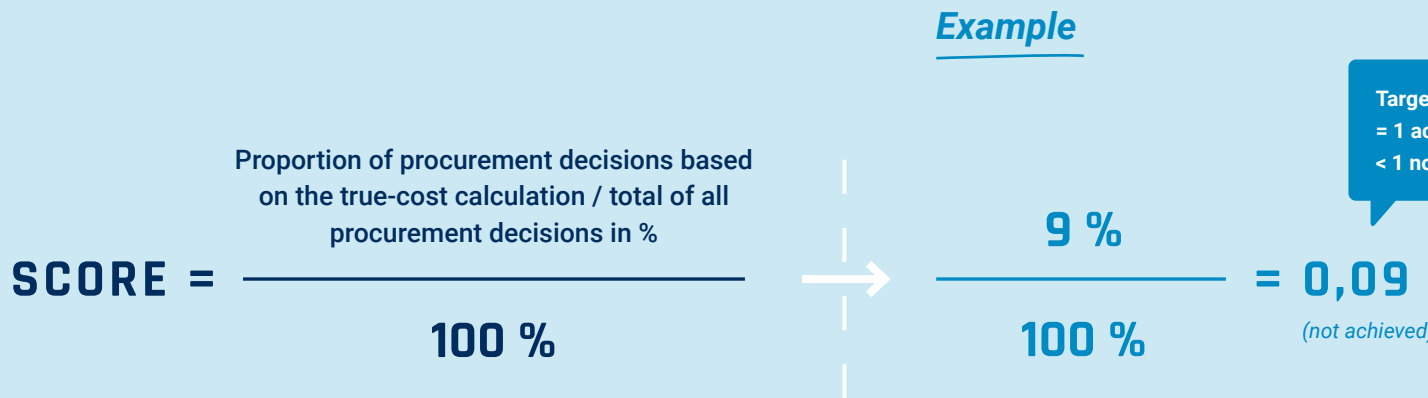
ENVIRONMENTAL | Climate Change



ESRS Topic: E1 – Climate Change
Link to the ESRS data point: ESRS_E1-6_AR53
Reference to the UNRISD-Manual: –

EXPLANATION

To internalize external costs, it is not only the internal CO2 pricing that is important, but rather the consideration of the entire costs of a product along the entire value chain, which can include both environmental costs and costs for society. Purchasing should therefore determine and monetize the actual costs in all tenders and provide evidence of the savings.



The company carried out 89 tenders in the year. Of these, the TCA was used in 9 tenders to compare the bids and take into account the environmental and social costs of the procurement object: $9/89 = 0,9*100 = 9\%$

DATA SOURCES

- ERP data
- Tender and P2P data (procurement control data)
- CSR department



- [WageIndicator.org](https://www.wageindicator.org)
- [TruePrice.org](https://www.trueprice.org)
- [TCA2f.org](https://www.tca2f.org)

JARO Procurement Indicator 7.E1.04

Products with Carbon Footprint (PCF)

ENVIRONMENTAL | Climate Change



ESRS Topic: E1 – Climate Change
Link to the ESRS data point: ESRS_E1-7_58a
Reference to the UNRISD-Manual: UNRISD II.A.2

EXPLANATION

PCF data from products strengthens the inventory of Scope 3 emissions. Good communication practices, incentives and support services are necessary to convince suppliers to collect the necessary data. Requesting and using this data should become the standard to obtain a high proportion of primary data in purchasing and use it in procurement decisions.

SCORE = $\frac{\text{Share of tendered products \& services with PCF / Total of all tendered products \& services in \%}}{100 \%}$

Example

$\frac{38 \%}{100 \%} = 0,38$ (not achieved)

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

The company put 20,000 products out to tender during the year. The PCF was collected for 7,600 products as part of the tenders:
 $7,600/20,000 = 0,38*100 = 38\%$

DATA SOURCES

- ERP data
- Supplier management data
- Procurement control data
- Cost planning/parts list data
- CSR department



→ [GHG Protocol Product – Standard](#)
→ [Free PCF Tool](#)

JARO Procurement Indicator 8.E2.01

Suppliers with an environmental management system (EMS)

ENVIRONMENTAL | Pollution



ESRS Topic: E2 – Pollution

Link to the ESRS data point: ESRS_E2-4_AR_25 c-d

Reference to the UNRISD-Manual: –

EXPLANATION

To avoid environmental damage in the supply chain, relevant suppliers should establish an environmental management system (EMS) such as EMAS. As part of supplier development, purchasing managers can provide appropriate awarenessraising and support services as well as targeted incentives.

SCORE = $\frac{\text{Share of all relevant suppliers with EMS}}{\text{Total of all relevant suppliers in \%}}$

100 %

→

Example

72 %

100 %

= **0,72**
(not achieved)

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with 5,000 suppliers. Of these, 200 suppliers were classified as relevant in the materiality analysis. An environmental management system exists for 146 suppliers:
 $146/200 = 0,72 \cdot 100 = 72\%$

DATA SOURCES

- ERP data
- Supplier management data (master data)
- Procurement control data
- CSR department



→ [EMAS Database](#) inkluding also ISO 14001

JARO Procurement Indicator 9.E2.02

Waste rate in the manufacture of procured products

ENVIRONMENTAL | Pollution



ESRS Topic: E2 – Pollution

Link to the ESRS data point: ESRS_E2-5_34

Reference to the UNRISD-Manual: UNRISD I.B_2

EXPLANATION

The waste rate is measured here in relation to the waste that must be disposed of per production unit in the manufacturing process of procured (preliminary) products, with a target value of zero (+1). It is calculated from the input and the output, i.e. the amount of waste / the amount of material used x 100%.

As the denominator is zero or close to zero (zero waste), the formula was rotated and adjusted (+1) in accordance with the UNRISD manual.

DATA SOURCES

- External supplier data (sustainability report)
- Extended product information
- Material parts lists



→ [circulareconomy](#)

→ [UNEP Towards Zero Waste](#)

Example

$$\text{SCORE} = \frac{0 (+1)}{\text{Average waste rate per tendered production unit in \% (+1)}} \rightarrow \frac{0 (+1)}{25 \% (+1)} = 0,04 \text{ (not achieved)}$$

Target value: 1 (0 %)
= 1 achieved
< 1 not achieved

The company put 20,000 products out to tender per year. Based on the information provided by the suppliers, an average of 25% waste per tendered production unit was identified in the tenders.

JARO Procurement Indicator 10.E2.03

Hazardous substances in the procurement volume

ENVIRONMENTAL | Pollution



ESRS Topic: E2 – Pollution

Link to the ESRS data point: ESRS_E2-4_AR 23 c

Reference to the UNRISD-Manual: UNRISD II.A_4

EXPLANATION

In order to avoid environmental pollution, hazardous substances must be avoided in the future. Purchasing should therefore always motivate suppliers to innovate and, as part of the procurement process, examine how hazardous substances can be replaced by non-hazardous substances. As the denominator is zero or close to zero, the formula was rotated and adjusted (+1) in accordance with the UNRISD manual.

DATA SOURCES

- External supplier data
- Material parts lists



- [EU Regulation REACH](#)
- [Helpdesk](#)
- [Hazardous Substances Ordinance \(DE\)](#)
- [Globally Harmonized System of Classification and Labelling of Chemicals \(GHS Rev. 9, 2021\)](#)

Example

$$\text{SCORE} = \frac{0 (+1)}{\text{Annual procurement volume of hazardous substances in tons (+1)}} \rightarrow \frac{0 (+1)}{5,6 (+1)} = 0,15 \text{ (not achieved)}$$

Target value: 1 (0 %)
= 1 achieved
< 1 not achieved

The company has an annual procurement volume of 2 billion euros. This includes 5.6 tons of products that are subject to registration under REACH.

JARO Procurement Indicator 11.E2.04

Training rate among suppliers

ENVIRONMENTAL | Pollution



ESRS Topic: E2 – Pollution

Link to the ESRS data point: ESRS_2_MDR-P65f

Reference to the UNRIISD-Manual: –

EXPLANATION

In order to prevent environmental pollution in the supply chain, all relevant suppliers should be trained in environmental protection and the improvement of their processes. As part of supplier development, training certificates must be validated in terms of timeliness, scope and audit performance.



A company works with 5000 suppliers. Of these, 200 suppliers were classified as relevant in the materiality analysis. A training certificate on environmental protection is available for 130 suppliers: $130/200 = 0,65 \cdot 100 = 65\%$

DATA SOURCES

- ERP data
- Supplier management data (master data, development measures with suppliers, etc.)

JARO Procurement Indicator 12.E3.01

Suppliers with water resource management in areas with water risk

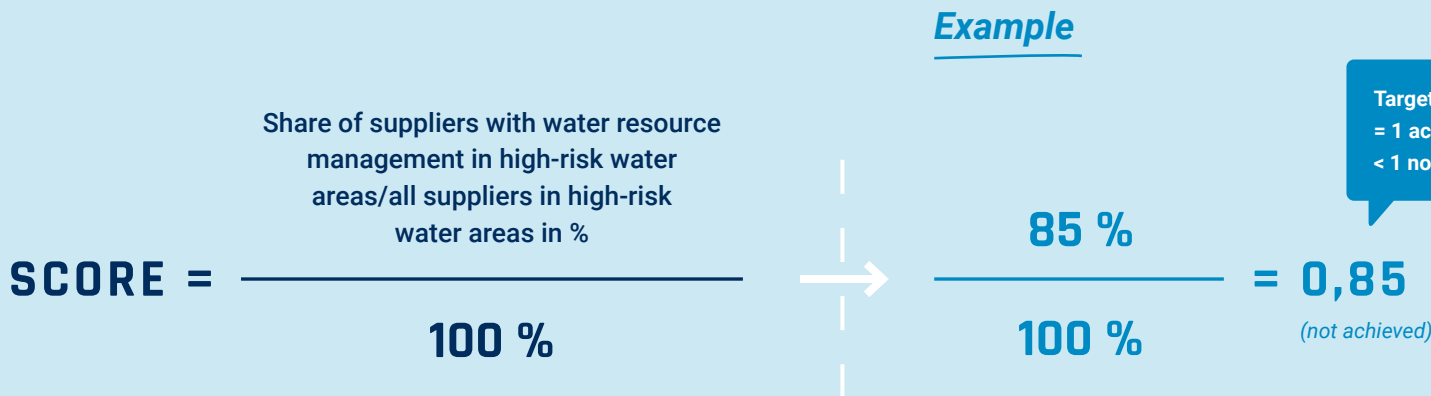
ENVIRONMENTAL | Water and marine resources



ESRS Topic: E3 – Water and marine resources
Link to the ESRS data point: ESRS_E3-3_23a-c
Reference to the UNRISD-Manual: UNRISD I.C_1

EXPLANATION

The increasing global scarcity of water requires companies and their suppliers to use this resource more responsibly, especially in risk areas. Purchasing should therefore sensitize its suppliers, support them specifically in the introduction of water management and review progress (e.g. according to ISO 14002-2:2023).



A company works with 5,000 suppliers. Of these, 100 suppliers have been identified in areas with a high water risk. A water management system is in place at 85 of these suppliers: $85/100 = 0,85 \cdot 100 = 85\%$

DATA SOURCES

- ERP data
- Supplier management data



- [WWF Water Risk Filter](#)
- [ISO 14002-2:2023](#)
- [WELLE Tool](#)
- [CDP Water Impact Index](#)
- [ATLAS OF WATER INNOVATIONS](#)

JARO Procurement Indicator 13.E3.02

Procurement volume with fair net water consumption

ENVIRONMENTAL | Water and marine resources



ESRS Topic: E3 – Water and marine resources
Link to the ESRS data point: ESRS_E3-4_AR31-32
Reference to the UNRISD-Manual: UNRISD II.A_3

EXPLANATION

Water use (by each relevant supplier) must be fair, equitable and proportionate to available renewable resources (UNRISD Handbook Indicator II.A_3). Procurement organizations must aim to source 100% of their spending in high water risk areas from suppliers that act responsibly based on these criteria. The provision of UNRISD indicator II.A_3 and evidence of optimization measures serve as proof (in the first step).

DATA SOURCES

- ERP Data / supplier management data (GPS coordinates, number of employees, GDP contribution per location, water consumption)



Example

$$\text{SCORE} = \frac{\text{Procurement volume with fair net water consumption of suppliers in high-risk water areas} / \text{Procurement volume of all suppliers in high-risk water areas in \%}}{100 \%} \rightarrow \frac{52 \%}{100 \%} = 0,52 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with 5,000 suppliers. Of these, 100 suppliers have been identified in areas with a high water risk. 52 of these suppliers can submit the UNRISD indicator II.A_3 and provide evidence of optimization measures: $52/100 = 0,52 * 100 = 52\%$

JARO Procurement Indicator 14.E3.03

Tendered products with a water footprint (PWF)

ENVIRONMENTAL | Water and marine resources



ESRS Topic: E3 – Water and marine resources

Link to the ESRS data point: ESRS_E3-5_AR33

Reference to the UNRISD-Manual: I.B_1

EXPLANATION

PWF data from suppliers strengthens responsible water use in the supply chain. Good communication practices, incentives and support services are necessary to convince suppliers to collect the necessary data. Requesting and using this data should become the standard in order to obtain a high proportion of primary data in purchasing and use it in procurement decisions.

DATA SOURCES

- ERP data / supplier management
- External supplier data
- Procurement controlling data
- Cost planning / parts list data



[Water Footprint Toolbox](#)

[Water Footprint Network](#)

Example

$$\text{SCORE} = \frac{\text{Share of tendered products \& services with PWF / total of all tendered products \& services in \%}}{100 \%} \rightarrow \frac{16 \%}{100 \%} = 0,16 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

The company put 20,000 products out to tender during the year. The PWF was determined for 3,200 products as part of the tenders:
 $3,200/20,000 = 0,16*100 = 16\%$

JARO Procurement Indicator 15.E4.01

Suppliers with a biodiversity program in areas at risk for biodiversity

ENVIRONMENTAL | Biodiversity and ecosystems



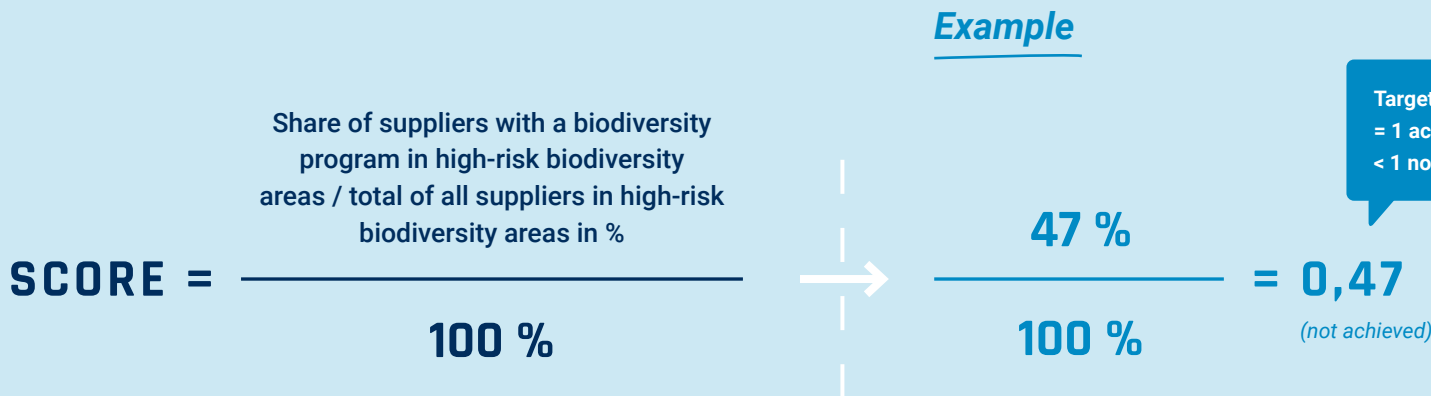
ESRS Topic: E4 – Biodiversity and ecosystems

Link to the ESRS data point: ESRS_E4-1_13a

Reference to the UNRISD-Manual: –

EXPLANATION

Biodiversity loss poses a significant risk to the resilience of supply chains and therefore to procurement. To counteract this, procurement managers should strive to ensure that their suppliers in biodiversity high-risk areas have a biodiversity program (e.g. as part of their environmental management system such as EMAS).



One company works with 5,000 suppliers. Of these, 600 suppliers were identified in areas with a high biodiversity risk. 282 of these suppliers can provide evidence of a biodiversity program:
 $282/600 = 0,47 \cdot 100 = 47\%$

DATA SOURCES

- ERP data / supplier management
- External supplier data
- CSR department / risk analysis



- [EMAS Database including also ISO 14001](#)
- [EMAS und Biodiversität \(DE\)](#)
- [WWF Biodiversity-Riskfilter](#)
- [SwissRE BES Index](#)
- [EU Factsheet Business Case Biodiversity](#)

JARO Procurement Indicator 16.E4.02

Collaborative measures for biodiversity in areas at risk for biodiversity

ENVIRONMENTAL | Biodiversity and ecosystems



ESRS Topic: E4 – Biodiversity and ecosystems
 Link to the ESRS data point: ESRS_E4_IRO-1_19b
 Reference to the UNRISD-Manual: –

EXPLANATION

Procurement managers should consider the extent to which their suppliers in biodiversity high-risk areas are implementing conservation measures in collaboration with external stakeholders, including NGOs, local civil society, academia, competitors, suppliers, etc. It is crucial that procurement itself plays an active role here, e.g. in the form of financial incentives and/or educational measures, in order to strengthen such commitment on the part of suppliers.

DATA SOURCES

- ERP data / supplier management
- External supplier data
- Program for sustainable procurement
- Sustainability report and cooperation agreements



- [EMAS und Biodiversität \(DE\)](#)
- [WWF Biodiversity-Riskfilter](#)
- [SwissRE BES Index](#)
- [EU Factsheet Business Case Biodiversity](#)

Example

$$\text{SCORE} = \frac{\text{Share of suppliers with collaborative measures in high-risk biodiversity areas / total of all suppliers in high-risk biodiversity areas in \%}}{100 \%} \rightarrow \frac{33 \%}{100 \%} = 0,33 \text{ (not achieved)}$$

Target value: 1 (100 %)
 = 1 achieved
 < 1 not achieved

A company works with 5,000 suppliers. Of these, 600 suppliers have been identified in areas with a high biodiversity risk. 200 of these suppliers can demonstrate collaborative conservation measures and have been supported by higher price agreements: $200/600 = 0,33 \cdot 100 = 33\%$

JARO Procurement Indicator 17.E4.03

Biodiversity-friendly procurement volume

ENVIRONMENTAL | Biodiversity and ecosystems



ESRS Topic: E4 – Biodiversity and ecosystems
Link to the ESRS data point: ESRS_E4_IRO-1_17a
Reference to the UNRIISD-Manual: –

EXPLANATION

To show how consistently biodiversity-friendly products are taken into account in procurement, the share of these products in the total procurement volume is measured. According to the EU, more than 50% of GDP depends on intact ecosystems. For this reason, attention should also be paid in tenders to suppliers who are actively committed to biodiversity (see 15_E4_01).

$$\text{SCORE} = \frac{\text{Proportion of the biodiversity-friendly procurement volume put out to tender / total of the total procurement volume put out to tender in \%}}{100 \%}$$

Example

$$\frac{14 \%}{100 \%} = 0,14 \quad (\text{not achieved})$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

The company has an annual procurement volume of 2 billion euros. 1 billion euros was put out to tender last year. Of this, products and services worth 160 million euros were awarded to suppliers who could demonstrate an active biodiversity program: $160 \text{ million} / 1 \text{ billion} = 0,16 * 100 = 16\%$

DATA SOURCES

- ERP data
- Supplier management
- External supplier data
- Procurement controlling data



- EMAS und Biodiversität (DE)
- WWF Biodiversity-Riskfilter
- SwissRE BES Index
- EU Factsheet Business Case Biodiversity

JARO Procurement Indicator 18.E5.01

Circularity of suppliers

ENVIRONMENTAL | Resource use and circular



ESRS Topic: E5 – Resource use and circular economy
Link to the ESRS data point: ESRS_E5_IRO-1_AR7e
Reference to the UNRISD-Manual: –

EXPLANATION

When qualifying and developing relevant suppliers, Procurement should pay attention to their level of development with regard to the circularity of their business model. This can be documented by various certificates (e.g. Company Level Aggregator Tool of the Ellen MacArthur Foundation (EMF)) or with an existing circular economy strategy including implementation measures.



A company works with 5,000 suppliers. 200 of the suppliers were classified as relevant in the materiality analysis. Of these, 56 suppliers have already established a circular business model:
 $56/200 = 0,28 * 100 = 28\%$

DATA SOURCES

- ERP data / Bill of Materials
- Supplier management
- External supplier data



JARO Procurement Indicator 19.E5.02

Circular innovations with suppliers

ENVIRONMENTAL | Resource use and circular



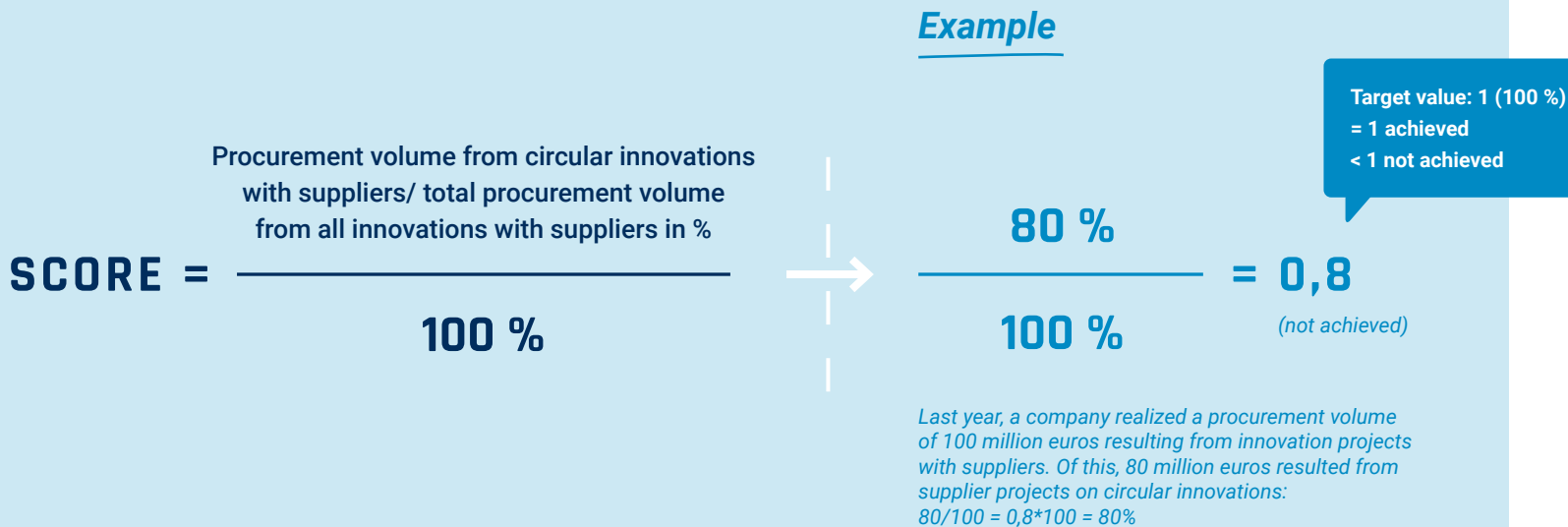
ESRS Topic: E5 – Resource use and circular economy

Link to the ESRS data point: ESRS_E5-2_AR11

Reference to the UNRISD-Manual: –

EXPLANATION

Collaboration is essential to close loops. Purchasing departments should therefore carry out targeted joint projects with suppliers to promote circular innovations (e.g. material or process innovations). Circularity should be part of all innovation projects, as it improves the company's own development.



DATA SOURCES

- ERP data
- Supplier management / development
- CSR / Sustainability report



- Circular Business Models
- MCI-Indicator of the EMF

JARO Procurement Indicator 20.E5.03

Secondary raw materials in tendered products

ENVIRONMENTAL | Resource use and circular economy



ESRS Topic: E5 – Resource use and circular economy

Link to the ESRS data point: ESRS_E5-4_31c

Reference to the UNRISD-Manual: –

EXPLANATION

A key aspect of the circular economy is the decoupling of economic output from new raw materials through the recycling of raw materials. Purchasing can significantly influence this development with its requirements specifications by prioritizing the procurement of secondary raw materials and demanding the highest possible proportion of recycled materials in tendered products.

The tolerance value is 0.8.

SCORE =
$$\frac{\text{Proportion of mass of secondary raw materials used in tendered materials \& products / total mass of tendered materials \& products (incl. packaging) in \%}}{100 \%}$$

Example

$$\frac{75 \%}{100 \%} = 0,75$$

(not achieved)

Target value: 1 (100 %)
0,8 - 1 achieved
< 1 not achieved

Last year, a company tendered for materials and products with a total mass of 400 tons (including packaging). Recycled materials / secondary raw materials already accounted for 300 tons of this: $300/400 = 0,75 \cdot 100 = 75\%$

DATA SOURCES

- ERP data
- Cost planning / bill of materials
- External supplier data



- [VDI Material Database \(DE\)](#)
- [Circular Transition Indicator Framework \(WBCSD\)](#)

JARO Procurement Indicator 21.S1.01

Gender pay gap in the procurement organization

SOCIAL | Own workforce



ESRS Topic: S1 – Own workforce
 Link to the ESRS data point: ESRS_S1-16_97a
 Reference to the UNRISD-Manual: UNRISD II.B_6

EXPLANATION

For indicator II.B_6 of the UNRISD manual, we adopt the tolerance framework of 3 percent for the average salaries of women employed in procurement compared to men. The values at the individual function levels are to be determined in order to calculate the gender pay gap at the end (simplified calculation of the adjusted gender pay gap).

The tolerance range is 3%.

DATA SOURCES

- HR payroll

$$\text{SCORE} = \frac{\text{Proportion of average hourly earnings in procurement for women vs men in \%}}{100 \%}$$



Example

$$\frac{98 \%}{100 \%} = 0,98 \text{ (achieved)}$$

Target value: 1 (100 %)
 0,97 – 1,03 achieved
 < 0,97 not achieved
 > 1,03 not achieved

The purchasing department employs 25 people: 1 female purchasing manager, 3 team leaders (1x female, 2x male) and 21 employees without management responsibility (5x female, 16x male).

At purchasing organization level, all women earn €52/h, all men €44.67/h, which is 13% less than the women.

At the functional level of the purchasing organization, on the other hand, 100% is given at level 1 (purchasing manager), as there is only 1 person involved, at level 2 (team leader) the men earn an average of €66/h - the women €64/h - 97% of the men's hourly rate, at level 3 (employee) the men earn €42/h - the women €41/h - 98% of the men's hourly rate.

Now calculate the average of the function levels:
 $100 + 97 + 97 = 294/3 = 98$

JARO Procurement Indicator 22.S1.02

Gender quota at every level of procurement management

SOCIAL | Own workforce



ESRS Topic: S1 – Own workforce
 Link to the ESRS data point: ESRS_GOV-1_21
 Reference to the UNRISD-Manual: UNRISD II.B_9

EXPLANATION

The degree of responsibility in the form of management positions is also decisive for equality. We adopt the tolerance range of 10% in accordance with II.B.9 for both men and women.

The assessment should be carried out at the individual management levels, provided that the procurement organization has at least three different management levels.

The tolerance range is 10%.

DATA SOURCES

– HR department

Example

Female managers in purchasing per hierarchy level/
Male managers in purchasing per hierarchy level

SCORE = $\frac{\text{Female managers in purchasing per hierarchy level} + \text{Male managers in purchasing per hierarchy level}}{1}$

→ $\frac{1}{1} = 1$ (achieved)

Target value: 1 (100 %)
 0,9 – 1,1 achieved
 < 0,9 not achieved
 > 1,1 not achieved

The purchasing department employs 25 people: 1 female purchasing manager, 3 team leaders (1x female, 2x male) and 21 employees without management responsibility (5x female, 16x male).

*At purchasing organization level, 2 of 4 management positions are therefore held by women and 2 by men:
 2/2 = 1/1 = 1*

JARO Procurement Indicator 23.S1.03

Investments in training for procurement employees

SOCIAL | Own workforce

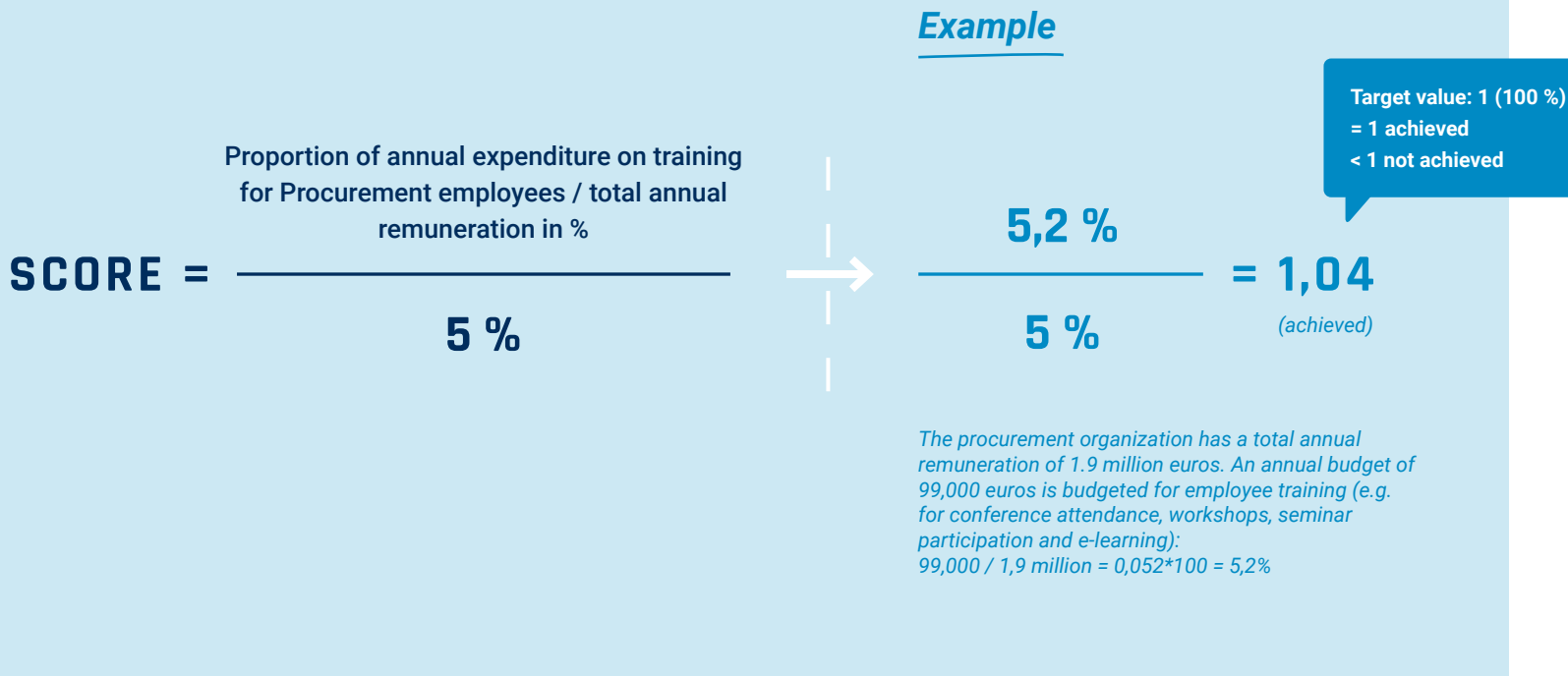


ESRS Topic: S1 – Own workforce
Link to the ESRS data point: ESRS_S1-1_AR17c
Reference to the UNRISD-Manual: UNRISD I.C_2

EXPLANATION

In order to meet the increasing demands on transformation capability in procurement, employees in procurement must receive regular and sufficient training.

This is the only way to systematically build up future skills and give procurement managers the confidence to act. Companies should budget 5% of total annual remuneration for this.



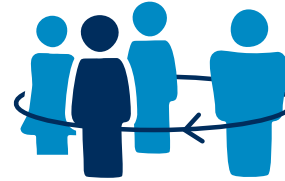
DATA SOURCES

- Procurement controlling data
- HR department

JARO Procurement Indicator 24.S2.01

Suppliers with a management system for occupational health and safety

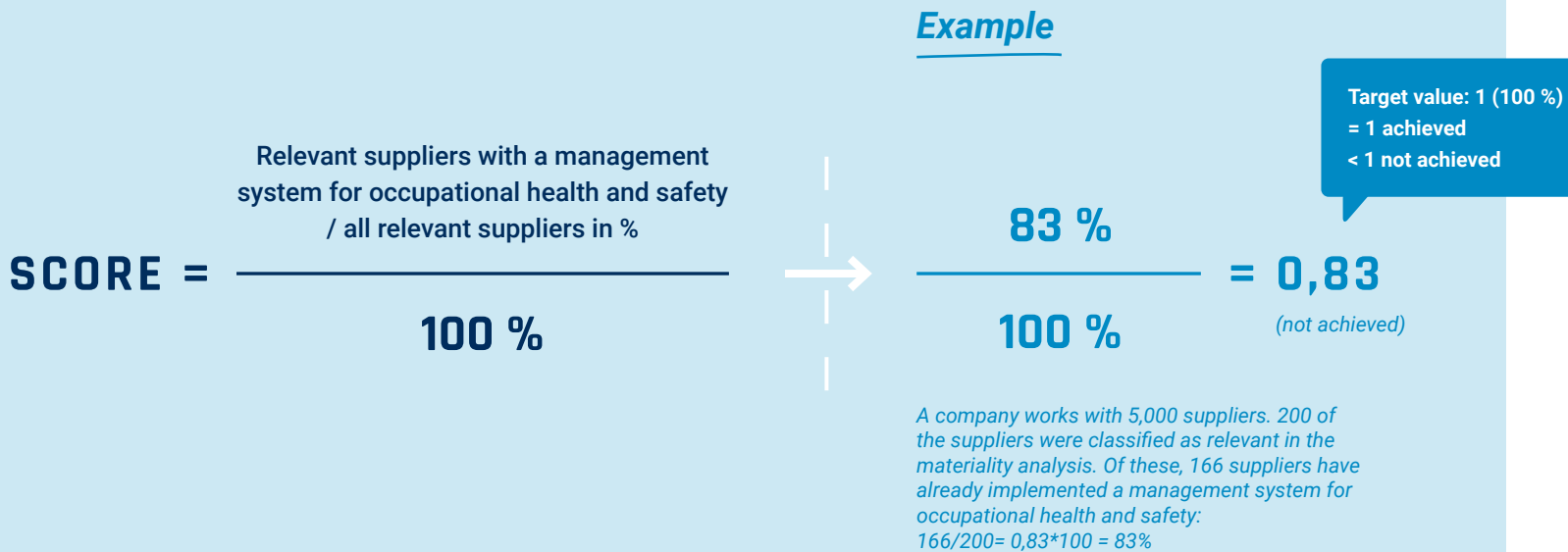
SOCIAL | Workers in the value chain



ESRS Topic: S2 – Workers in the value chain
Link to the ESRS data point: ESRS_S2-1_17,17a,17b
Reference to the UNRISD-Manual: UNRISD I.C_4

EXPLANATION

To ensure good and fair working conditions in the supply chain, management systems such as ISO 45001 help companies to work on internal processes and conditions for occupational health and safety in a structured way. For SMEs, guidelines and training programs could be an alternative.



DATA SOURCES

- ERP data / supplier management
- External supplier data

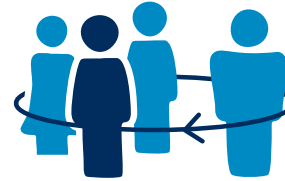


→ [ISO 45001:2018](#)

JARO Procurement Indicator 25.S2.02

Suppliers with living wages for all full-time employees

SOCIAL | Workers in the value chain



ESRS Topic: S2 – Workers in the value chain
Link to the ESRS data point: ESRS_S2-4_AR37
Reference to the UNRISD-Manual: UNRISD II.B_4

EXPLANATION

Paying living wages in supply chains for all full-time employees is one of the biggest social levers for procurement and has a positive impact on 12 of the UN's 17 Sustainable Development Goals (SDGs). Great efforts should therefore be made to convince suppliers of this and to support them with fair prices, contracts and training measures.

$$\text{SCORE} = \frac{\text{Relevant suppliers with living wages for all Full-time employees / all relevant suppliers in \%}}{100 \%}$$

→

$$\frac{6 \%}{100 \%} = 0,06 \text{ (not achieved)}$$

Example

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with 5,000 suppliers. 200 of the suppliers were classified as relevant in the materiality analysis. Of these, 12 suppliers were able to provide evidence that they pay all full-time employees a living wage: $12/200 = 0,06 * 100 = 6\%$

DATA SOURCES

- ERP data / supplier management
- External supplier data
- CSR department



- [Data of the WageIndicator Foundation](#)
- [Idh Roadmap on Living Wages](#)
- [UNGC Toolkit Living Wage](#)

JARO Procurement Indicator 26.S2.03

Suppliers with compliant social audit

SOCIAL | Workers in the value chain



ESRS Topic: S2 – Workers in the value chain

Link to the ESRS data point: ESRS_S2-1_18

Reference to the UNRISD-Manual: –

EXPLANATION

Social audits support the improvement of working conditions. A distinction is made between internal audits (within the company), supplier audits (inspection by clients at suppliers) and independent audits by third parties (external auditing companies). In the context of this indicator, only supplier audits and audits by third parties are taken into account. Conformity means compliance with the agreed standards.

DATA SOURCES

- ERP data / supplier management
- External supplier data
- Procurement controlling data



- SA 8000 Standard
- Amfori BSCI
- Social Audits Study of BMI (DE)

Example

$$\text{SCORE} = \frac{\text{Relevant suppliers with a compliant social audit} / \text{all relevant suppliers in \%}}{100 \%} \rightarrow \frac{56 \%}{100 \%} = 0,56 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with 5,000 suppliers.
200 of the suppliers were classified as relevant in the materiality analysis. Of these, 112 suppliers passed the social audits last year: $112/200 = 0,56 * 100 = 56\%$

JARO Procurement Indicator 27.S2.04

Suppliers with works council

SOCIAL | Workers in the value chain



ESRS Topic: S2 – Workers in the value chain
 Link to the ESRS data point: ESRS_S2-2_22a
 Verweis auf das UNRISD-Handbuch: –

EXPLANATION

The establishment of works councils strengthens the rights of employees and their representation of interests. As part of the supplier qualification process, the existence of works councils should therefore be checked with relevant suppliers. This is not possible or widespread in all countries. Alternatively, multinational companies in particular can set up global employee representative bodies.

DATA SOURCES

- ERP data / supplier management
- External supplier data
- CSR departmentg



- [Database on transnational company agreements](#)
- [EWC Directive](#)
- [Global Works Council](#)

Example

$$\text{SCORE} = \frac{\text{Relevant suppliers with works council} / \text{all relevant suppliers in \%}}{100 \%} \rightarrow \frac{62 \%}{100 \%} = 0,62 \text{ (not achieved)}$$

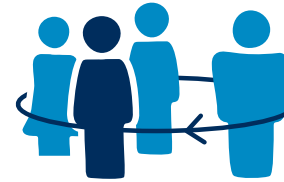
Target value: 1 (100 %)
 = 1 achieved
 < 1 not achieved

A company works with 5,000 suppliers. 200 of the suppliers were classified as relevant in the materiality analysis. Of these, 124 suppliers have established a works council: 124/200= 0,62*100 = 62%

JARO Procurement Indicator 28.S3.01

Sourcing countries with active cooperation with external, supply chain-specific stakeholders

SOCIAL | Affected communities



EXPLANATION

To improve working and living conditions in global procurement markets, procurement organizations must work intensively with external stakeholders such as civil society actors, suppliers, politicians and competitors. To this end, barriers should be broken down and more openness created for joint projects to improve working, living and environmental conditions in the respective countries in relation to their own business activities (e.g. through joint awareness-raising and training offers).

DATA SOURCES

- ERP data / Procurement market analyses
- Procurement data
- Public project documentation / case studies with details on scope, duration and results (e.g. in annual reports or case studies from NGOs or project sponsors)

SCORE =
$$\frac{\text{Sourcing countries with active cooperation with external supply chain stakeholders} / \text{all sourcing countries in \%}}{100 \%}$$

→

Example

$$\frac{37 \%}{100 \%} = 0,37$$

(not achieved)

Target value: 1 (100 %)
 = 1 achieved
 < 1 not achieved

A company procures goods and services in 100 countries worldwide. To improve working conditions and thus minimize due diligence risks, collaborative projects with NGOs and regional suppliers are supported in 37 countries: $37/100 = 0,37 \cdot 100 = 37\%$

JARO Procurement Indicator 29.S3.02

Incidents of human rights violations in the supply chain in affected communities

SOCIAL | Affected communities



ESRS Topic: S3 – Affected communities
 Link to the ESRS data point: ESRS_S3-1 16
 Reference to the UNRISD-Manual: –

EXPLANATION

Despite preventive measures, human rights violations can occur in the supply chain in the affected communities. Purchasing should always be informed about this and communicate transparently how it is taking responsible remedial action together with its business partners. As the denominator is zero or close to zero, the formula was rotated and adjusted (+1) in accordance with the UNRISD manual.

Example

$$\text{SCORE} = \frac{0 (+1)}{\text{Number of incidents of human rights violations in the supply chain in the affected communities (+1)}} \rightarrow \frac{0 (+1)}{3 (+1)} = 0,25 \text{ (not achieved)}$$

Target value: 1 (0 %)
 = 1 achieved
 < 1 not achieved

A company has been notified of a total of 3 incidents of human rights violations in its supply chains in the last year: $(0+1) / (3+1) = 0,25$

DATA SOURCES

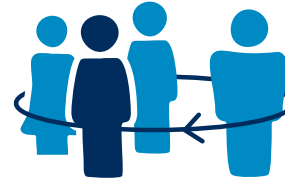
- ERP data / supplier management
- CSR/Legal department
- Complaints mechanism



JARO Procurement Indicator 30.S3.03

Suppliers without a tax gap

SOCIAL | Affected communities



ESRS Topic: S3 – Affected communities
Link to the ESRS data point: ESRS_G1-6_33b
Reference to the UNRISD-Manual: UNRISD II.B_2

EXPLANATION

The payment of taxes is necessary so that the state can make investments for the community. Tax evasion, on the other hand, is one of the major challenges that is often insufficiently prevented for political reasons. Care should be taken in purchasing to ensure that we only work with suppliers who pay fair taxes according to the regular tax rates in the countries in which they operate.

DATA SOURCES

- ERP data / supplier management
- Supplier balance sheets



- Tax Responsibility and Transparency Index
- EU Tax Gap Project Group
- OECD-Statistics

Example

$$\text{SCORE} = \frac{\text{Share of relevant suppliers without tax differentials/ all relevant suppliers in \%}}{100 \%} \rightarrow \frac{77 \%}{100 \%} = 0,77 \text{ (not achieved)}$$

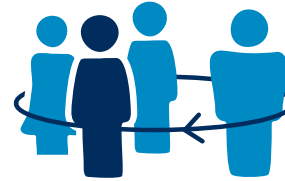
Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with a total of 5,000 suppliers. 200 of the suppliers were classified as relevant in the materiality analysis. Of these, the balance sheets of 154 suppliers were positively audited: $154/200 = 0,77 * 100 = 77\%$

JARO Procurement Indicator 31.S3.04

Suppliers with local NGO involvement

SOCIAL | Affected communities



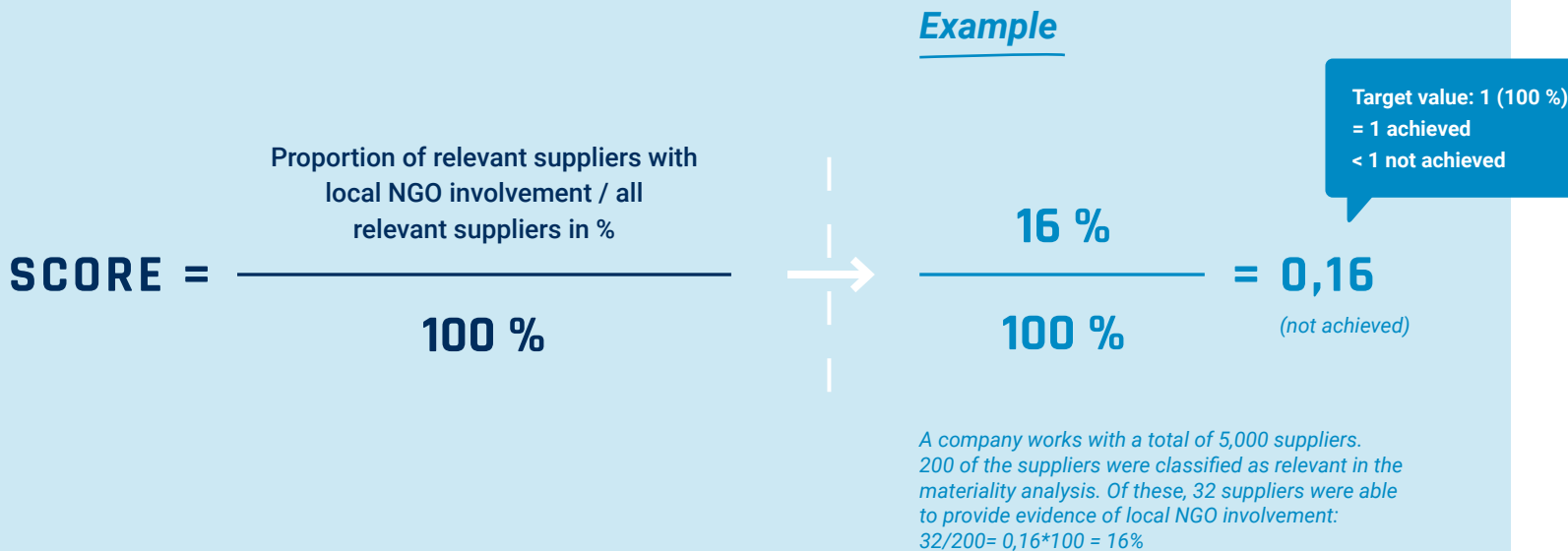
ESRS Topic: S3 – Affected communities
Link to the ESRS data point: ESRS_2_SBM-2_45
Reference to the UNRISD-Manual: –

EXPLANATION

To improve working and living conditions worldwide, companies must cooperate with external interest groups such as NGOs. The relevant suppliers should be motivated and supported for such engagement, e.g. through targeted awareness-raising on stakeholder management and training measures for practical implementation.

DATA SOURCES

- ERP data / supplier management
- External supplier data
- Public project documentation / case studies with details on scope, duration and results (e.g. in annual reports or case studies from NGOs or project sponsors)



JARO Procurement Indicator 32.S4.01

Products with a digital product passport (DPP)

SOCIAL | Consumers and end-users



ESRS Topic: S4 – Consumers and end-users
 Link to the ESRS data point: ESRS_S4-4_AR25a
 Reference to the UNRISD-Manual: –

EXPLANATION

With the DPP, the purchasing department can improve the data quality of its procurement volume and make better decisions as part of its purchasing activities. To do this, it must ensure that appropriate evidence is provided for the relevant product groups. Relevant product groups are assigned to categories that have a high environmental impact, such as electronics, textiles and furniture.

DATA SOURCES

- ERP data
- External supplier data (product information sheets)



- Study Digital Product Passport
- EU Ecodesign Regulation
- EU Battery Regulation

Example

$$\text{SCORE} = \frac{\text{Proportion of advertised products with DPP in relevant categories} / \text{all advertised products in relevant categories in \%}}{100 \%} \rightarrow \frac{19 \%}{100 \%} = 0,19 \text{ (not achieved)}$$

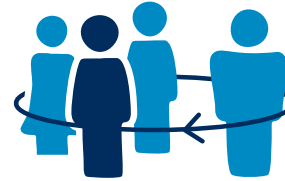
Target value: 1 (100 %)
 = 1 achieved
 < 1 not achieved

The company has tendered for 20,000 products per year. Of these, 3,000 are products from product groups that are assigned to categories with a high environmental impact. The DPP of 570 products was documented as part of the tenders:
 $570/3,000 = 0,19*100 = 19\%$

JARO Procurement Indicator 33.S4.02

Complaints regarding the supply chain that were resolved by the purchasing department

SOCIAL | Consumers and end-users



ESRS Topic: S4 – Consumers and end-users
Link to the ESRS data point: ESRS_S4-3_AR23
Reference to the UNRISD-Manual: –

EXPLANATION

Despite preventive measures, complaints may arise regarding the supply chain. Purchasing should always be informed about this and communicate transparently how it reacts responsibly together with its business partners. This indicator is intended to show how consistently and successfully Purchasing deals with complaints in the supply chain.

$$\text{SCORE} = \frac{\text{Complaints regarding the supply chain that are resolved by Purchasing / all complaints concerning the supply chain in \%}}{100 \%}$$

→

$$\frac{68 \%}{100 \%} = 0,68$$

(not achieved)

Example

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

Last year, a company received 25 complaints relating to the supply chain. Purchasing was able to uncover the causes of 17 complaints and resolve them together with the supplier:
 $17/24 = 0,68 * 100 = 68 \%$

DATA SOURCES

- ERP data / supplier management
- Action plan for procurement
- CSR department
- Complaint management system



- [Consumer advice center \(DE\)](#)
- [Warnings of the consumer advice center \(DE\)](#)

JARO Procurement Indicator 34.S4.03

Investment in training for purchasing staff on customer requirements

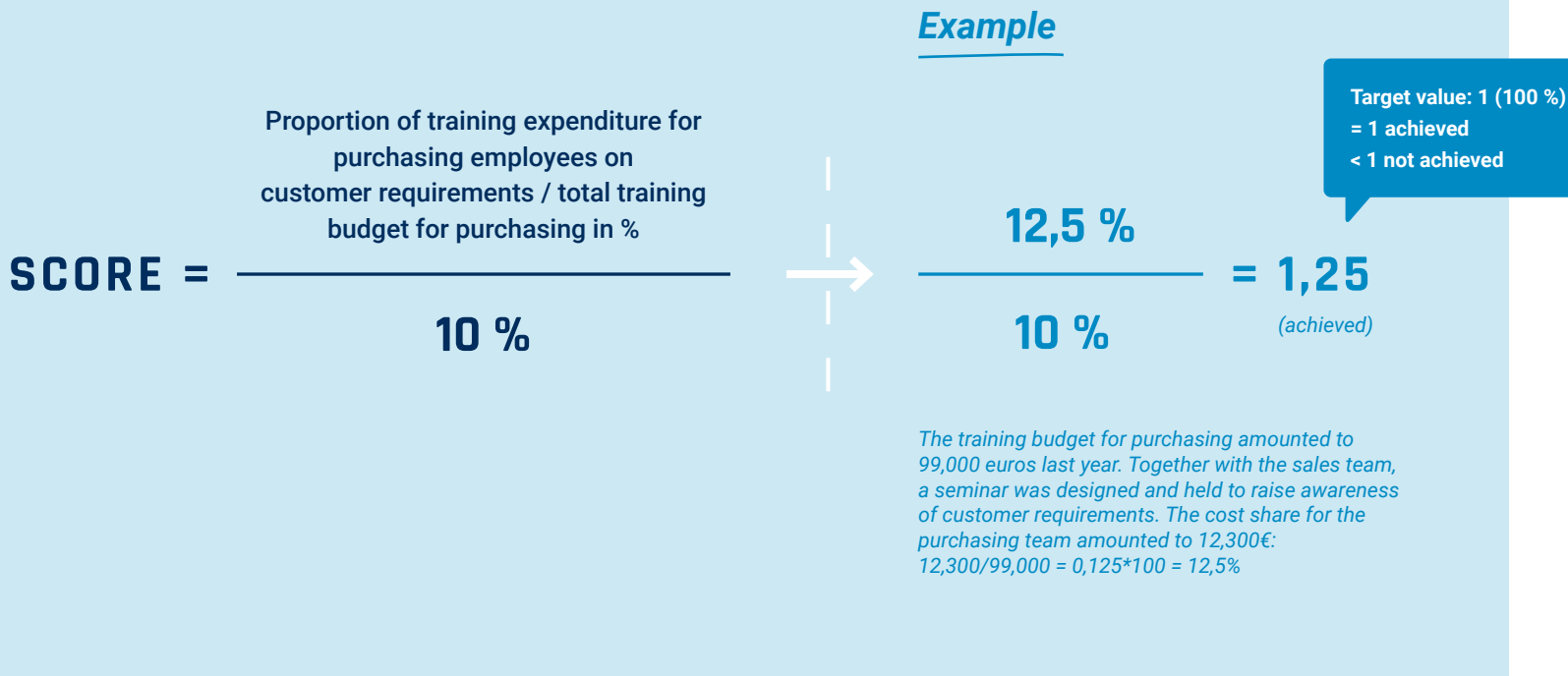
SOCIAL | Consumers and end-users



ESRS Topic: S4 – Consumers and end-users
Link to the ESRS data point: ESRS_S4-4_AR34
Reference to the UNRISD-Manual: –

EXPLANATION

To ensure that Purchasing is aware of customer requirements and the resulting product or service specifications, training should be carried out as part of Purchasing's regular training activities. 10% of the available training budget was defined as the target value.



DATA SOURCES

- HR department
- Sales department

JARO Procurement Indicator 35.G1.01

Payment terms with suppliers < 30 days

GOVERNANCE | Business conduct



ESRS Topic: G1 – Business conduct
Link to the ESRS data point: ESRS_G1-6 33a-d
Reference to the UNRISD-Manual: –

EXPLANATION

Payment terms often pose a liquidity problem for many SMEs in particular. Companies should therefore not abuse their market power to demand long and therefore unfair payment terms. A payment term of less than 30 days was set as the target value.

SCORE =
$$\frac{\text{Orders with payment within < 30 days / all orders in \%}}{100 \%}$$

Example

$$\frac{66 \%}{100 \%} = 0,66$$

(not achieved)

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company placed 122,000 orders last year. For 81,000 of these orders, payment was made within less than 30 days: $81,000 / 122,000 = 0,66 \cdot 100 = 66\%$

DATA SOURCES

- ERP data
- Contract data / General Terms and Conditions
- Accounting data
- Procurement controlling data

JARO Procurement Indicator 36.G1.02

Compliance in the procurement process

GOVERNANCE | Business conduct



ESRS Topic: G1 – Business conduct
Link to the ESRS data point: ESRS_G1-1_7
Reference to the UNRISD-Manual: –

EXPLANATION

The indicator shows how compliant procurement is in the company. Procurement without the (procedural) involvement of the purchasing department is detrimental to sustainability performance, as the due diligence obligations defined by the purchasing department cannot be considered, among other things. A tolerance range of 90% was defined.

A tolerance limit of 90 percent was defined (0,9).

SCORE =
$$\frac{\text{Proportion of procurement volume with involvement of the purchasing organization / total procurement volume in \%}}{0 (+1)}$$

Example

$$\frac{80 \%}{100 \%} = 0,08$$

(not achieved)

Target value: 1 (100 %)
0,9 -1 achieved
< 0,9 not achieved

*A company has an annual procurement volume of 2 billion euros. 1.6 billion euros were processed in a compliant manner via the procurement organization: 1,6 billion / 2 billion = 0,8*100 = 80%*

DATA SOURCES

- ERP data
- Procurement controlling data
- Accounting data
- Compliance department

JARO Procurement Indicator 37.G1.03

Responsible contracts with suppliers

GOVERNANCE | Business conduct



ESRS Topic: G1 – Business conduct
Link to the ESRS data point: ESRS_G1-2 14, 15a
Reference to the UNRISD-Manual: –

EXPLANATION

Fair contract design is crucial to convince suppliers of the seriousness of sustainable management. The common practice to date, e.g. to shift the duty of care entirely onto the supplier and make them liable for all incidents, is not only inappropriate, but also dangerous for the supplier's own risk management.

$$\text{SCORE} = \frac{\text{Fair contracts with relevant suppliers} / \text{all contracts with relevant suppliers in \%}}{100 \%}$$



Example

$$\frac{7 \%}{100 \%} = 0,07 \text{ (not achieved)}$$

Target value: 1 (100 %)
= 1 achieved
< 1 not achieved

A company works with a total of 5,000 suppliers. 200 of the suppliers were classified as relevant in the materiality analysis. Of these, the contracts with 14 suppliers were redrafted in accordance with the principles of responsible contract design: $14/200 = 0,07 * 100 = 7\%$

DATA SOURCES

- ERP data / supplier management
- Contract management
- Procurement controlling data



- Responsible Contracting-Projekt (RCP)
- Toolkit Responsible Contracting

JARO Procurement Indicator 38.G1.04

Incidents of corruption with suppliers

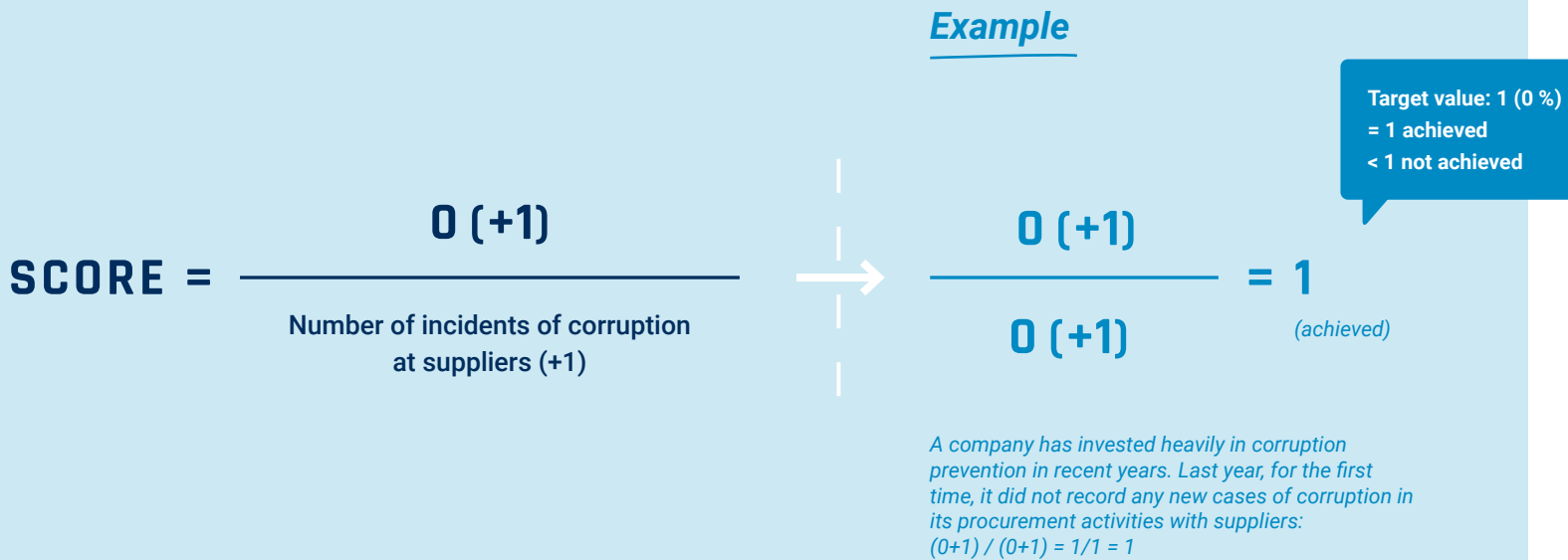
GOVERNANCE | Business conduct



ESRS Topic: G1 – Business conduct
Link to the ESRS data point: ESRS_G1-4 25a
Reference to the UNRIISD-Manual: –

EXPLANATION

Corruption is a widespread risk in connection with procurement activities and must therefore be taken into account when evaluating purchasing performance.



DATA SOURCES

- ERP data / supplier management
- External service providers
- Compliance department
- CSR department



→ *Corruption Perceptions Index by Transparency International*

1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

USE OF INDICATORS
BASED ON MATERIALITY

4

4 Use of indicators based on materiality

The indicators that a company or organization uses to monitor its own performance in any area should ideally be selected and prioritized by the organization itself, in line with its goals and objectives. The indicators selected to measure sustainability performance in procurement must reflect and be aligned with the procurement strategy, but must also be consistent with the company's sustainability goals.

For this reason, it is important to consider the operational procurement context of the company or organization to determine which indicators best capture the relevance of sustainable procurement measures and the impact on the supply chain. This varies from company to company and depends on factors such as the company's business model, sector, size, region and supply chain configuration.

When considering all available indicators , the selection of the most suitable indicators requires reflection on questions such as:

- Which indicators best reflect the objectives of our company's sustainable procurement strategy?
- Based on our company's risk assessments, what are the main risks associated with unsustainable sourcing practices, such as supply chain disruptions, reputational damage, legal and regulatory compliance issues, and environmental or social controversies? Which indicators can best be used to identify and monitor them?
- What are the key environmental and social impacts of our supply chain that we need to monitor and improve?
- Which supply categories are critical from a sustainability perspective? How could the indicator set support the identification of hotspots in the supply chain?
- Who are the most important suppliers from an impact perspective that our organization needs to focus on for monitoring?

4

No existing framework or set of indicators can be considered ready for use by an organization without a sound critical analysis in the light of its own context and capabilities.

Ideally, the Key Performance Indicators (KPIs) for sustainable procurement support the implementation of the Sustainable Procurement Strategy and indicate areas for improvement. By monitoring KPIs on specific topics such as carbon emissions or impact on biodiversity, the results of these indicators can, for example, lead to the identification of pressure points within the supply chain so that specific measures can be taken to improve processes or even change business models.

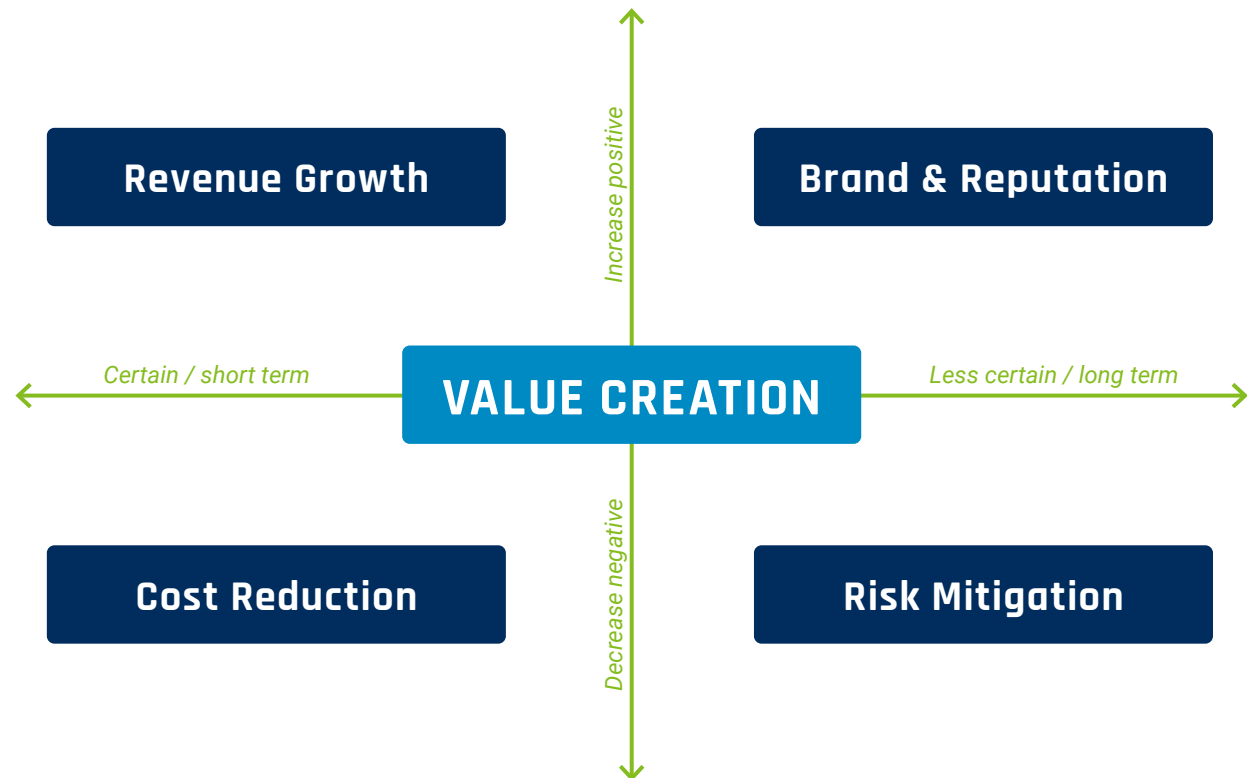
The company's materiality analysis can serve as a starting point for identifying and selecting the most important sustainability issues that are relevant (material) to the company's sustainability. However, an extended analysis that focuses on the supply chain aspects can bring new issues into the company's focus.

Combining the materiality analysis with a good understanding of the hotspots in the supply chain forms the basis for a solid sustainable procurement strategy and KPI system.

It is crucial to know what to monitor in the supply chain, whether it is biodiversity, emissions, waste or all of the above, and where to prioritize.

Over the past two decades, companies have learned about the importance of combining shareholder and stakeholder perspectives, increasingly incorporating

stakeholder dialog and consultation into their strategic agendas and developing appropriate capabilities. The development of reporting guidelines in recent years and the growing attention to sound materiality analysis supporting the core of corporate sustainability and procurement reflect the clear trend and need for ever greater transparency and accountability.



Sustainable Procurement as an investment in the future viability of the company (Source: own illustration based on WEF 2015)

Current reporting guidelines such as the Corporate Sustainability Reporting Directive (CSRD) and the associated European Sustainability Reporting Standards (ESRS) support companies in strengthening their (dual) materiality analysis. Participatory materiality analysis is the key to the success of a corporate sustainability strategy. And since no organization or company can become sustainable on its own, procurement plays a central strategic role in implementing sustainability for the company by managing the interface with business partners and providing relevant data on supply chain operations.

The double materiality analysis differs from the single materiality analysis in that it is broader in scope and takes into account both financial and non-financial aspects. What is new about the double materiality analysis is the recognition of the interconnectedness of financial performance and sustainability issues. Applied to procurement, this means that the financial, environmental and social impacts of procurement decisions are assessed in an integrated manner.

The United Nations Research Institute for Social Development (UNRISD) goes further and recommends the triple materiality analysis, additionally, to assess risks and impacts in the context of the carrying capacity thresholds of the multiple capitals (i.e. natural, social, human, built, and financial capitals among others). This is the approach used as basis for this SPPI – System.

With a clear system for measuring and capturing sustainability in procurement and an understanding of the potential that procurement can offer to the overall sustainability of the business, the company can identify additional relevant opportunities for its business, such as circular procurement, which can combine impacts across multiple sustainability issues and support the company's overall circularity strategy if this is a business priority.

The strategic value of procurement grows for the business when sustainability challenges and opportunities are understood, well managed and measured.

Clarity about your own sustainable procurement strategy and objectives, the definition and appropriate management of KPIs and a thorough understanding of the configuration and needs of the supply chain are key aspects of building a successful measurement system and realizing the full procurement potential for the company and its stakeholders.

From Cristina Fedato

1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

BENCHMARKING TOOL

5

5 Benchmarking Tool

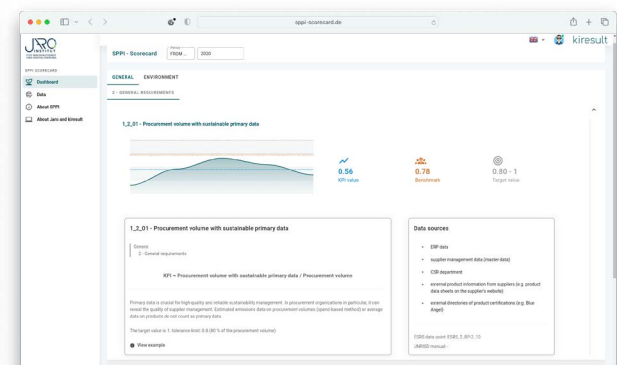
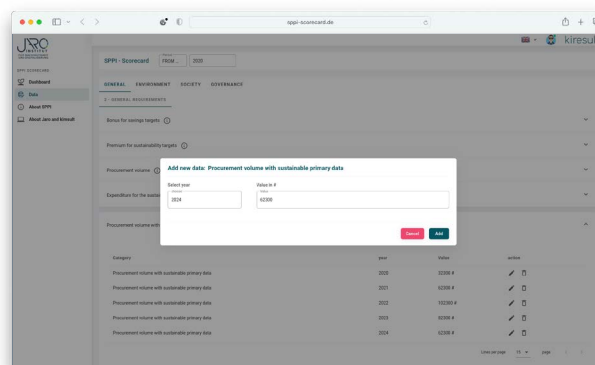
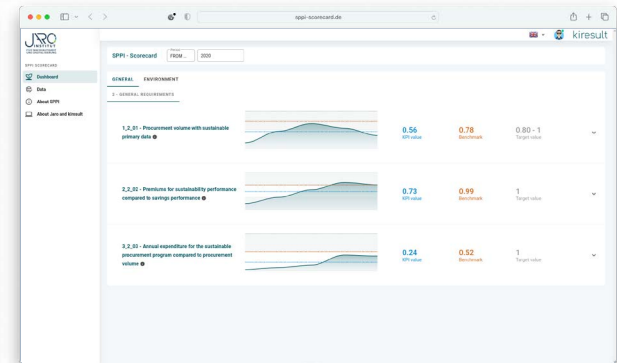
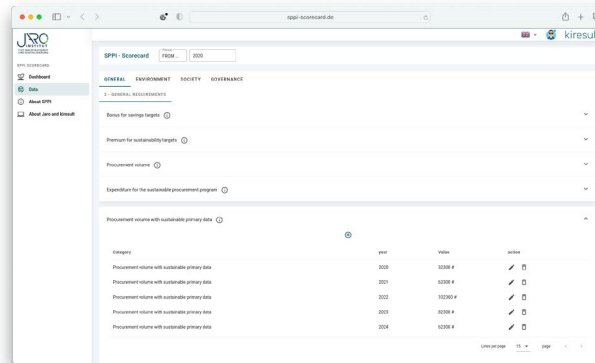
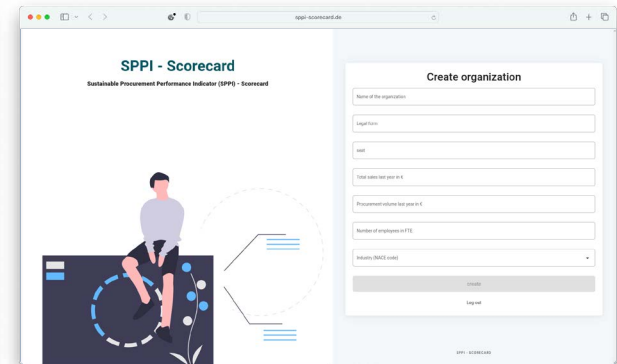
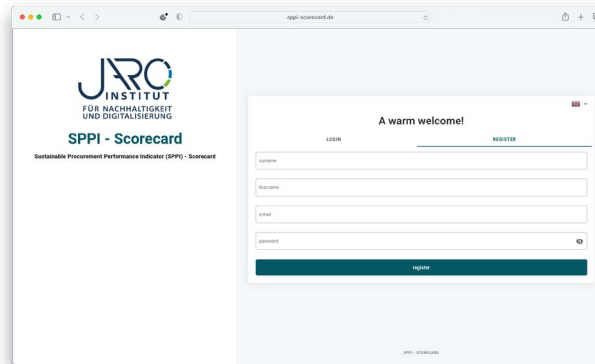
As part of the indicator development process, the idea arose to develop a free tool for purchasing and CSR managers that can be used to quickly calculate the indicators.

Even though many companies will probably need time to collect the relevant data first, the tool should make their calculation work easier and visualize the results with the formulas provided. As the indicator set has created a standardized framework with a link to the ESRS, this tool will also enable benchmarking. Additional functions such as targeted filter options by sector and company size or interfaces to your own organization are planned and optionally available in the form of an upgrade.

Following the idea, a partner for the implementation was found in the start-up kiresult. Users can first create a profile via the start page and then determine the corresponding indicators for the respective chapters in accordance with their organizational reporting specifications along the ESRS. The indicators can then be benchmarked in the results view. At the end, the summary of the results can be downloaded as a PDF.

→ Zugang unter: sppi-scorecard.de

All data is processed in compliance with GDPR. The benchmarks are only provided anonymously.



1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

ABOUT US **6**

6 About us

JARO Institute for Sustainability and Digitalization e.V.

The JARO Institute for Sustainability and Digitalization is a non-profit association in Berlin (Germany). Together with its members, it aims to ensure that sustainable action becomes the standard in business, administration and organizations of all kinds. To this end, the institute imparts relevant knowledge, connects people and organizations and works with them to implement the 17 UN Sustainable Development Goals (Agenda 2030).

The focus is on applied research for sustainable procurement and the impact of digital developments in these areas. JARO aims to motivate and inspire organizations to implement sustainability in their business processes. The transfer of knowledge from theory to practice is particularly important to the institute. It shares its knowledge and experience in a variety of formats such as publications, online sessions, specialist lectures and its own → *Podcast* (in German language only) and also expressly promotes dialog and networking between business, science, civil society and politics.

The JARO Academy's digital training program to become a (Certified) Sustainable Procurement Professional in the form of 40 modular e-learning courses should be highlighted. These can be used individually, as a complete program or as a role-based curriculum consisting of 15 modules with confirmation of participation or with optional certification. The certification is linked to a two-day classroom training course and a submission and confirms the participants' qualification with an international university certificate and 6 ECTS. An integration into existing corporate learning management systems (LMS) is also possible.

More information at:

- jaro-institut.de/en
- jaro-academy.com



kiresult GmbH

kiresult is a procurement start-up from the Rhineland (Germany) that has made it its mission to rethink the acquisition and use of data in procurement. Its customers already include companies such as United Internet, TECE, ewmr and Funke Mediengruppe.

It all starts with spend data, i.e. all invoices and orders in the company. The tools from kiresult merge data from any system and bring it to a usable standard.

The special feature: The quality of the data doesn't matter. kiresult's AI algorithms automatically enrich the data with detailed product groups and even digitize all invoices if desired.

On this basis, the intuitive tool then offers detailed spend analyses and KPIs, specializing in strategic purchasing. This information is not only the basis for product group strategies, but also for tracking sustainability KPIs and compliance with the LkSG.

But it doesn't stop there: The AI not only recognizes savings potential, but also proactively suggests strategies and measures to users. Initiatives and savings projects

can be defined, tracked and evaluated. An easy-to-understand risk management system checks the risks along all payment flows.

All of this is coupled with fast and uncomplicated implementation. Regardless of the system landscape, the solutions are ready for use within just one month at unbeatable costs.

kiresult is your partner for efficient, risk-conscious and strategically oriented purchasing.

More information at:

 kiresult.com

kiresult

Glossar

Affected Communities

People or group(s) living or working in the same area that have been or may be affected by a reporting undertaking's operations or through its upstream and downstream value chain. Affected communities can range from those living adjacent to the undertaking's operations (local communities) to those living at a distance. Affected communities include actually and potentially affected indigenous peoples.

[ESRS Glossar](#)

Annual Total Remuneration

Annual total remuneration to own workforce includes salary, bonus, stock awards, option awards, non-equityAnnual total remuneration to own workforce includes salary, bonus, stock awards, option awards, non-equity incentive plan compensation, change in pension value, and nonqualified deferred compensation earnings provided over the course of a year.

[ESRS Glossar](#)

Areas of Biodiversity Risk

Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas ('KBAs'), as well as other protected areas, as referred to in Appendix D of Annex II to Commission Delegated Regulation (EU) 2021/2139

[ESRS Glossar](#)

Areas of Water Risk

A water catchment, where several physical aspects related to water:

1. lead to one or more water bodies to be in less than good status and / or deteriorate in status (as defined in Directive 2000/60/EC of the European Parliament and of the Council[4]), thus pointing to significant issues as regards water availability, quality, quantity (including high water-stress); and/or
2. lead to issues as regards accessibility of water, regulatory or reputational issues (including the shared use of water with communities and affordability of water) for its facilities and for the facilities of key supplier(s).

[ESRS Glossar](#)

Biodiversity or biological variability

Biodiversity or biological variability

[ESRS Glossar](#)

Biodiversity Program

Ein Maßnahmenprogramm zur Umsetzung der Biodiversitätsstrategie mit verbindlichen Zielen, Aktivitäten und Verantwortlichkeiten.

[JARO Institut e.V.](#)

Bonus

Performance-related special payment for employees

[JARO Institut e.V.](#)

Business Model

The undertaking's system of transforming inputs through its activities into outputs and outcomes that aims to fulfil the undertaking's strategic purposes and create value over the short-, medium- and long-term. ESRS use the term "business model" in the singular, although it is recognised that undertakings may have more than one business model.

[ESRS Glossar](#)

Circular Business Model

Circular business models are business models that are geared towards enabling, closing, creating or extending cycles by preserving value for as long as possible and conserving resources while maintaining competitiveness. while maintaining competitiveness.

[Institut der Deutschen Wirtschaft \(IW-Report 27/2022\)](#)

Circular Economy

A circular economy is a systemic approach to economic development designed to benefit businesses, society, and the environment. In contrast to the 'take-make-waste' linear model, a circular economy is regenerative by design and aims to gradually decouple growth from the consumption of finite resources.

[Ellen MacArthur Foundation](#)

Circular Innovations

Innovations in the form of new materials, products or processes that comply with the principles of the circular economy.

[JARO Institut e.V.](#)

Corporate Carbon Footprint (CCF)

A company's carbon footprint is the sum of all greenhouse gas emissions for which the company is responsible in a defined period.

The footprint is made up of the emissions from the company's own buildings, facilities and vehicles as well as the emissions resulting from the production of electricity or heat consumed (Scope 1 and 2). In addition, emissions from upstream and downstream processes, such as the extraction of raw materials and purchased services through to the disposal of sold products, are taken into account (Scope 3).

According to the Kyoto Protocol, greenhouse gas emissions include a total of seven gases: Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). When calculating the footprint, these gases are converted into the corresponding amount of CO₂ with the same effect (CO₂ equivalent).

vgl. GHG Protocol

Core Principals of Responsible Contracting

The three "Rs" of responsible contracting are:

1. Responsible allocation of risks and responsibilities: Set aside supplier-only guarantees of perfect compliance in favor of a joint commitment to cooperate in carrying out human rights and environmental due diligence (HREDD)
2. Responsible purchasing practices: Commit the buyer to engage in purchasing practices that can support effective HREDD
3. Remediation first and responsible exit: If an adverse impact happens, provide remedy to victims and take

measures to ensure the harm stops and does not reoccur before turning to traditional contract remedies (e.g., suspending payment and canceling orders). Exit should only be pursued as a last resort, taking measures to mitigate the impact.

Implementing these core principles is crucial for transitioning from traditional to due diligence-aligned contracts.

Responsible Contracting Project

Corruption

Abuse of entrusted power for private gain, which can be instigated by individuals or organisations. It includes practices such as facilitation payments, fraud, extortion, collusion, and money laundering. It also includes an offer or receipt of any gift, loan, fee, reward, or other advantage to or from any person as an inducement to do something that is dishonest, illegal, or a breach of trust in the conduct of the undertaking's business. This can include cash or in-kind benefits, such as free goods, gifts, and holidays, or special personal services provided for the purpose of an improper advantage, or that can result in moral pressure to receive such an advantage.

ESRS Glossar

Digital Product Passport (DPP)

The digital product passport is a data set that summarises the components, materials and chemical substances or information on reparability, spare parts or proper disposal for a product. The data originates from all phases of the product life cycle and can be used in all these phases for various purposes (design, manufacture, use, disposal).

Structuring environmentally relevant data in a standardised, comparable format enables all players in

the value and supply chain to work together towards a circular economy. The digital product passport is also an important basis for reliable consumer information and sustainable consumption decisions in both bricks-and-mortar and online retail.

Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz (BMUV)

Environmental Management System (EMS)

Procedures to monitor, control, evaluate and improve the organization environmental performance.

ISO 17889-1: 2021 (3.4.2)

Europäischer Emissions Trading (EU ETS)

European emissions trading has been the EU's central climate protection instrument since 2005. The aim is to reduce greenhouse gas emissions from the participating energy sector and energy-intensive industry. Air transport within Europe has been participating since 2012 and maritime transport from 2024. In addition to carbon dioxide, nitrous oxide and perfluorocarbons have also been included since 2013.

Umweltbundesamt

Fair net water consumption

Water consumption (of each relevant supplier) must be fair, equitable and proportionate to the available renewable resources.

This indicator is based on hydrological models of stream flows and human withdrawals (for both consumptive and non-consumptive use). Using satellite images, national statistics and the water withdrawal and consumption data, the indicator measures the gross water available, the net water available, and allocated water available for the use of economic entity at different geographical scales (the circular regions of 10, 50, 100, 200 and 300 km surrounding the facility location). By performing this calculation at several “scales” we gain insight as to the “context” sensitive nature of the metric.

There are four water allocations based on gross withdrawals (GW), consumptive use (C), GDP, and population (Pop).

[UNRISD SDPI Manual \(II.A_3\)](#)

Gender Pay Gap

The gender pay gap describes the difference in earnings per hour between women and men. A distinction is made between the unadjusted and the adjusted gender pay gap:

The unadjusted gender pay gap is defined as the difference between the average gross hourly earnings of women and men as a percentage of the average gross hourly earnings of male employees.

The adjusted gender pay gap excludes that part of the difference in earnings that is attributable to structural differences between the genders, such as differences in occupation, industry, scope of employment, qualification or career level.

[Statistisches Bundesamt](#)

Harmful substances in the procurement volume

Substance which can adversely affect human health or the environment with immediate or retarded effect.

As part of the procurement volume, the quantity of harmful substances procured is to be recorded here in accordance with the EU Chemicals Regulation (REACH): <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1907-20231201>
[ISO 23434-1: 2021 \(3.21\)](#)

Human Rights

A set of equal and inalienable rights of all members of the human family. Human rights are described in the Universal Declaration of Human Rights (1948), the International Convention on Economic Social and Cultural Rights (1966), as well as other conventions, treaties and national laws.

[ISO 34101-2:2019 \(3.15\)](#)

Internal Carbon Pricing

Price used by an undertaking to assess the financial implications of changes to investment, production, and consumption patterns, and of potential technological progress and future emissions abatement costs.

[ESRS Glossar](#)

Internal Carbon Pricing System

An organisational arrangement that allows an undertaking to apply carbon prices in strategic and operational decision making. There are two types of

internal carbon prices commonly used by undertakings. The first type is a shadow price, which is a theoretical cost or notional amount that the undertaking does not charge but that can be used in assessing the economic implications or trade-offs for such things as risk impacts, new investments, net present value of projects, and the cost-benefit of various initiatives. The second type is an internal tax or fee, which is a carbon price charged to a business activity, product line, or other business unit based on its GHG emissions (these internal taxes or fees are similar to intracompany transfer pricing).

[ESRS Glossar](#)

Living Wages

An allowance received by a working person in a particular location for a normal working week that is sufficient to provide an adequate standard of living for that person and his or her dependents. An adequate standard of living includes food, water, shelter, education, medical care, transport, clothing and other basic needs, including provisions for unexpected events.

[UN Global Compact, Praxislotse Wirtschaft & Menschenrechte](#)

Management System for Occupation Health and Safety

Management system or part of a management system used to achieve the Occupation health and safety policy. The intended outcomes of the OH&S management system are to prevent injury and ill health to workers and to provide safe and healthy workplaces.

[ISO 45001:2018 \(3.11\)](#)

Non Governmental Organization (NGO)

Non-governmental organisations (NGOs) are basically all associations or groups that represent common interests, are not profit-oriented and are not dependent on governments or state agencies. These include, for example, trade unions, churches and citizens' initiatives, but also employers' organisations and sports clubs. In general usage, the term NGO has become established for organisations, associations and groups that are involved in socio-political activities. Some important and typical fields of activity of NGOs are development policy, environmental policy and human rights policy.

[Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung \(BMZ\)](#)

Procurement

Activity of acquiring goods or services from suppliers. The procurement process considers the whole cycle from identification of needs through to the end of a services contract or the end of the life of goods, including disposal. Sourcing is a part of the procurement process that includes planning, defining specifications and selecting suppliers.

[ISO 20400:2017 \(3.18\)](#)

Procurement Indicator

A metric for statements on the development of certain performance aspects of a procurement organisation.

[JARO Institut e.V.](#)

Procurement Program

The package of measures for implementing the procurement strategy in a defined period.

[JARO Institut e.V.](#)

Procurement Volume

The total amount of goods and services procured by an organisation in a defined period.

[JARO Institut e.V.](#)

Procurement Volume with sustainable primary data

Information on the total goods and services procured by an organisation in a period for which sustainability data is available directly from the suppliers. This data was not estimated or generated from average data.

[JARO Institut e.V.](#)

Product Carbon Footprint (PCF)

The product carbon footprint describes the balance of greenhouse gas emissions along the entire life cycle of a product in a defined application. The life cycle of a product covers the entire value chain: from the manufacture and transport of raw materials and preliminary products, through production and distribution, to utilisation, subsequent use and disposal. The term product is a generic term for goods and services.

[PCF Pilotprojekt Deutschland](#)

Product Water Footprint (PWF)

The water footprint of a product (a commodity, good or service) is the total volume of freshwater used to produce the product, summed over the various steps of the production chain.

[Water Footprint Network](#)

Relevant Suppliers

Relevant suppliers are companies that offer goods and services to the procurement organisation and were classified as relevant in the double materiality analysis. In addition to the procurement volume and strategic importance, relevance refers in particular to the assessment of sustainability risks (environmental and human rights due diligence) by the procurement organisation and external stakeholders, such as academia and civil society.

[JARO Institut e.V.](#)

Savings Performance

Performance to achieve the financial savings targets (of the procurement organisation).

[JARO Institut e.V.](#)

Scope 3 Data

Emissions from sources that are not owned and not directly controlled by the facility. However, they are related to the company's activities. This is usually considered to be the supply chain of the company, so emissions caused by vendors within the supply chain, outsourced activities, and employee travel and commute. In many industries, other indirect

GHG emissions account for the biggest amount of GHG emissions. This is due to the fact that in today's economy, many tasks are outsourced and few companies own the entire value chain of their products.
[ISO 6338:2023 \(3.8\)](#)

Secondary Raw Material

Secondary raw materials are separated and partially concentrated material fractions from industrial and household waste, which are further processed into basic and other materials in a subsequent process. They are intended to replace primary raw materials as far as their quality allows. The term recycles is also used for some products.

[Bayrisches Landesamt für Umwelt](#)

Social Audit

A component of an assessment. A systematic, documented procedure to obtain and objectively evaluate records, factual assertions or other relevant information to determine the extent to which certain requirements are met. Audits in connection with the Declaration of Commitment serve to monitor the implementation of the labour and social standards defined in the Declaration of Commitment (DoC).

[Beschaffungsmat des Bundesministerium des Inneren \(BMI\), Studie: Sozial-Audits als Instrument zur Überprüfung von Arbeitsbedingungen \(2021\)](#)

Sourcing Country

A sourcing country is a country from which a company obtains raw materials, means of production, capital or

labour for its own production or trade from business partners (suppliers).

[JARO Institut e.V.](#)

Stakeholder

Those who can affect or be affected by the undertaking. There are two main groups of stakeholders:

Affected stakeholders: individuals or groups whose interests are affected or could be affected – positively or negatively – by the undertaking's activities and its direct and indirect business relationships across its value chain; and

users of sustainability statements: primary users of general purpose financial reporting (existing and potential investors, lenders and other creditors including asset managers, credit institutions, insurance undertakings), as well as other users, including the undertaking's business partners, trade unions and social partners, civil society and non-governmental organisations, governments, analysts and academics. Some, but not all, stakeholders may belong to the two groups.

[ESRS Glossar](#)

Supplier

Entity upstream from the organisation (i.e., in the organisation's supply chain), which provides a product or service that is used in the development of the organisation's own products or services. A supplier can have a direct business relationship with the organisation (often referred to as a first-tier supplier) or an indirect business relationship.

[ESRS Glossar](#)

Sustainable Procurement

Procurement that has the most positive environmental, social and economic impacts possible over the entire life cycle. Sustainable procurement involves the sustainability aspects related to the goods or services and to the suppliers along the supply chains. Sustainable procurement contributes to the achievement of organizational sustainability objectives and goals and to sustainable development in general.

[ISO 20400:2017 \(3.38\)](#)

Sustainability Performance

Performance in achieving the sustainability goals (of the procurement organisation).

[JARO Institut e.V.](#)

Tax-Gap

Difference between the tax due and tax collected.

[OECD The measurement of tax gaps](#)

True Cost Accounting (TCA)

The TCA is used to determine the total life cycle costs of a product along the value chain - from production and use through to recycling. These can be both environmental costs and costs for society.

[Vgl. WWF](#)

Waste rate in the manufacture of procured products

The waste rate is measured here in relation to the waste that has to be disposed of per production unit in the manufacturing process of procured (preliminary) products. It is calculated from the input and the output, i.e. from the amount of waste / the amount of material used x 100%.

JARO Institut e.V.

Water Resource Management

water resource management - activity of planning, developing, distributing and managing the optimum use of water resources

ISO 6707-3:2022 (3.4.11)

Works Council

A works council represents the interests of employees in the company and can negotiate with the employer on their behalf. To this end, it has rights that are set out in the German Works Constitution Act (BetrVG) and cannot be ignored by the employer. These rights are called co-determination rights. This is why the work of works councils is also referred to as operational co-determination.

Deutscher Gewerkschaftsbund (DGB)

Weitere Definitionen siehe auch

ESRS Glossar unter:

→ <https://esrs-nachhaltigkeitsberichterstattung.de/esrs/uebersicht/anhang-ii>

Bibliography

Achatec - German Academy of Science and Engineering (2021). Circular business models: Overcoming barriers, unlocking potential. <https://www.acatech.de/publikation/zirkulaere-geschaeftsmodelle-barrierenueberwinden-potenziale-freisetzen/>. [20.05.2024].

Amfori (2024): amfori BSCI Resources. <https://www.amfori.org/en/solutions/social/about-bsci/resources/>. [20.05.2024].

Amnesty International (2024): <https://www.amnesty.de/en/>. [20.05.2024].

Baue, Bill (2023): An Inquiry Invitation: Is the Science Based Targets Initiative Science Based? A Comprehensive Compilation of a Multi-year Quest for Answers. <https://www.r3-0.org/wp-content/uploads/2023/03/Is-the-Science-Based-Targets-initiative-Science-Based.pdf>. [20.05.2024].

Procurement Office of the BMI (2021): Social audits as an instrument for reviewing working conditions. https://www.bescha.bund.de/SharedDocs/Downloads/Wissenswertes/2021/Studie%20zu%20Sozial-Audits.pdf?__blob=publicationFile&v=2. [20.05.2024].

Blue Angel (2024): Product world. <https://www.blauerengel.de/de/produktwelt/>. [20.05.2024].

Lake Constance Foundation and Global Nature Fund (2023). EMAS and Biodiversity - Guideline 2023 - Protection of biodiversity in the context of environmental management systems. <https://www.business-biodiversity.eu/bausteine.net/f/10055/EMASundBiodiversitaet%20Leitfaden2023.pdf>. [20.05.2024].

Federal Institute for Occupational Safety and Health: Helpdesk REACH-CLP-Biocides. https://www.reachclp-biozid-helpdesk.de/DE/REACH/REACH_node.html. [20.05.2024].

Federal Ministry of Justice (2021): Hazardous Substances Ordinance. https://www.gesetze-iminternet.de/gefstoffv_2010/GefStoffV.pdf. [20.05.2024].

Federal Ministry of Education and Research (2024): Innovation Atlas Water. <https://www.innovationsatlaswasser.de/de/>. [20.05.2024].

Business and Human Rights Resource Center (2024): <https://www.business-humanrights.org/de/>. [20.05.2024].

Bustamente, Silke et al. (2022): Shaping a Sustainable Future. Innovative Teaching Practices for Educating Responsible Leaders. <https://www.nomos-shop.de/en/nomos/title/shaping-a-sustainable-future-id-106039/>. [20.05.2024].

CDP (2024): Water Watch - CDP Water Impact Index. <https://www.cdp.net/en/investor/water-watch-cdp-water-impact-index>. [20.05.2024].

Circle Economy (2023): The Circularity Gap Report 2023. A circular economy to live within the safe limits of the planet. <https://www.circularity-gap.world/2023/>. [20.05.2024].

German Sustainability Code (2022): EU reaches agreement on further development of the Non-Financial Reporting Directive. https://www.deutschnachhaltigkeitskodex.de/de-DE/Documents/PDFs/Sustainability-Code/DNK-Infoblatt_CSRD_2021_05_19.aspx. [20.05.2024].

German Sustainability Code (2023): The Corporate Sustainability Due Diligence Directive (CSDDD). EU draft directive on corporate due diligence obligations. [https://www.deutscher-nachhaltigkeitskodex.de/de-DE/Documents/PDFs/Sustainability-Code/Factsheet-zur-Directive-on-Corporate-Sustainab-\(1\)](https://www.deutscher-nachhaltigkeitskodex.de/de-DE/Documents/PDFs/Sustainability-Code/Factsheet-zur-Directive-on-Corporate-Sustainab-(1)). [20.05.2024].

Diaz, Philippe (2023): Corporate capture in standard-setting – the German standard setter as a stooge for large corporations. <https://www.linkedin.com/pulse/corporate-capture-standard-setting-german-standaaras-philippe-diaz>. [20.05.2024].

EFRAG SRB. <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeeting%20Documents%2F2302241014027635%2FESRS%20%20presentation%20to%20SRB%2014%20June.pdf>. [20.05.2024].

EFRAG (2023): Sustainability Reporting Standards. <https://www.efrag.org/Activities/2105191406363055/Sustainability-reporting-standards-interim-draft>. [20.05.2024].

EFRAG (2023): Implementation guidance for the materiality assessment. <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeting%20Documents%2F2307280747599961%2F06-02%20Materiality%20Assessment%20SRB%20230823.pdf>. [20.05.2024].

EFRAG (2023): Implementation guidance for value chain (VCIG). <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeeting%20Documents%2F2307280747599961%2F05-02%20VCIG%20SRB%20230823.pdf>. [20.05.2024].

EFRAG (2023): (Draft) List of ESRS datapoints - Implementation Guidance. <https://efrag.sharefile.com/share/view/s1a12c193b86d406e90b1bcd7b6bb8f6f/fo37c90b-9d9b-4432-a76b-27760cfcc01b> [20.05.2024].

Ellen MacArthur Foundation and Granta Design (2015): Circularity indicators. An approach to measuring circularity. Non-technical studies. <https://emf.thirdlight.com/link/ukiokhl9wek3-wfb5iv/@/preview/1?o>. [20.05.2024].

Etoimou, Eirini (2022): Reshaping supply chains: Leading to more sustainable business models. <https://ideas.repec.org/a/aza/jscm00/y2023v5i2p102-120.html>. [20.05.2024].

European Chemicals Agency - ECHA (2024): ECHA Chemicals Database. <https://chem.echa.europa.eu/> (20.05.2024)

European Commission (2023): REACH Regulation (1907/2006/EC). <https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R1907-20231201>. [20.05.2024].

European Commission (2020): The business case for biodiversity. https://ec.europa.eu/commission/presscorner/api/files/attachment/865555/factsheetbusiness-case-biodiversity_en.pdf. [20.05.2024].

European Commission (2009): EWR Directive (2009/38/EC). <https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:02009L0038-20151009>. [20.05.2024].

European Commission: Database on transnational company agreements. <https://ec.europa.eu/social/main.jsp?catId=978&langId=en>. [20.05.2024].

European Commission (2023): European Sustainability Reporting Standards. Presentation to European Commission (2023): EU Battery Regulation (2023/1542). <https://eurlex.europa.eu/eli/reg/2023/1542/oj>. [20.05.2024].

European Commission (2023): EU Proposal for Ecodesign for Sustainable Products Regulation. https://environment.ec.europa.eu/publications/proposal-ecodesignsustainable-products-regulation_en. [20.05.2024].

European Commission (2020): Tax Gap Project Group. <https://www.europarl.europa.eu/cmsdata/161065/Part%20II%20-%20Estimation%20Methodologies.pdf>. [20.05.2024].

European Commission (2024): EMAS Register. <https://webgate.ec.europa.eu/emas2/public/registration/list>. [20.05.2024].

European Commission (2024): EU Forest Observatory. <https://forest-observatory.ec.europa.eu/>. (20.05.2024)

European Environment Agency (2024): EU Emissions Trading System (ETS) data viewer. <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>. [20.05.2024].

European Foundation for the Improvement of Living and Working Conditions (2019): Global works council. <https://www.eurofound.europa.eu/en/european-industrial-relationsdictionary/global-works-council>. [20.05.2024].

European Sustainability Reporting Standards (2024): Tabelle 2 - Begriffsbestimmungen in den ESRS. <https://esrs-nachhaltigkeitsberichterstattung.de/esrs/uebersicht/anhang-ii> (20.05.2024)

European Union (2019): European Circular Economy Stakeholder Platform. <https://circulareconomy.europa.eu/platform/en/toolkits-guidelines/circularprocurement-8-steps>. [20.05.2024].

Fair Tax (2024): Tax Responsibility and Transparency Index launches to benchmark companies. <https://fairtaxmark.net/tax-responsibility-and-transparency-indexlaunches-to-benchmark-companies/>. [20.05.2024].

Greenhouse Gas Protocol: Product Life Cycle Accounting and Reporting Standard. <https://ghgprotocol.org/product-standard>. [20.05.2024].

Green Vision Solutions (2023): Corporate Sustainability Reporting Directive (CSRD) und ESRS Standards. <https://greenvisionsolutions.de/neue-eu-richtlinie-csrd/>. [20.05.2024].

Holly, Gabrielle et al. (2024): Due Diligence in the Downstream Value Chain. Case Studies of Current Company Practice. https://www.humanrights.dk/files/media/document/Downstream_Policy-Output-Paper_EN_May2024.pdf. [20.05.2024].

Human Rights Watch (2024): <https://www.hrw.org/>. [20.05.2024].

IDH (2024): Roadmap on Living Wages. <https://www.idhsustainabletrade.com/living-wageplatform/>. [20.05.2024].

Ilcheong Yi et al (2022): Authentic Sustainability Assessment: A User Manual for the Sustainable Development Performance Indicators. Geneva, UNRISD. ISBN 978 92 9085 131 8. <https://cdn.unrisd.org/assets/library/reports/2022/manual-sdpi-2022.pdf>. [20.05.2024].

International Organization for Standardization (2018): ISO 45001:2018 - Occupational health and safety management systems – Requirements with guidance for use. <https://www.iso.org/standard/63787.html>. [20.05.2024].

International Organization for Standardization (2023): ISO 14002-2:2023 - Environmental management systems – Guidelines for using ISO 14001 to address environmental aspects and conditions within an environmental topic area Part 2: Water. <https://www.iso.org/standard/79165.html#lifecycle>. [20.05.2024].

International Organization for Standardization (2024): Online Browsing Platform (OBP). <https://www.iso.org/obp/ui/#home>. (20.05.2024)

Jamal, Y. et al. (2023): Nachhaltige Beschaffung und verantwortungsvolle Lieferketten – Studienergebnisse 2023. <https://jaro-institut.de/>. [20.05.2024].

Know the Chain (2019): Subset of indicators. https://knowthechain.org/wpcontent/uploads/KTC_Benchmark_Methodology_Subset_2020_2021.pdf. [20.05.2024].

Know the Chain (2022): 2022-23 Benchmark Methodology. <https://knowthechain.org/wpcontent/uploads/KTC-methodology-2022-23.pdf>. [20.05.2024].
McElroy, M. (2008): Social footprints: measuring the social sustainability performance of organizations. [Thesis fully internal (DIV), University of Groningen].

Thetford Center.

Neligan, A. et al (2023): Digitaler Produktpass - Enabler der Circular Economy. Relevanz und Umsetzbarkeit durch Unternehmen. IW-Report, Nr. 47, Berlin / Köln. <https://www.iwkoeln.de/studien/adriana-neligan-barbara-engels-thorsten-krokedigitaler-produktpass-enabler-der-circular-economy.html>. [20.05.2024].

Normative (2024) for SME Climate Hub: The Business Carbon Calculator. <https://smeclimatehub.org/start-measuring/>. [20.05.2024] und <https://businesscarboncalculator.normative.io/en/>. [20.05.2024]

OECD (2023): Tax Administration. https://www.oecd-ilibrary.org/taxation/taxadministration_23077727. [20.05.2024].

r3.0 - Center of Sustainable Organizations (2023). r3.0 UN SDPI Trainings. Trainingsunterlagen SDPI Scorecard. <https://www.r3-0.org/un-sdpi-trainings/> (20.05.2024).

Social Accountability International (2014): SA 8000 – Internationaler Standard zur Sozialen Verantwortung. https://sa-intl.org/wpcontent/uploads/2020/01/SA80002014_German1.pdf. [20.05.2024].

Soil & More GmbH (2021): True Cost Accounting Agrifood Handbook. <https://tca2f.org/>. [20.05.2024].

SwissRE (2020): A fifth of countries worldwide at risk from ecosystem collapse as biodiversity declines, reveals pioneering Swiss Re index. <https://www.swissre.com/media/press-release/nr-20200923-biodiversity-andecosystems-services.html>. [20.05.2024].

S&P Global/BME Einkaufsmanagerindex™ Deutschland (2022): Erste Auswirkungen des Ukraine-Kriegs auf Lieferketten, Preise und Exporte lassen EMI im März auf 18-Monatstief fallen. <https://www.pmi.spglobal.com/Public/Home/PressRelease/2ff4522b424b424abcb6040ed8cff0c2>. [20.05.2024].

Technische Universität Berlin (2024): Water Footprint Tools. <https://wf-tools.see.tu-berlin.de/>. [20.05.2024].

The Cabinet Office (2012): A guide to Social Return on Investment. <https://static1.squarespace.com/static/60dc51e3c58aef413ae5c975/t/60f7fa286b9c6a47815bc3b2/1626864196998/The-SROI-Guide-2012.pdf>. [20.05.2024].

The Corporate Climate Responsibility Monitor (2023): Corporate Climate Responsibility Monitor 2023. Assessing The Transparency And Integrity Of Companies' Emission Reduction And Net-Zero Targets. <https://newclimate.org/resources/publications/corporate-climate-responsibilitymonitor-2023>. [20.05.2024].

The Corporate Climate Responsibility Monitor (2023): Corporate Climate Responsibility Monitor 2023. Assessing The Transparency And Integrity Of Companies' Emission Reduction And Net-Zero Targets. <https://newclimate.org/resources/publications/corporate-climate-responsibilitymonitor-2023>. [20.05.2024].

The Corruption Perception Index (2023): Transparency International. <https://www.transparency.org/en/cpi/2023>. [20.05.2024].

The Footprinters (2023): FootprintCalc. <https://footprintcalc.org/>. [20.05.2024].

The RCP Toolkit (2023): Responsible Contracting Project. <https://www.responsiblecontracting.org/toolkit>. [20.05.2024]

Thorsteinsdottir, Hanna et al. (2015): Raising the Bar - Advancing Environmental Disclosure in Sustainability Reporting. <https://www.unep.org/resources/report/raising-baradvancing-environmental-disclosure-sustainability-reporting>. [20.05.2024].

TruePrice (2024): <https://trueprice.org/>. [20.05.2024].

Federal Environment Agency (2021): Rethinking economic efficiency. 179/2021. <https://www.umweltbundesamt.de/publikationen/wirtschaftlichkeit-neudenken>. [20.05.2024].

United Nations Global Compact (2024). Living Wage Analysis Tool. <https://livingwagetool.unglobalcompact.org/>. [20.05.2024].

United Nations (2021). Globally Harmonized System of Classification and Labelling of Chemicals (GHS). 9th revised edition. https://unece.org/sites/default/files/2021-09/GHS_Rev9E_0.pdf. [20.05.2024].

United Nations environment programme (2023): Towards Zero Waste: a catalyst for delivering the Sustainable Development Goals. https://wedocs.unep.org/bitstream/handle/20.500.11822/44102/towards_zero_waste.pdf. [20.05.2024].

VDI Center for Resource Efficiency (2024): Material database. <https://www.ressource-deutschland.de/werkzeuge/ressourceneffizienz-in-der-praxis/materialdatenbank/>. [20.05.2024].

Consumer center (2024): All market monitoring alerts. <https://www.verbraucherzentrale.de/warnungen>. [20.05.2024]

WageIndicator Foundation (2024): Wages in Context. <https://wageindicator.org/salary/wagesin-context>. [20.05.2024]

Water Footprint Network (2024): <https://www.waterfootprint.org/>. [20.05.2024]

World Business Council for Sustainable Development (WBCSD) (2023): Circular Transition Indicators v4.0 – Metrics for business, by business. <https://www.wbcd.org/Programs/Circular-Economy/Metrics-Measurement/Resources/Circular-Transition-Indicators-v4.0-Metrics-for-business-bybusiness>. [20.05.2024]

World Economic Forum (2015): Beyond Supply Chains. S.8./Abb.5. https://www3.weforum.org/docs/WEFUSA_BeyondSupplyChains_Report2015.pdf. (20.05.2024)

WWF (2024): WWF Risk Filter Suite. Biodiversity Risk Filter. <https://riskfilter.org/biodiversity/explore/map>. [20.05.2024]

WWF (2024): WWF Risk Filter Suite. Water Risk Filter. <https://riskfilter.org/water/explore/map>. [20.05.2024]

Imprint / Copyright

↘ Responsible for the content:

JARO Institut für Nachhaltigkeit
und Digitalisierung e.V.

Yvonne Jamal

Köpenicker Straße 325, Haus 11

12555 Berlin

Phone: +49 30 234 80 567

www.jaro-institut.de/en

www.jaro-academy.com

↘ Layout & Graphic:

Isabell Pohlisch

Graphic designer and illustrator
with sustainable focus

mail@hiheyhallo-isa.de

www.hiheyhallo-isa.de

[instagram.com/hiheyhallo_isa](https://www.instagram.com/hiheyhallo_isa)

↘ Implementation of the tool

„SPPI Scorecard“:

kiresult UG (limited liability)

Oststraße 2-4

51766 Engelskirchen

Phone: +49 160 7745912

info@kiresult.com

www.kiresult.com

We would like to thank all contributors for their active contributions and suggestions (in alphabetical order):

Anwander, Sibyl; Breither, Ole; Burkhard, Ute; Costa – Schott, Rosário; Dalstein, Felix; Fajardo, Andrea Catalina; Fedato, Cristina; Fröhlich, Lisa; Geis, Silvia; Gerlach, Cara; Hame, Christiane; Hansmann, Janina; Heinrich, René; Helfrich, Christof; Henn, Kira; Jamal, Yvonne; Kirchberger, Steffi; Knothe, Emily; Wolfgang; Krüger - Wendel, Regina Kuschel, Zoe; Lösing, Louisa; Lückert, André; Miller, Daniela; Mühlberger, Annette; Münch, Tabea; Pieper, Johannes; Pyttlik, Anna; Schirrmeister, Lutz; Schmidt, Sebastian; Schulze, Florian; Schwärzler, Christoph; Sorg, Gabi; Steiner, Richard; Thurm, Ralph; Ullah, Gundula; Vinz, Anja; Weber, Heinrich; Weyerstrass, Eric; Winkler, Eva; Winzen - Kühnl, Isabell; Zwick, Yvonne

1 8 9 7
10 3 1 6
11 4 5
5 7 2 11
2 6
8

Please open
with your
banking app:



Help us to be able to provide further publications
free of charge in the future – with a donation.
Thank you very much.



Do you have any feedback, suggestions or other
helpful data sources that should be added?

Then write to us at: info@jaro-institut.de

