

"Measuring Corporate Greenhouse Gas Emissions: A Deep Dive into the Greenhouse Gas Protocol and Digital Solutions for Tracking Carbon Emissions"

Webinar

HOUSE OF 
SUSTAINABILITY

powered by Chamber of Commerce
& Chambre des Métiers

13 July 2023

Agenda

Welcome by the House of Sustainability

The fundamentals of the corporate standard of the GHG Protocol

Introduction of a digital platform for calculating corporate carbon emissions according to the GHG Protocol

Subsidy Program: SME Packages – Sustainability

Q&A

M. Philippe SCHOLTEN, Sustainability Advisor at House of Sustainability

M. Armin NEISES, CEO & Founder at WAVES

M. Florian BENDER, Senior Sales Manager at WAVES

M. Philippe SCHOLTEN, Sustainability Advisor at House of Sustainability

House of Sustainability

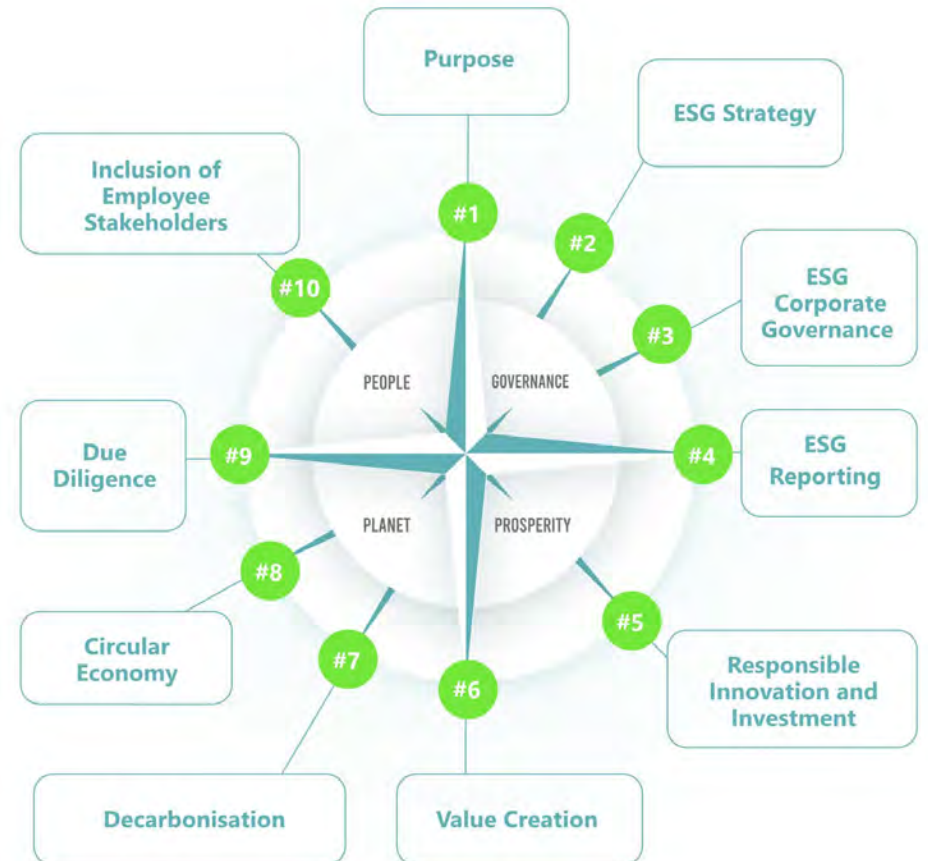
HOUSE OF SUSTAINABILITY

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The **House of Sustainability** is a platform to:

- coordinate
- federate and
- facilitate

towards the sustainable development of Luxembourg companies



Sustainability Cycles - Decarbonisation

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Decarbonisation

Due Diligence

Circular Economy

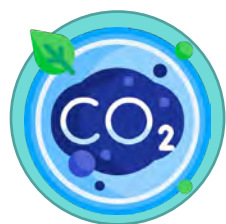
Reporting ESG

July 2023

October 2023

November 2023

December 2023



27 June 2023
Klimapakt fir
Betriber -
Decarbonisation
measures



13 July 2023
Webinar
Corporate Carbon
Footprint



18 July 2023
Taxonomie
Européenne:
Opportunités et défis
pour les PME



www.sustainability.lu



GHG Protocol introduction

House of Sustainability
Thursday, July 13th, 2023
Armin Neises

Agenda



- ✓ **Carbon Accounting – What is it and why is it important?**
- ✓ **GHG Protocol**
- ✓ **What are GHG Scopes 1-3 and sub-categories?**
- ✓ **Using GHG Protocol for Supply Chain Transparency**
- ✓ **New EU regulations that will change the game for companies**
- ✓ **An automated software solution to calculate the corporate carbon footprint and other ESG indicators**



Carbon Accounting



What is Carbon Accounting?

The origin is the life cycle assessment of products according to ISO 14040/44 (so-called LCA = Life Cycle Assessment).

Here, the carbon assessment is a component of the estimation of environmental impacts for the analyzed system (so-called impact estimation).

On the basis of LCA, procedures have been developed specifically for CO₂ balancing for:

Products - ISO 14067

Companies - ISO 14064 / GHG Protocol

Transport - EN 16258, ISO 14083 & GLEC-Standard



Carbon Accounting



The importance of Carbon Accounting

Carbon accounting enables companies to quantify their emissions and understand their impact on the environment. It provides an important basis for developing measures to reduce CO₂ emissions.

It can also be used to measure progress towards emission reduction targets and monitor the effectiveness of measures.

5 reasons for Carbon Accounting:

- Environmental impact
- Legal requirements
- Transparency and credibility
- Cost reduction
- Competitive advantage

The five principles of GHG:

- Relevance.
- Completeness.
- Consistency.
- Transparency.
- Accuracy



How does the GHG-Protocol account for emissions?

All emissions are measured according their global warming potential (GWP).

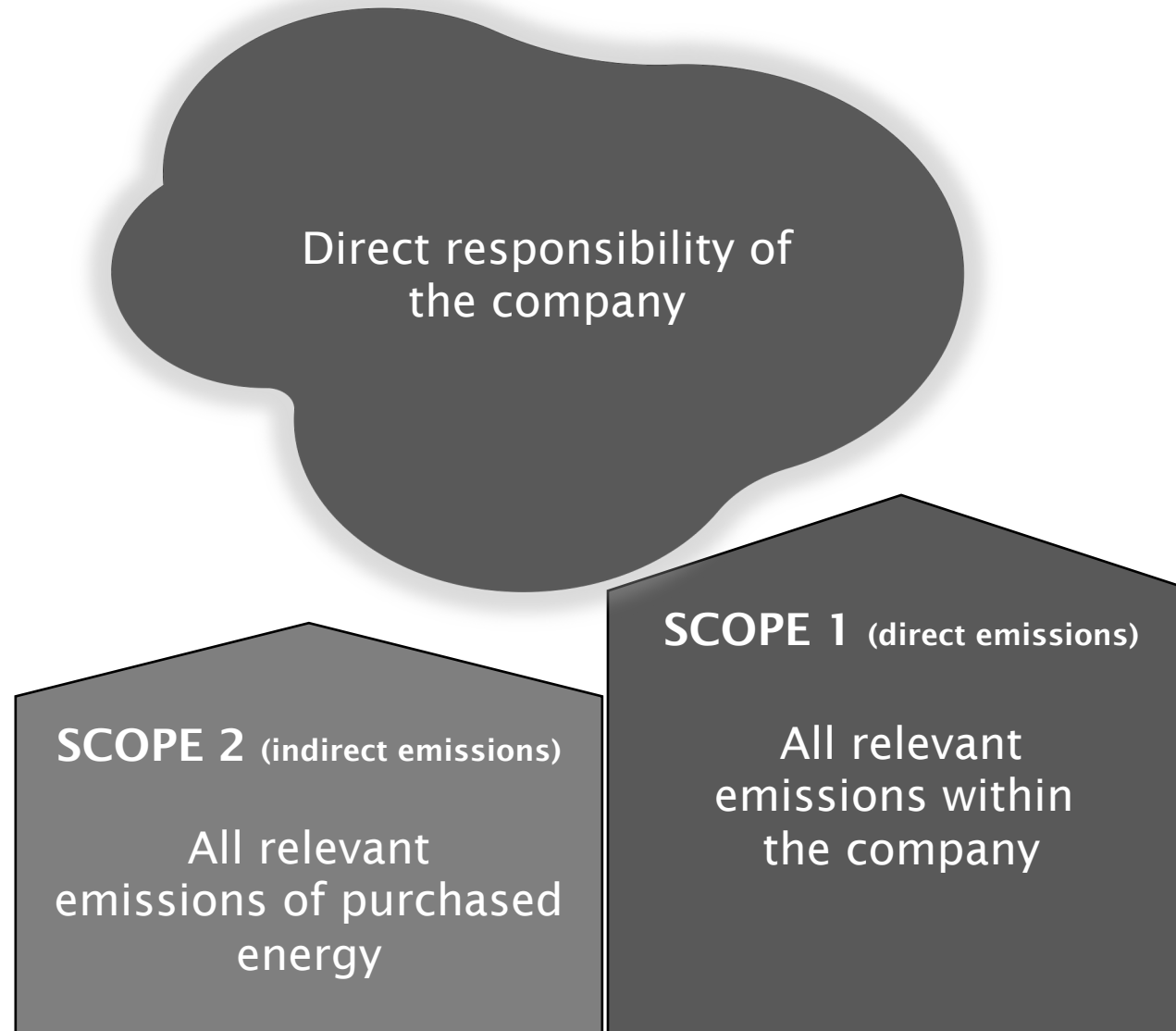
- Measuring the impact, the emissions will have on the global warming over the next 100 years

All greenhouse gases have an equivalent value of CO₂ emissions

Carbon dioxide	CO ₂	➡	1
Methane	CH ₄	➡	28
Nitrogen	N ₂ O	➡	265
Tetraflourmethane	CF ₄	➡	7350
Sulfure hexafluoride	SF ₆	➡	23500



GHG categories according to GHG Protocol



Upstream Activities

On-site Activities

Downstream Activities



Managing the Company Carbon Footprint

SCOPE 3 - upstream (indirect emissions)





- 3.1  purchased goods and services
- 3.2  Capital goods
- 3.3  Fuel and Energy
- 3.4  Transp. & Distribution
- 3.5  Waste
- 3.6  Business travel
- 3.7  Commuting/Home office
- 3.8  Upstream leased assets

Upstream Activities

SCOPE 2 (indirect emissions)








- 2.1  Electricity
- 2.2  Thermal energy

SCOPE 1 (direct emissions)

- 1.1  Stationary combustion
- 1.2  Phys./ Chem. Processes
- 1.3  Mobile combustion
- 1.4  Fugitive emissions

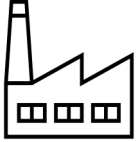
On-site Activities

SCOPE 3 - downstream (indirect emissions)

- 3.9  Transp. & Distribution
- 3.10  Processing of goods sold
- 3.11  Use of goods sold
- 3.12  EoL of goods sold
- 3.13  Downstream leased assets
- 3.14  Franchises
- 3.15  Investments

Downstream Activities

GHG Scope 1



Direct onsite emissions

On-site Activities

GHG-related activities

Energy consumption through:

Activity	Source	How?
Generating electricity	Generator	Diesel, renewable energy
Heating offices	Heaters	Oil, gas, renewable energy
Own cars, trucks, forklifts	Engine combustion	Diesel, gas, renewable energy
Cooling Units	Refrigerators, freezers	Refrigerant (Coolant R134)

GHG Scope 2



Indirect emissions

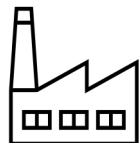
Energy related activities

GHG-related activities

Purchased electricity and thermal energy

Activity	Source	How?
Purchased electricity	Electricity provider	Renewable, nuclear, coal
Purchased thermal energy	District heating provider	Heat

GHG Scope 3



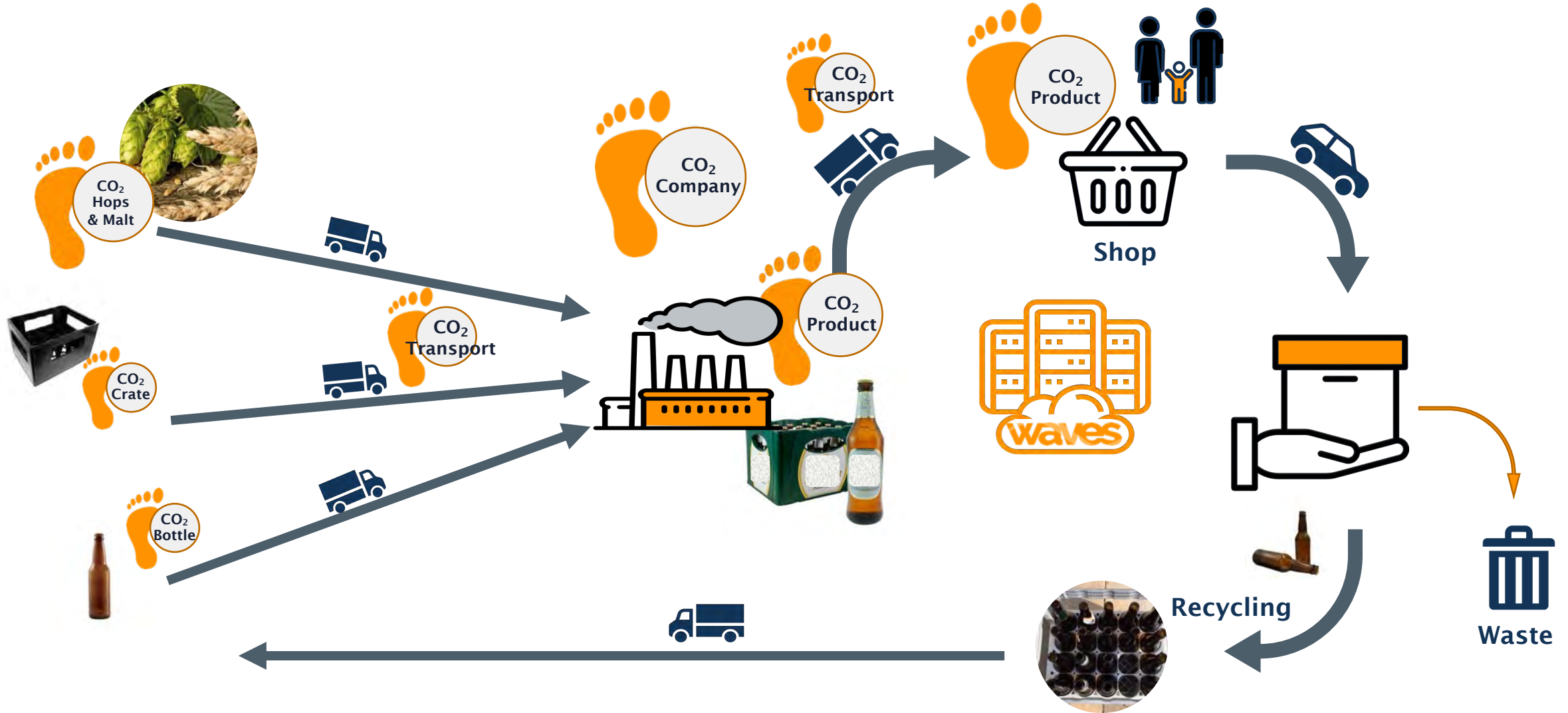
Indirect emissions

Up- and Downstream activities

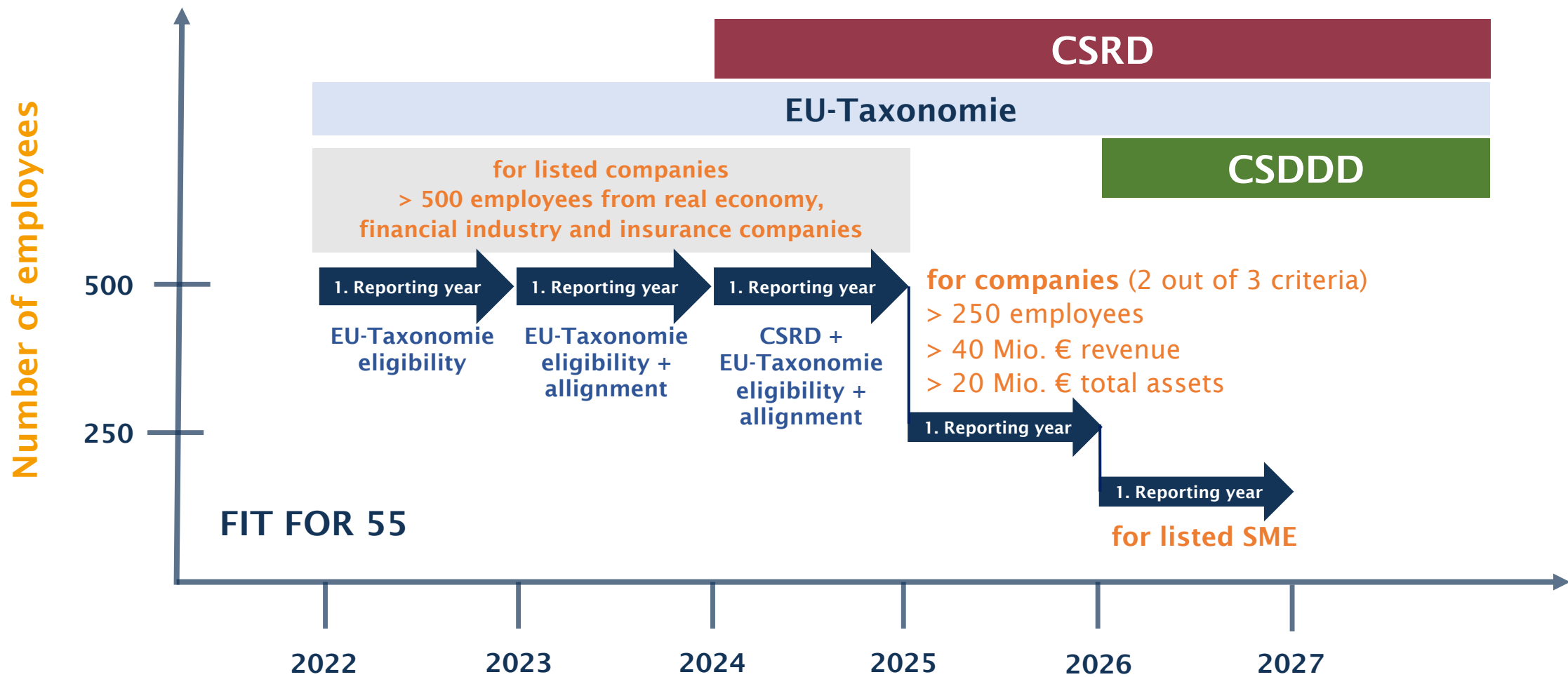
GHG-related activities

Activity	Source	How?
Purchased Goods and services	Suppliers and service providers	Emissions for production of materials, semi-finished goods and upstream delivering
Business travel	Trains, airplanes, cars	Fuel used
Employee commuting or home office	Car, train, bike travel	Daily commute to work
End-of-life of goods sold	Wasteplant, recycling station	Dissemlance or processing
... and many more		

Transparency across industries and supply chains



New EU regulations will change the game



ESRS E1.6

Disclosure Requirement E1-6

Gross Scopes 1, 2, 3 and Total GHG emissions

The undertaking shall disclose its:

- a) gross Scope 1 GHG emissions;
- b) gross Scope 2 GHG emissions;
- c) gross Scope 3 GHG emissions;
- d) and total GHG emissions.

ESRS E1 Climate change



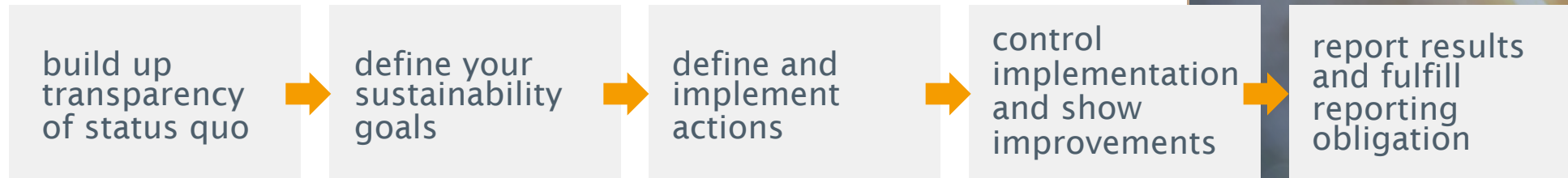
THE PROBLEM

- Companies need to comply with implemented and upcoming environmental and social standards and regulations (e.g., **EU Taxonomy**, **CSRD**, **CSDDD based on ESRS**)
- **Customers demand reliable numbers** and facts about a company's sustainability activities, especially customer requirements if you are in the **supply chain of bigger companies**
- Companies need to **save costs** and therefore require transparency about their impact on the environment (e.g., carbon emissions) and saving potential
- Today, a majority of existing companies that use **cloud & non-cloud** technology are unable to calculate all indicators relevant to sustainability
- Companies need technologies that can manage and easily integrate sustainability into their existing processes

NEED FOR SOLUTION

*A solution that can calculate all relevant **sustainability indicators** by taking into account **environmental** (emissions, water/land use, etc.), **economic and governance** (profit, cost savings, growth, etc.), & **social** (working conditions, work safety, child labour, etc.) aspects*

STEERING TOWARDS CORPORATE SUSTAINABILITY



Implement, update and control sustainability indicators

Sustainability Management Platform

Setting the standard for holistic sustainability management and reporting in ONE unified solution!



International registrations:

- Intellectual property: i-DEPOT Nr. 10559 Feb 15th 2021
- Trademark: BX 1431255 Dec 9th 2020
- Industrial Designs: CERTIFICATE

SME Packages – Sustainability

Subsidy Program

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Modalities: SME Packages – Sustainability

A package includes:

- personal support by a sustainability consultant from the House of Sustainability
- the implementation of a concrete solution by a technical expert
- financial support of € 5.000 for a total investment of between € 6.650 and € 25.000 (excl. VAT)

Eligible companies:

- SMEs with a business permit from the Direction Générale des Classes Moyennes
- Definition of a SME:
 - < 250 employees and
 - < 50 million € annual turnover or
 - < 43 million € annual balance sheet

Areas of Environmental Protection

Energy

Improved energy efficiency



Carbon Footprint

Reduction of greenhouse gas emissions



Waste

Improving waste management



Water

Reduction in water consumption



Carbon Footprint | Energy | Waste | Water

Carbon Footprint



- Corporate carbon assessments according to internationally recognized standards (Bilan Carbone®, GHG Protocol)
- CAPEX investments reducing carbon emissions

Energy



- Energy Audits
- LED lighting systems
- Insulation of buildings & offices
- Heating & cooling systems
- Renewable energy production (Solar panels)
- ...

Waste



- Multifunctional recycling furniture
- Waste reduction systems
- Installation for processing wood off-cuts into pellets
- ...

Water



- Graywater filtration systems or rainwater capture
- High-efficiency equipment for washing machines
- Installation of a monitoring system
- Water leak detection system
- ...

**Sustainability
Quick Check**



Q&A Session

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13 July 2023

Satisfaction Survey



Contact

M: sustainability@cc.lu

T: +352 42 39 39 328

A: 14, rue Erasme L-1468 Lux

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En partenariat avec l'Institut National pour le Développement durable et la RSE (INDR)

Back up

OUR VISION

OUR MISSION

**MAKING
SUSTAINABILITY
VISIBLE**

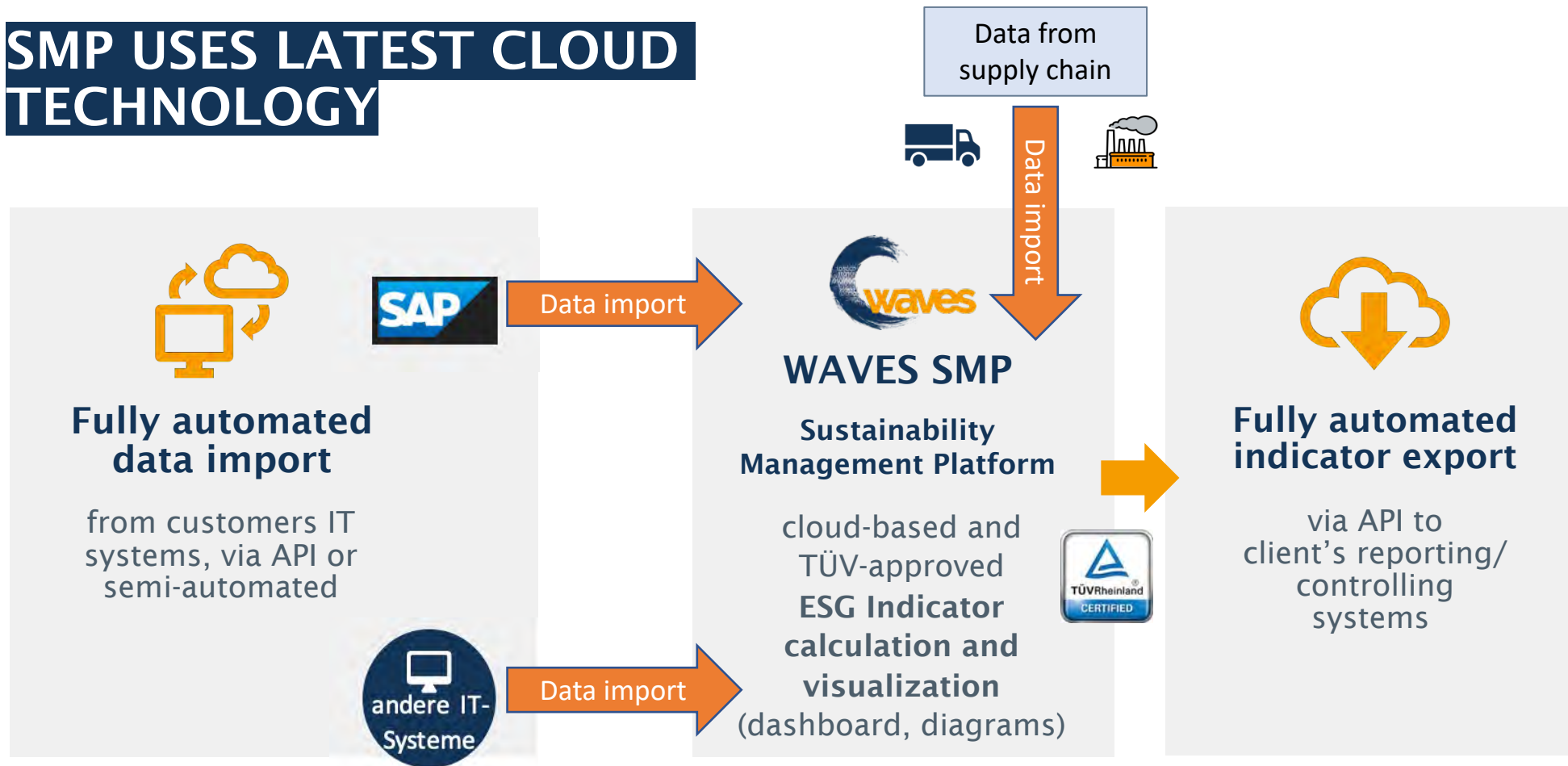
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Be the expert for
Sustainability

The SMP will cover and connect ALL ESG indicators in ONE unified platform!

- **Deliver Completeness**
- **GDPR-compliant and TÜV-certified**
- **Cloud-based calculations**
- **Automated real-time data stream via API**
- **Compliant with standards and legislation**
- **Supply Chain Transparency**

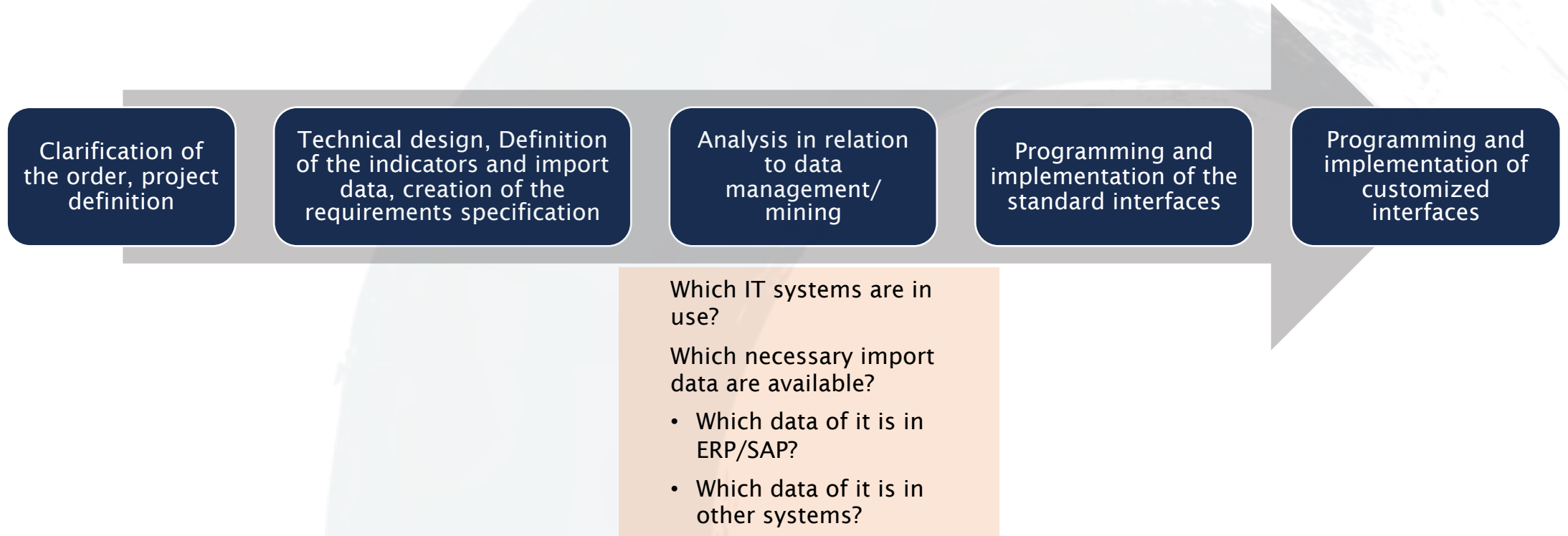
SMP USES LATEST CLOUD TECHNOLOGY



WAVES as independent, certified platform refines unfiltered customer data into valuable, manageable sustainability indicators



Procedure for consulting for sustainability indicators



OUR PRODUCTS AND SERVICES AS OF TODAY

4 modules ready to be commercialized. Additional modules are planned for full ESG coverage and reporting.



In addition, we offer **sustainability management consulting** to support companies on their way to climate neutrality.

WITH THE WAVES SMP, COMPANIES CAN...

be compliant

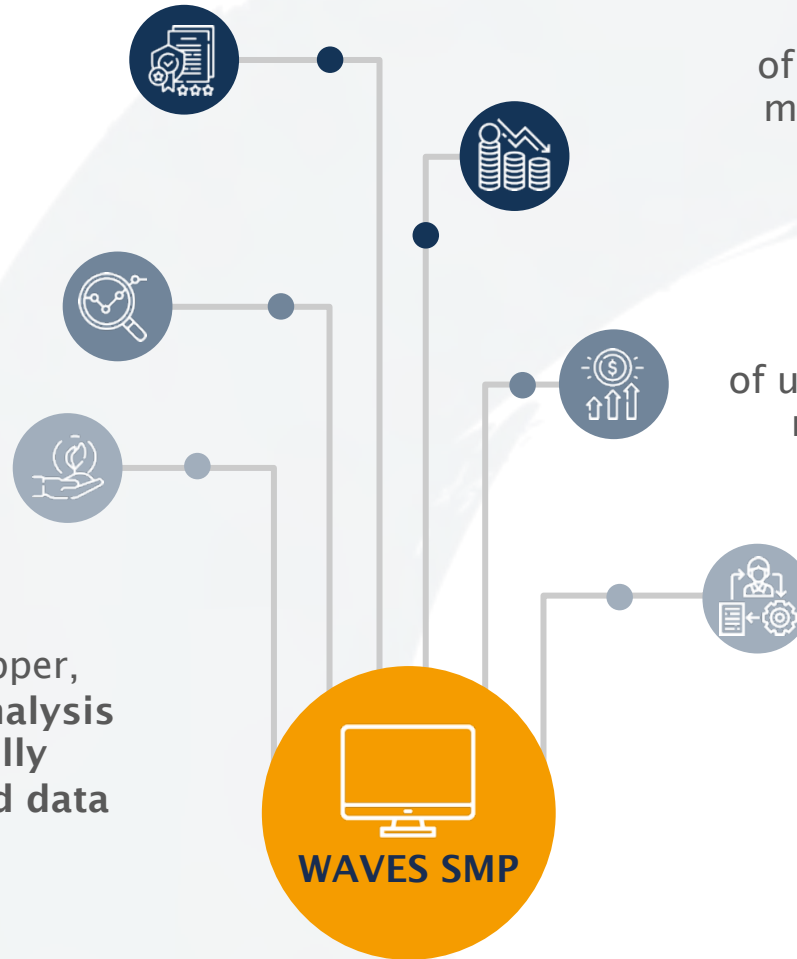
with EN16258, GLEC Framework V.2, GHG Protocol, CSRD, EU-Taxonomy

obtain relevant data

on carbon price and saving potentials in an easy-to-use software solution to gain competitive advantages

manage their sustainability

in customizable dashboards (shipper, carrier, tendering) with in-depth analysis of the carbon footprint in ONE fully integrated system and automated data flows



realize reductions

of negative environmental impacts by making the emission sources and their magnitude 100 % transparent

generate revenue


of up to 8 % more revenue according to recent studies, for which the SMP is a possible enabler

save resources

of up to 90 % of human-, time- and financial resources

**Time to act
is now!**

Contact

 **WAVES S. à r. l.**
9, rue de Laboratoire
L-1911 Luxembourg

www.waves-sustainability.com



Armin Neises

CEO and Founder

Email: armin.neises@waves.lu

Phone: +49 160 9696 6324



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