Upstream by Elia Group

SAP application for Green Procurement, Scope 3 Reporting and Supply Chain transparency

June 2025 | Philipp von Normann

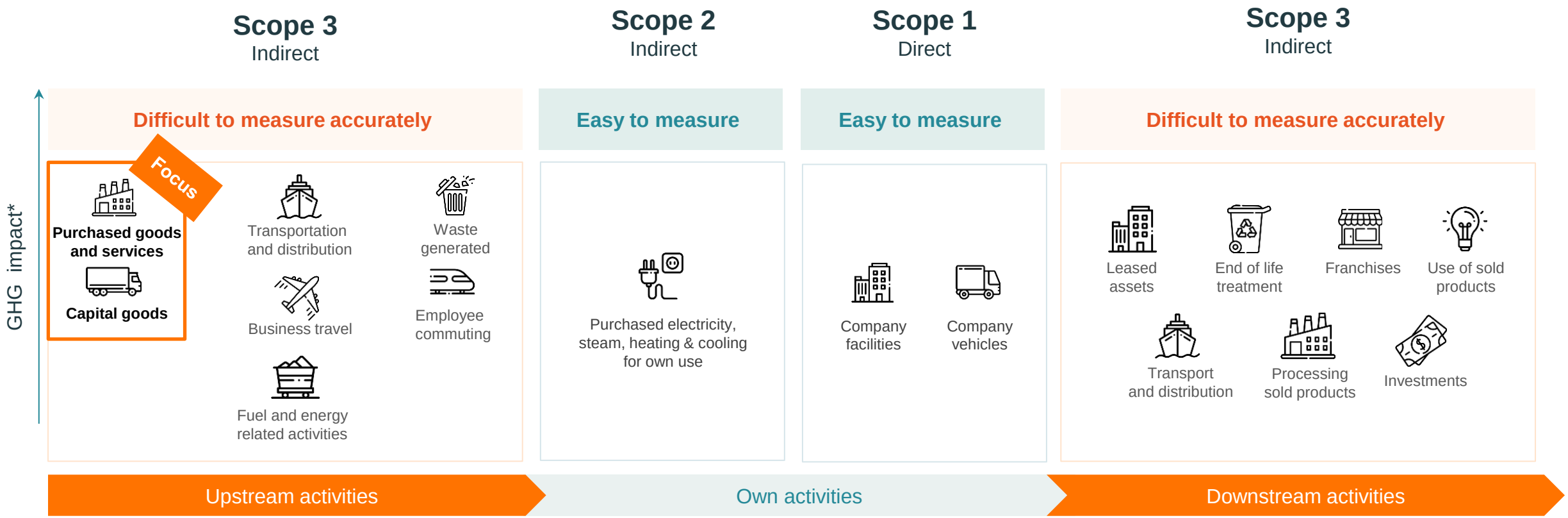
Context & situation

Utilities are expected to start decarbonizing their supply chain because of multiple drivers

Legal	Financial	Society	Employees
			
Regulations like CSRD[1] make supply chain tracking a necessity	Investors expect to see results on SBTi[2] scope 3 emissions	Increasing consumer demand for actions by corporates and public services	Staff expects purpose-driven companies, remaining attractive for young talents

1) CSRD = Corporate Sustainability Reporting Directive | 2) SBTi = Science Based Targets initiative

Scope 3 – purchased goods and services & capital goods are particularly important for utilities but very difficult to measure



Problems

Major challenges exist in data collection, data integration and data analysis on the journey towards decarbonization and beyond

Data collection

Spend based averages

Need to comply with CSRD regulations

Overwhelming process to determine areas for primary data collection

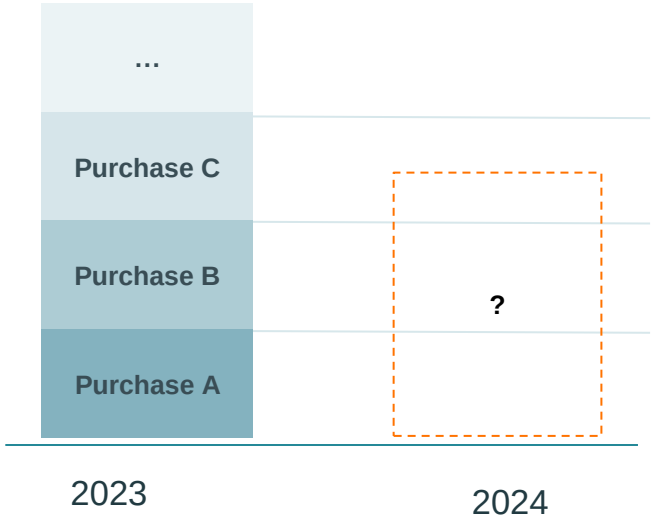
Primary data from suppliers

Challenge to identify information to request from supplier

Data integration

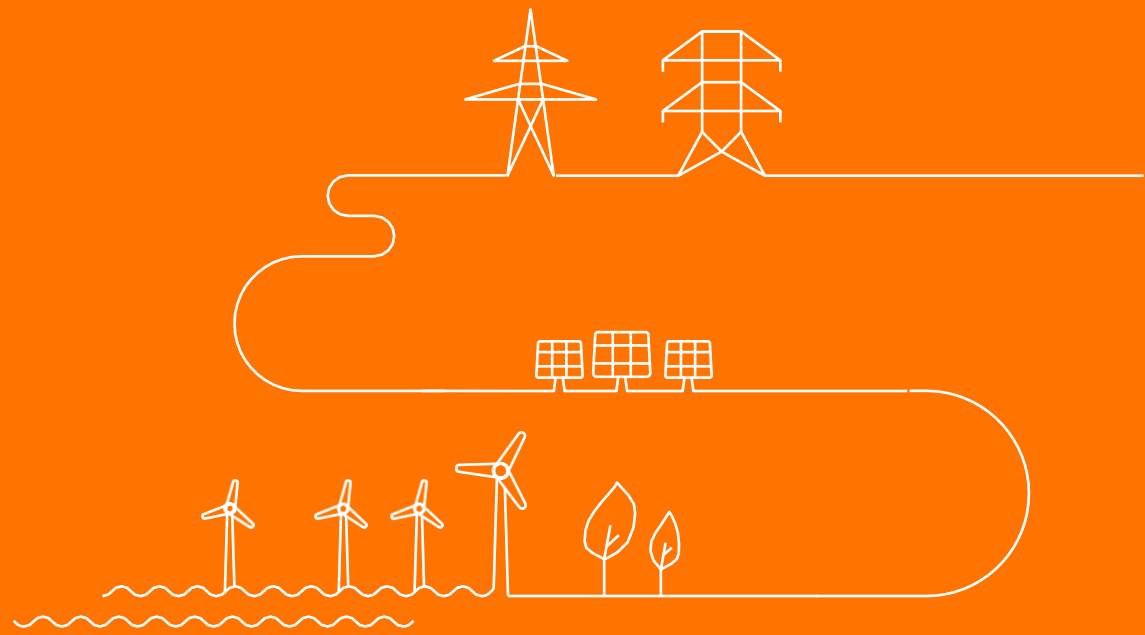
Missing data integration & exchange options

Data analysis

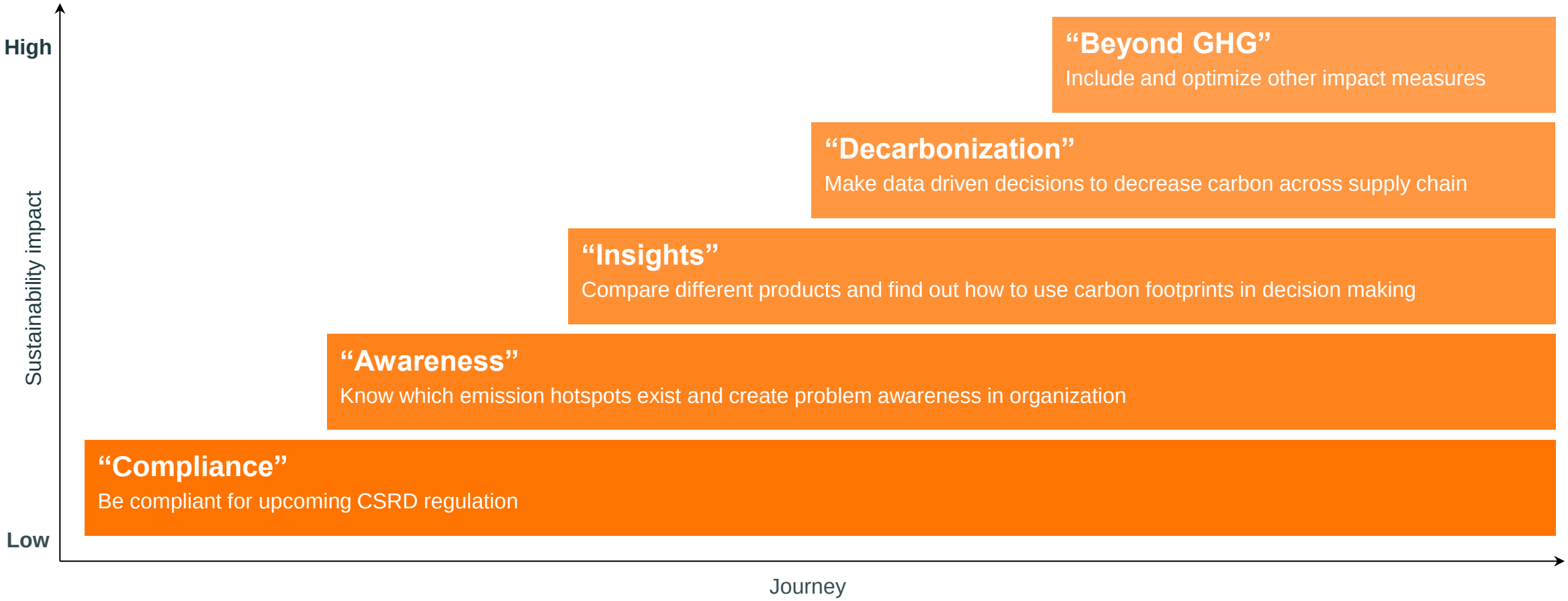


Missing tools & know-how to make data-driven decisions for decarbonization and beyond GHG reductions

The challenges



Five maturity levels can be distinguished on the journey towards decarbonization and beyond



Foundation for CSRD compliance can be laid by using spend based emission accounting

Scope 3 estimations based on spend based emission factors for “power cables”

Spend hierarchy	Volume 2023 [€]	EM. factor [kg CO_2/€]	Source	Scope 3 [t CO_2]
Power cables	**600.000**	**3,48**	**EM. factor "machines"**	**2.088**
Power cable A	300.000	3,48	EM. factor "machines"	1.044
Power cable B	200.000	3,48	EM. factor "machines"	696
Spare parts	100.000	3,48	EM. factor “machines”	348

What?
Spend based emission factors are averages that help estimate emissions of product groups

Why? By using spend based factors, Scope 3 emissions can be estimated which sets foundation for CSRD compliance

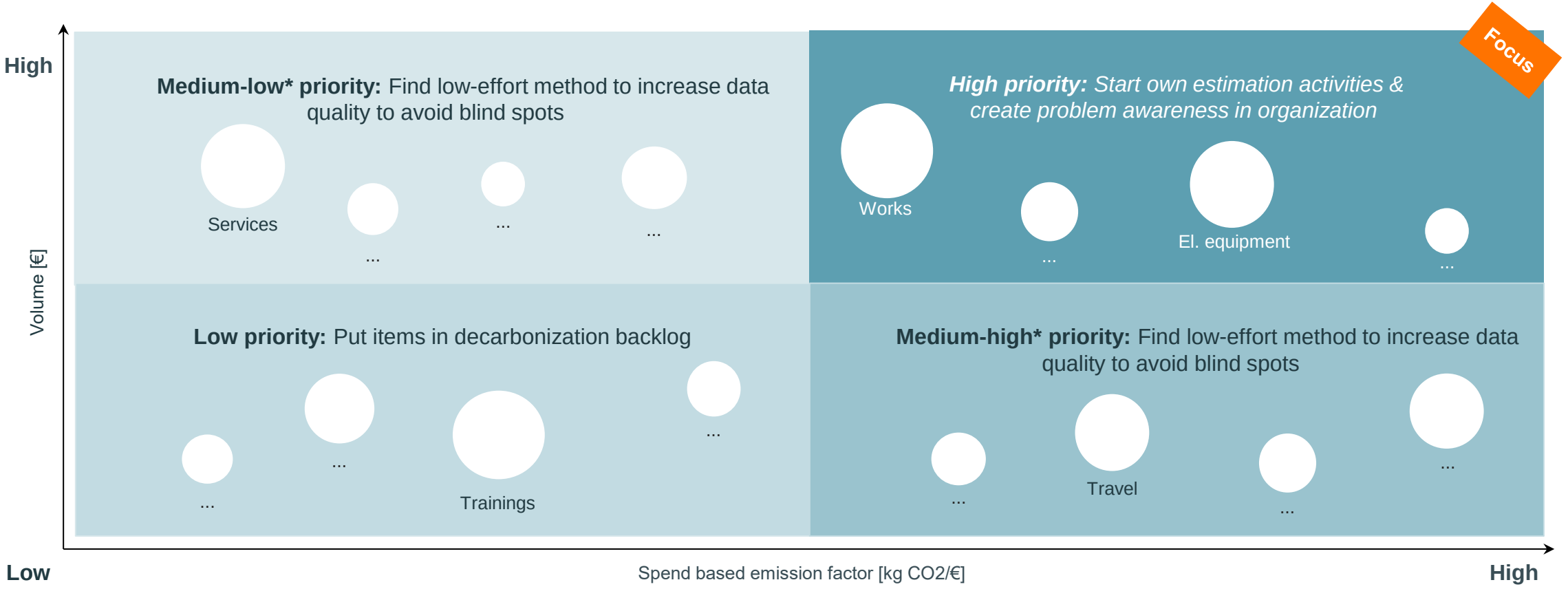
How? Estimates can be derived from different databases like “DEFRA” but do not allow decarbonisation!

CSRD requires a clear roadmap to move away from spend-based accounting towards more accurate data

Overwhelming process to determine areas for primary data collection

Relevant categories where to collect data and dedicate resources become apparent by assessing materiality of spend categories

Matrix indicating key categories for next decarbonization steps



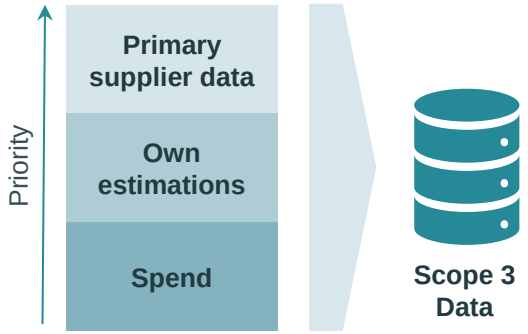
— ✓ Compliance — • **Awareness** — Insights — Decarbonization — Beyond GHG

To get accurate footprints, primary data & industry-specific methods are needed for calculations

Calculations example for power cable A (to be carried out for all purchases)

Data collection

Collect primary data or use industry specific methods like third party LCAs



Project calculations

LCA data and procurement data need to be combined allow reporting and make impact visible (not feasible with MS Excel on a larger scale)

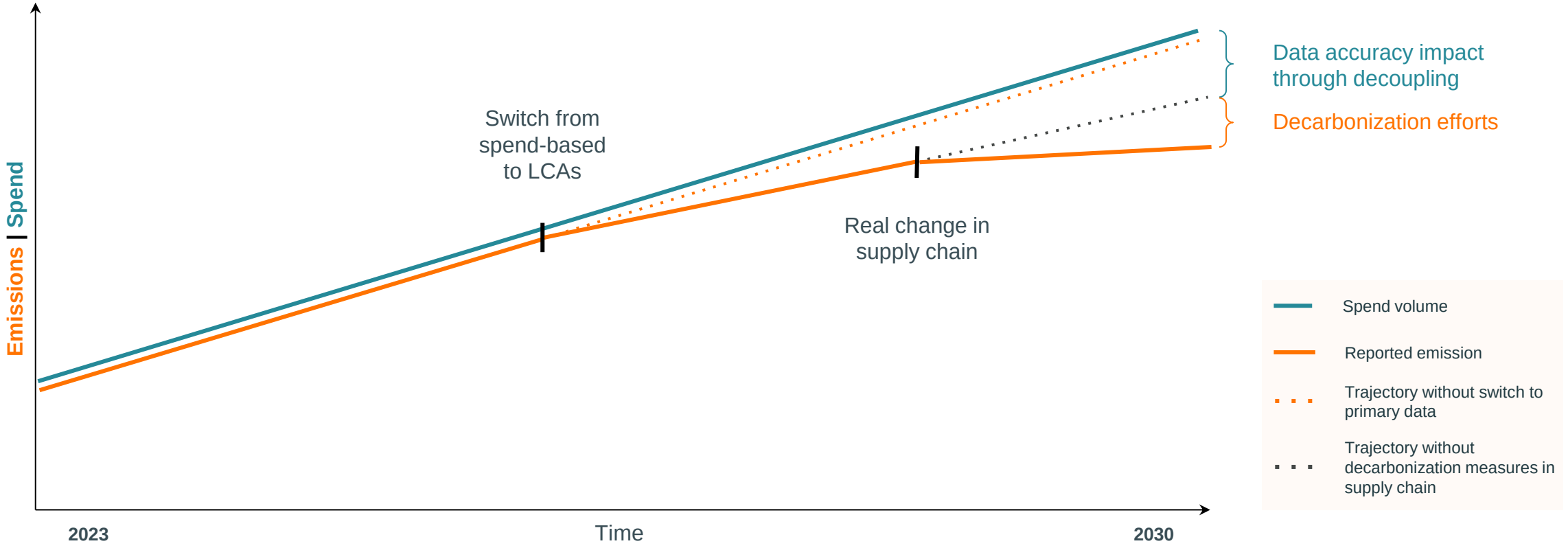
Spend hierarchy	Volume 2023 [€]	EM. factor [kg CO_2/€]	Source	Scope 3 [t CO_2]
Power cables	500.000	2,48	EM. factor "machines" / LCA	1,240
Power cable A	300.000	Spec.	Based on LCA by supplier X	744 ✓
Power cable B	200.000	2,48	EM. factor "machines"	496

*) EF = Emission factor

Missing tools & know-how to make data-driven decisions for decarbonization and beyond GHG

Showing the ROI of decarbonization efforts requires decoupling emission-data from spend-data

Example: decoupling emission- from spend-volume



Missing tools & know-how to make data-driven decisions for decarbonization and beyond GHG

Other impact categories will need to be tracked by collecting EPDs or primary data from individual products and services

Additional impact categories to become future-proof* beyond GHG

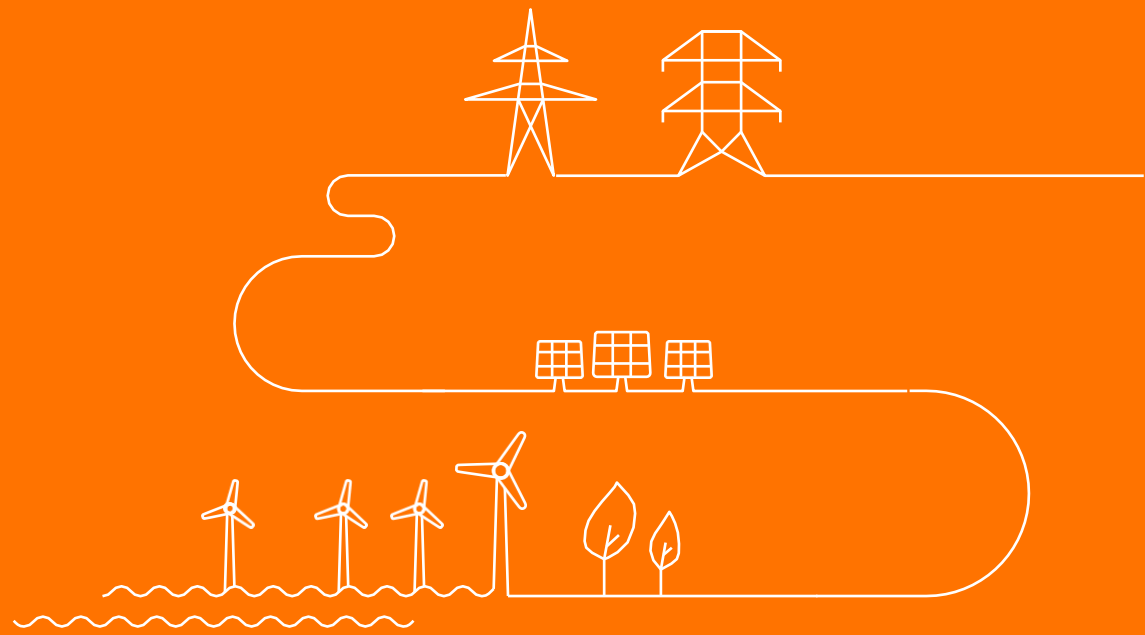
Spend hierarchy	Volume 2023 [€]	Scope 3 [t CO_2]	Water usage [L]	Labour right risk [High / Med / Low]	Origin raw material	Production country	…
Power cables	600.000	1.488	?	?	?	?	…
Power cable A	300.000	744	?	?	?	?	…
Power cable B	200.000	496	?	?	?	?	…
Spare parts	100.000	248	?	?	?	?	…

Data sources

- Environmental Product Declaration (EPD)
- Primary Data

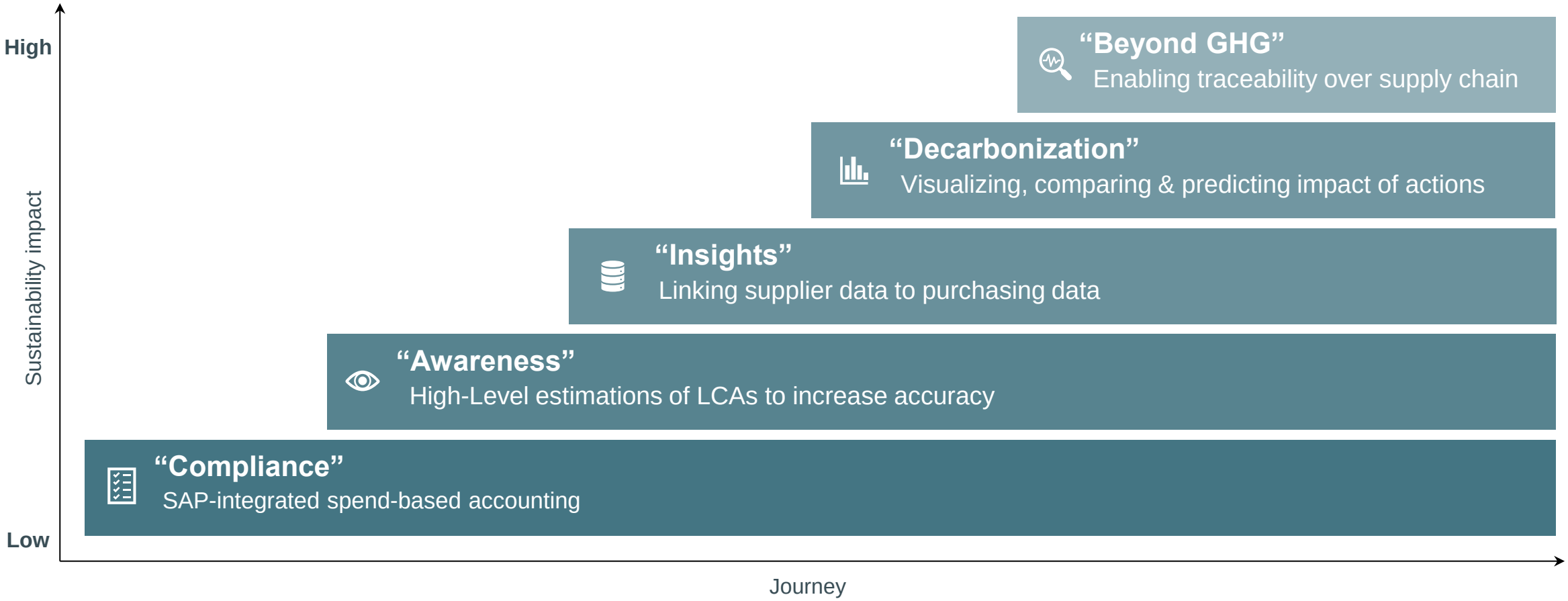
* Required by current or upcoming legislation (CSRD, CSDDD, national supply chain due diligence acts)

Our solution



Our solution

Upstream supports companies regardless of the phase they are in towards decarbonisation and beyond



Our S/4Hana-integrated emission accounting combines procurement data with LCA data from different sources

Spend based accounting in S/4Hana

Benefits of Upstream integration into S/4Hana

Fully compliant and auditable
Basic fulfilment of CSRD requirements

Real-time data
Live data through ERP integration

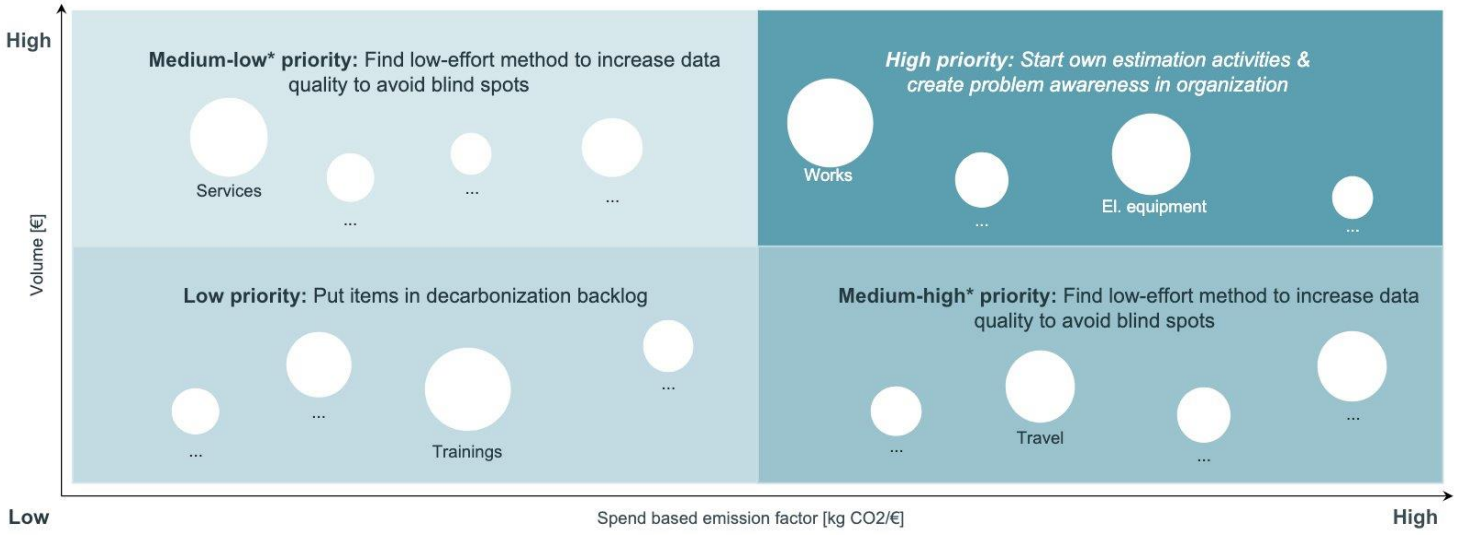
Analytics
Breakdowns by suppliers, project etc.

Future proof
Groundwork to enrich with better data

Overwhelming process to determine areas for primary data collection

Upstream provides high-level estimations that dramatically increase accuracy with little effort and help direct attention to next priorities

Matrix indicating key categories for next decarbonization steps



With *Upstream* you are able to create a **solid plan** of what needs to be **done next** and then **get fast results** through:

- Existing estimation templates ✓
- 3rd-party validated emission factors and methodologies ✓
- Industry knowledge about relevant assets and work types ✓

Supplier data to further increase accuracy can be linked to purchase order items, material masters or quotations

Example: power cable A with Upstream

Time savings

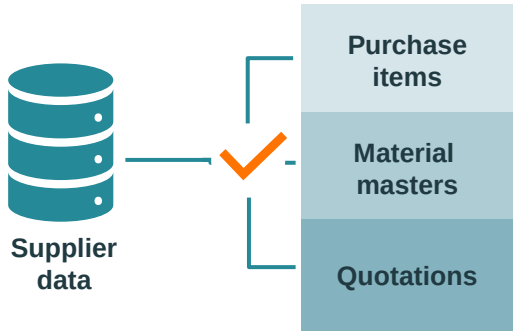
by standardizing calculations thanks to built-in LCA tool

LCA template

Kg of steel:	mas ...kg
Recycled %	...%
Country of origin	Country
...	

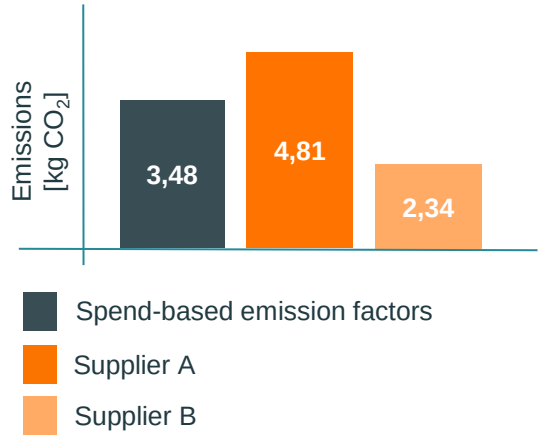
Create basis for data-based decisions

by linking data with purchase items, material masters or quotations



Understand difference

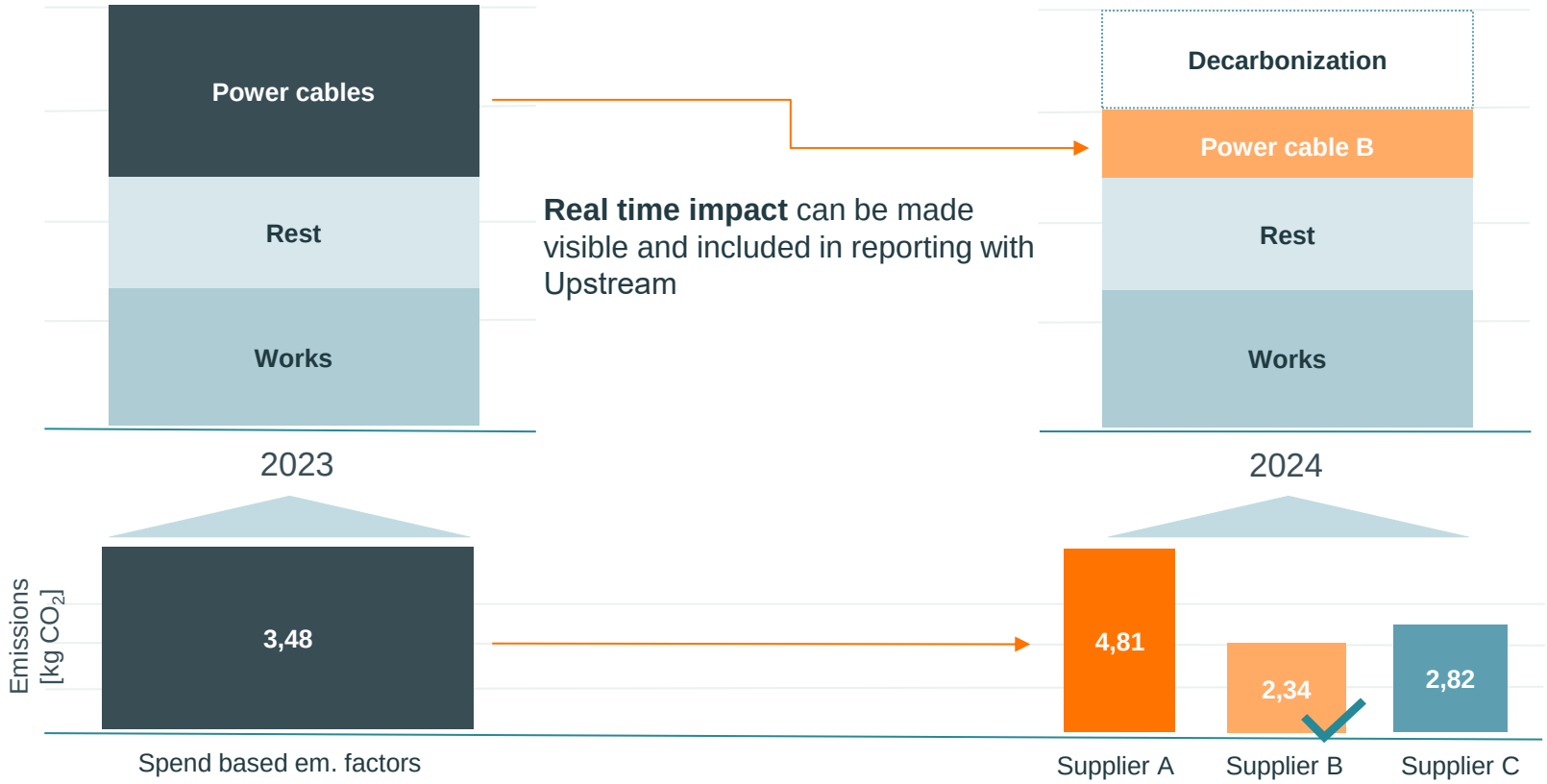
of similar products & services by easy comparison



Missing tools & know-how to make data-driven decisions for decarbonization and beyond GHG

Through comparability, impact of actions can be simulated and made visible as real change in GHG emission reduction

Comparison of Scope 3 emissions of different articles



Exemplary reasons:

- Switch to green electricity for production
- Low-emission steel
- Transport switch road to rail

✓ Compliance — ✓ Awareness — ✓ Insights — • **Decarbonization** — Beyond GHG

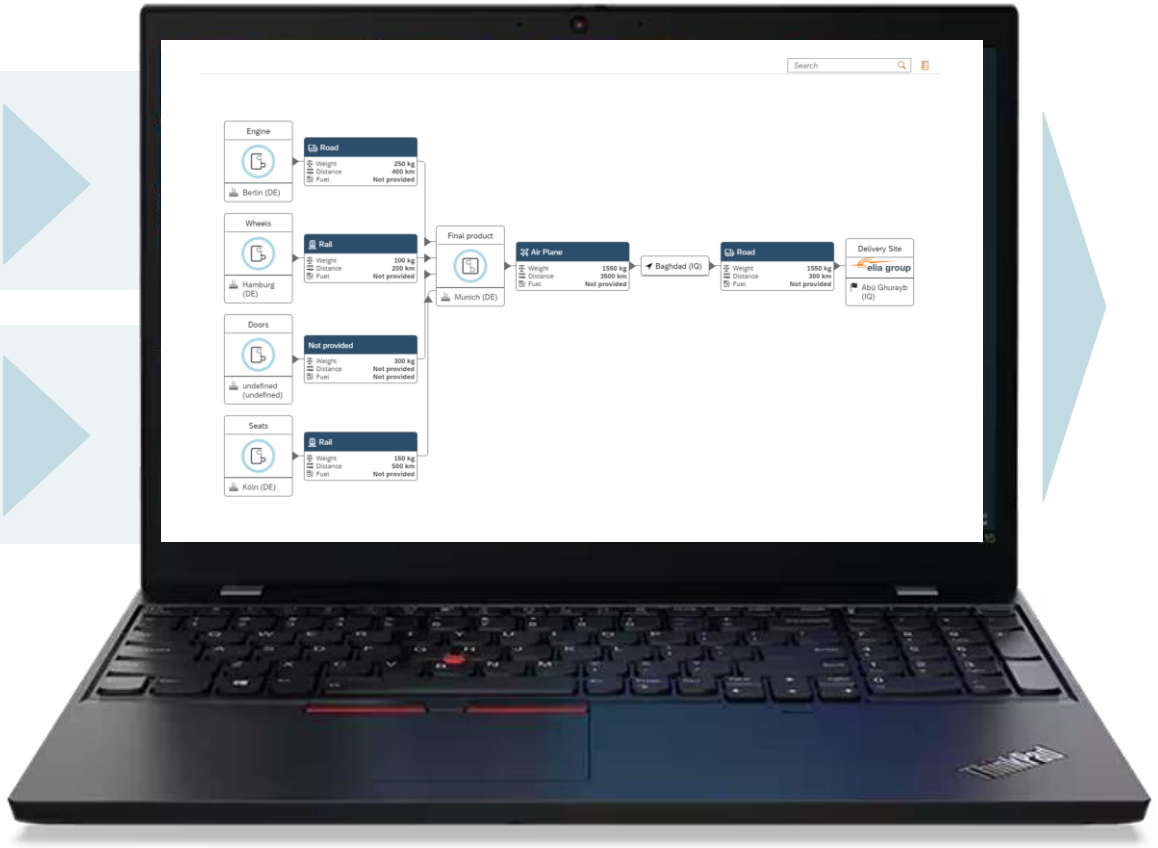
Missing tools & know-how to make data-driven decisions for decarbonization and beyond GHG?

Upstream lays the framework to become compliant beyond GHG by enabling traceability over the whole supply chain

Primary Data
Using built-in asset specific questionnaires

Environmental product declaration (If available)

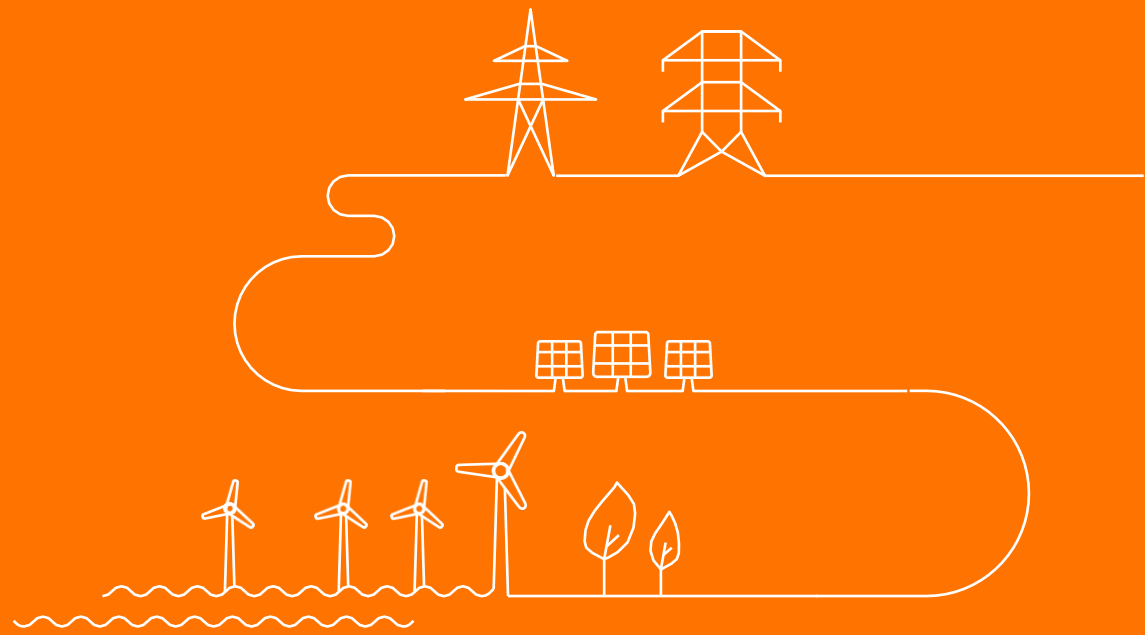
Full traceability of supply chain tree diagram in *Upstream*



- Compliance for CSRD, ESRD E5-4, LkSG
- Full data ownership & custom APIs
- Calculation results shared with suppliers (win-win)

✓ Compliance ✓ Awareness ✓ Insights ✓ Decarbonization • **Beyond GHG**

Our proposition



Our Solution

Upstream is the one-stop shop for tracking and steering the decarbonization and supply chain related CSRD reporting

Platform for Scope 3 Accounting, CSRD reporting* and Green Procurement

- Tracking the decarbonization of your supply chain in real-time
- Full integration into your SAP system
- Using TSO-specific experience and expertise made readily available
- Proven methodology for carbon pricing in public Procurement (EU tender conform)
- The highest data quality standards of CSRD reporting across your supply chain
- No need to develop extensive internal expertise
- Full transparency to all parties enhancing supplier engagement and common targets
- Aligned with European initiatives and active working groups (e. g. ENTSO-E, JIP on power transformers, etc.)

* ESRS E1-6, E5-4, E4-5

Unique offer

6 selected features distinguish *Upstream* from alternative approaches and offer a cost-effective solution for your needs

✓ Distinguishing features of *Upstream* by Elia Group

Primary data	Collection and management of primary data allows detailed analysis, strategy and scenario building and allows reporting on other dimensions (e.g. ESRS E1-6)	**Real-time purchasing data**	Real-time interface with purchasing record allows for continuous monitoring of data to move away from snapshot reporting to proactive "carbon controlling"
LCA experience and templates	The built-in LCA tool allows for fair and objective comparison of products and services independent of supplier assumptions and maturity levels	**TSO industry experience**	Proven concepts tested by Elia Group, tailored to the TSO/DSO sector. We are striving for alignment among European partners.
ERP integration	Connecting to SAP S4/HANA prevents doubling of master data and allows for custom analysis (e. g. break-down by project for Permitting)	**Eased supplier management**	Long experience in implementing Carbon Pricing with suppliers is already built into processes and our software (buyer vs. supplier needs, legal boundaries)

? Alternative to *Upstream* by Elia Group

Build necessary knowledge through long trial and error phase internally or with external help	Maintain supplier input and data exchange formats on sharepoint or similar databases	Research emission factors and pay license fees for access to specialized databases	Maintain several linked Excel tools with purchasing and supplier data	Tweak standard software (often manufacturing-orientated) to TSO-specific needs

Team

Our team has extensive experience in implementing sustainability strategies in utilities companies

Supported by:

Flexso

AMISTA

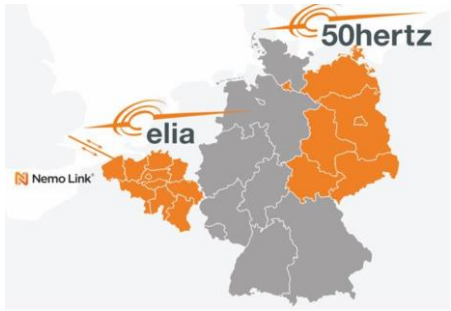
intys.

the value chain
Accelerate. Adapt. Act.

Philipp von Normann
Product owner Upstream
by Elia Group

“Data is the backbone for decarbonization, enabling informed decisions and effective strategies for a sustainable future.”

Our first use case: Elia Group



- International Transmission System Operator with two control areas (Belgium and East Germany)
- Group-Level Sustainability Strategy („ActNow“ Programm) as initiator of Upstream

SAP

Winner **SAP Innovation Awards 2024**

Let's talk

Assess the strengths of the solution in detail in a 1:1 call

Schedule a 1 hour product demo with Philipp von Normann

Agenda:

- What are you needs as TSO/DSO/Utility etc.?
- Could Upstream be a fit for these needs?
- Demo of our product

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