

CO2 Analytics playbook

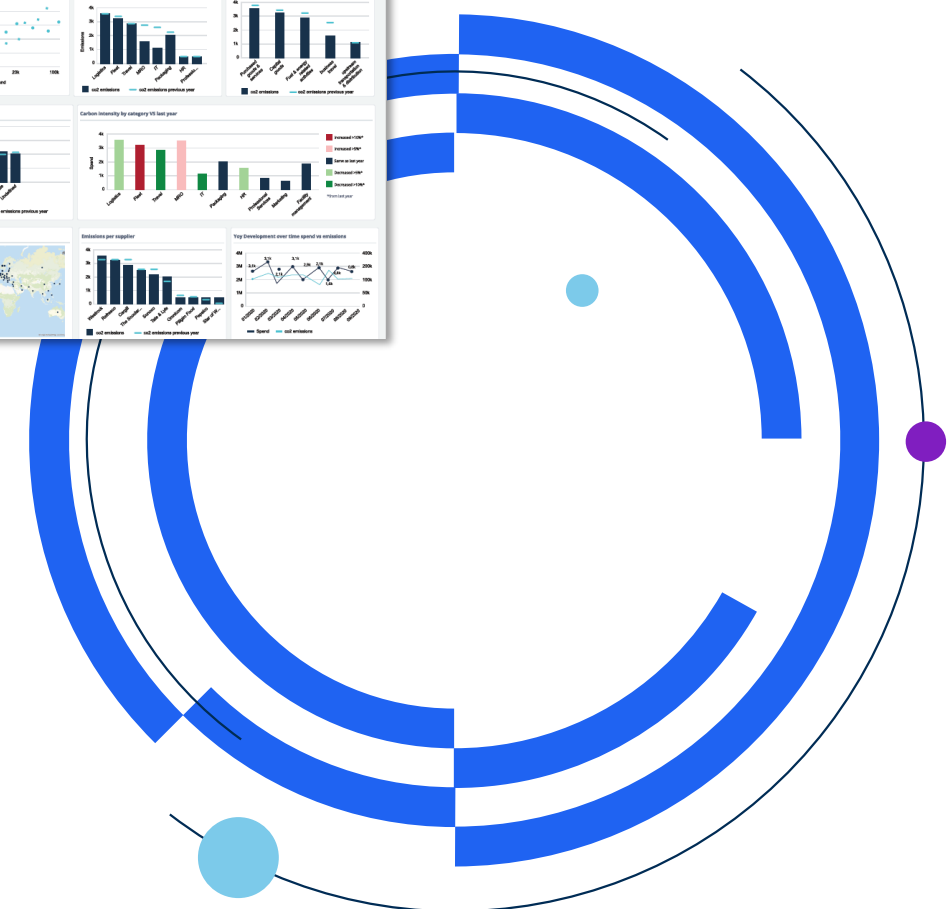
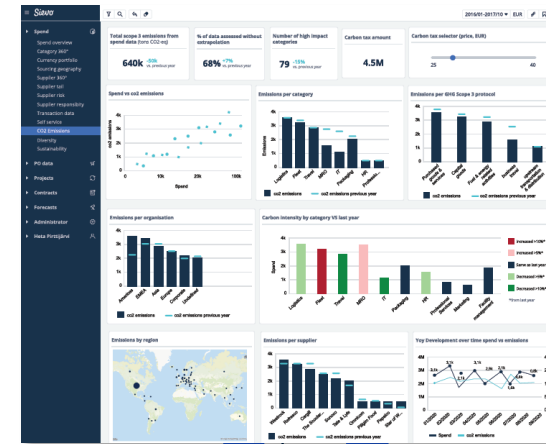


Introducing CO2 Analytics by Sievo

This playbook introduces Sievo CO2 Analytics, a solution that combines your internal purchasing data with external emission data or supplier data for actionable insights.

This playbook will present you the key functionalities of the solution including our out-of-the-box dashboard.

This dashboard covers the most common analysis needs of modern procurement teams in terms of CO2 Analytics, but more customized analysis are available if required by your organization.



The 4 benefits of out-of-the-box dashboards



All you need in one view

- Completely new way of moving from insights to actions
- Designed by analytics professionals to contain all key data and charts
- Covers the most crucial procurement use cases



Speed

- Quickest way to getting all benefits of analytics and data
- Out-of-the-box dashboards are quick and easy to deploy



Flexibility

- Self-service functionality brings a lot of flexibility
- Best way to get started before creating custom dashboards



Development & training

- Out-of-the-box dashboards are continually developed
- Ready-made training material

Sievo actionable analytics

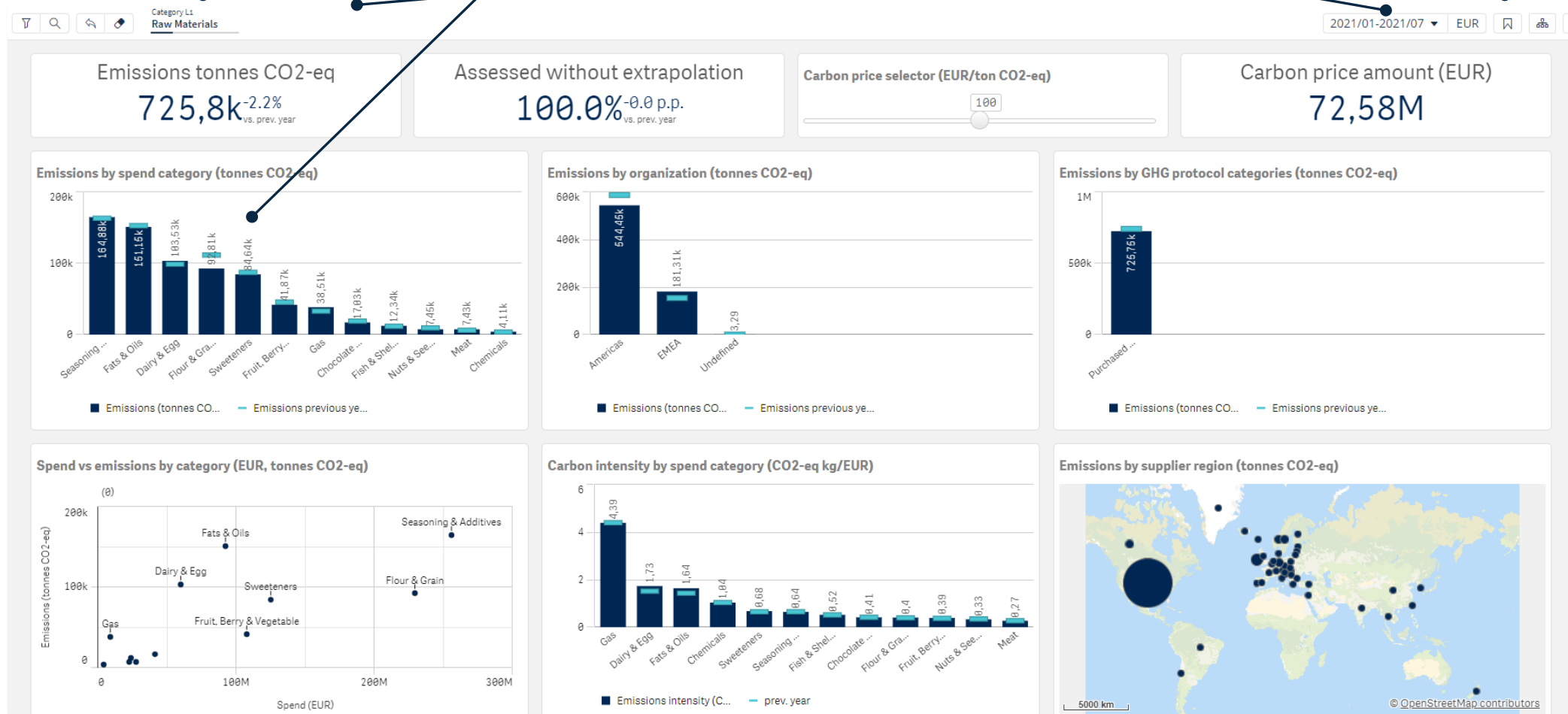
Add, clear and manage filters

Add filter by clicking on the chart

Filters follow between dashboards

Select time range and currency

Save and share your filters

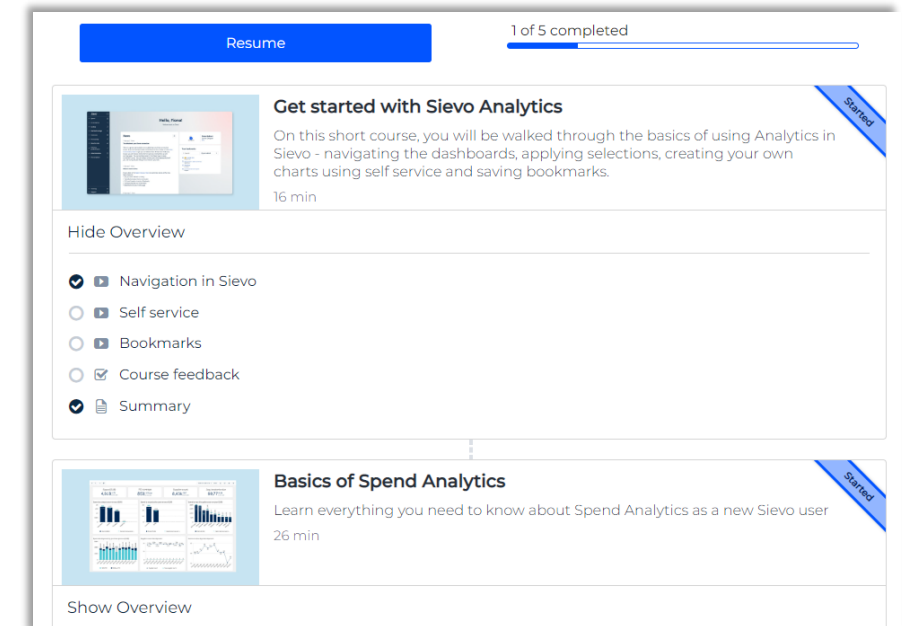
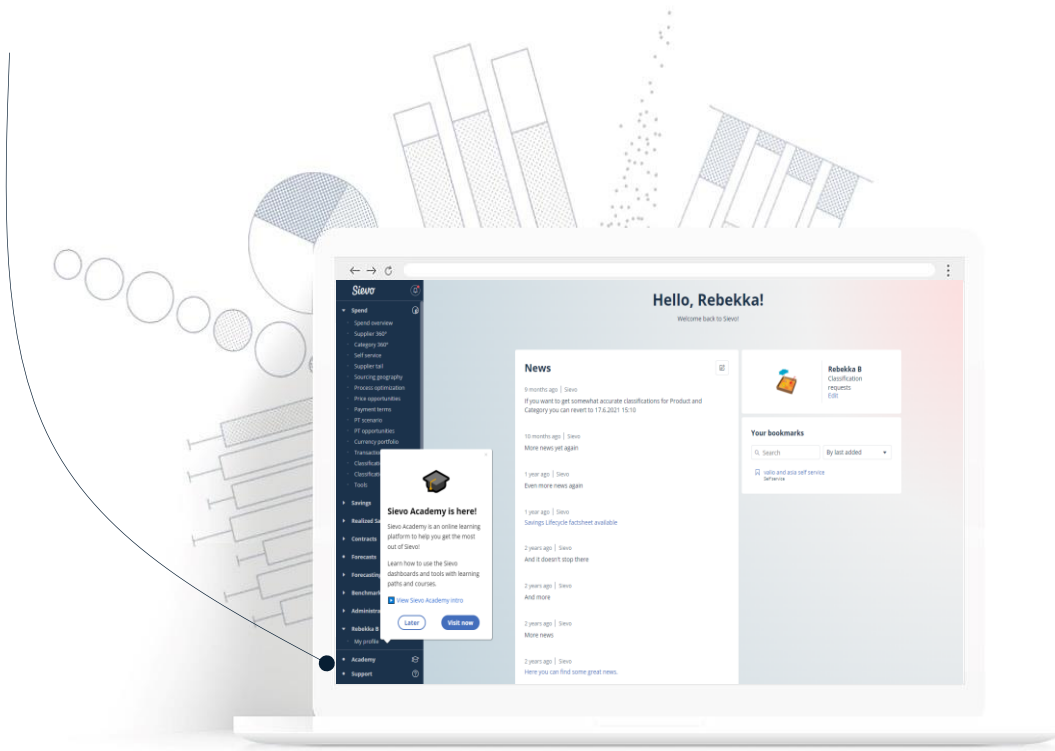


Sievo Academy

Next level online learning experience including learning paths, best practices and certifications*, found at the bottom of your navigation

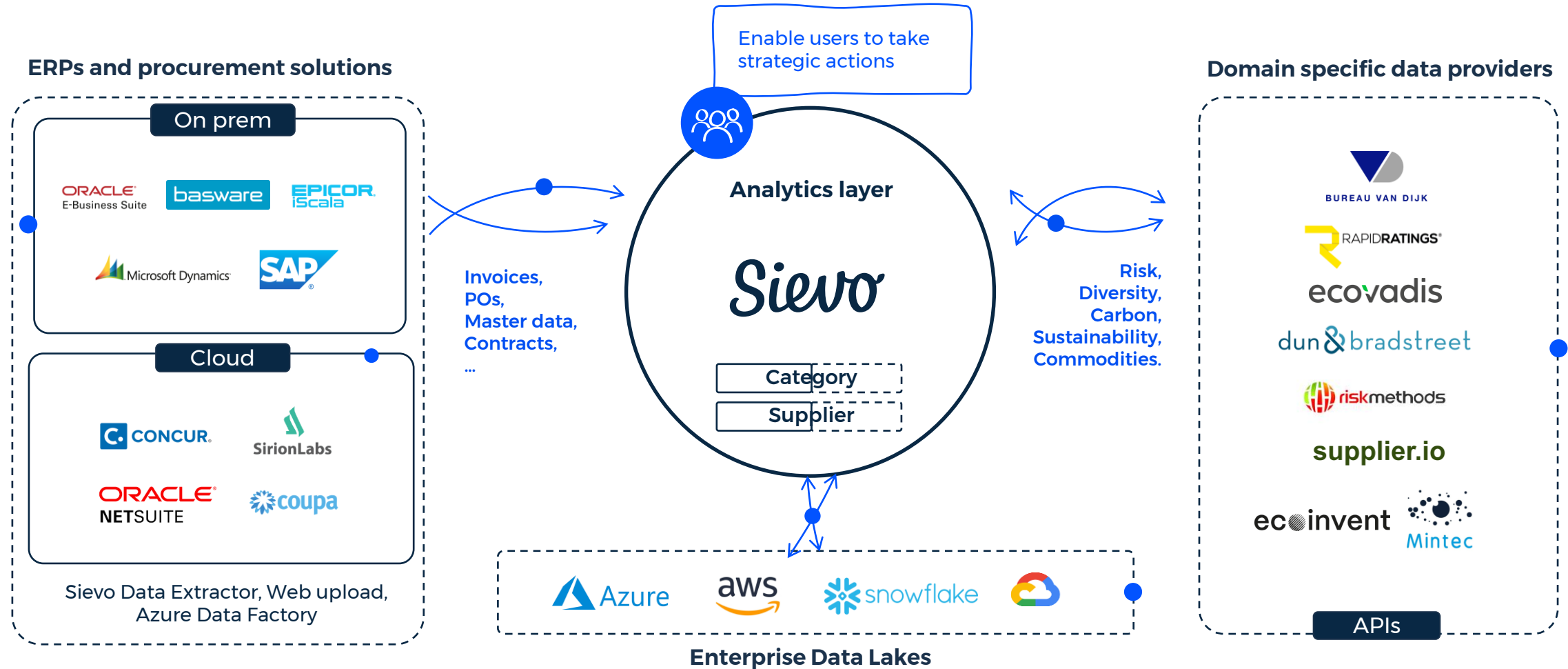
Resources for both new and experienced users, covering all solution areas

- Curated learning paths for easy tool adoption
- FAQ's
- Exercises
- Playbooks
- Certificates



Sievo Sustainability Information Hub

Combining data for insights



Take control of your procurement spend with spend analytics.

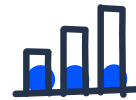
Get more value from your spend with automated data extraction, AI-powered classification, and advanced spend analytics



Why?

Need for visibility to spend and identification of improvement opportunities

For every \$1BN analysed identify \$1M in savings – repeatedly



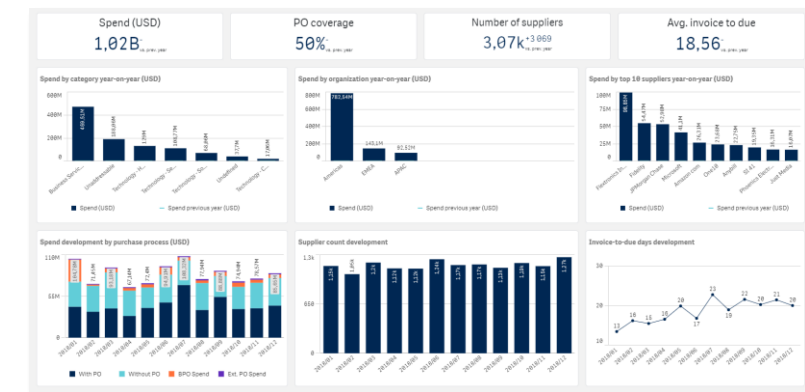
What?

- **Classify** your spend
- **Analyze** how your procurement performs
- **Follow** payment term developments
- **Track** key spend KPIs
- **Identify** savings opportunities



How?

- Automated data extraction from any source system
- Industry leading AI-powered spend classification
- Advanced spend analytics and configurable dashboards



Spend analytics and CO2 analytics in short

1

Reduce emissions across the enterprise with CO2 analytics.

CO2 analytics combines spend data with established emission factors to calculate your scope 3 emissions



Why?

80%
of company
emissions
come from
the supply
chain (scope
3 emissions)

65%
of FTSE 100
companies
have already
committed to
net zero



What?

- **Identify** emission hotspots to understand which categories, regions, and suppliers to focus on
- **Report** emissions
- **Follow** emission reduction targets
- **Act** on your emissions with automatic monthly data refreshes
- **Supercharge** cross-functional communications
- **Save** time and costs



How?

Spend data x emission factors from established databases or from your suppliers according to the GHG protocol and verified by a third party



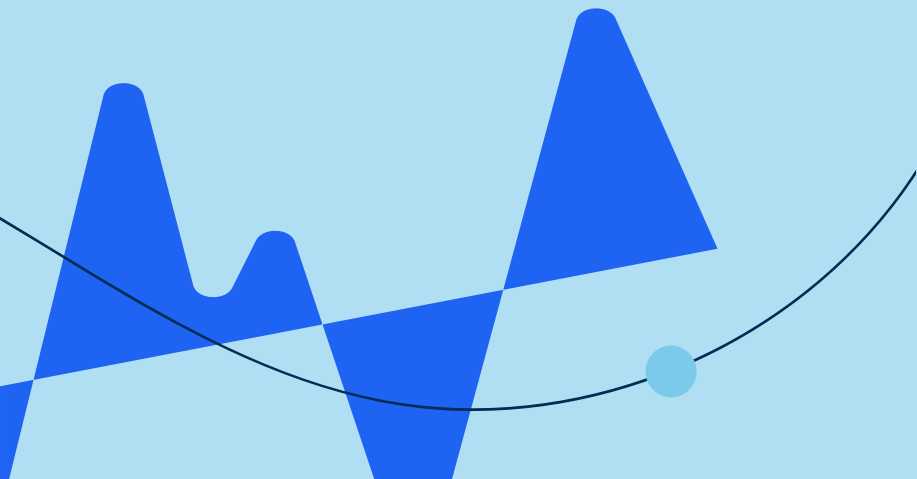
CO2 analytics

The details

2

The background features a large, light blue curved shape on the left and a smaller, light blue curved shape on the right. A dark blue curved shape separates them. A thin white line curves from the bottom right towards the top right. A solid blue circle is located on this line in the lower right quadrant, and a solid purple circle is further up the line on the right edge.

How does the tool work?



Sievo Customer Interviews:

It takes on average **3 to 4 person-months a year** for a company to build and maintain a manual carbon footprint calculation tool.”

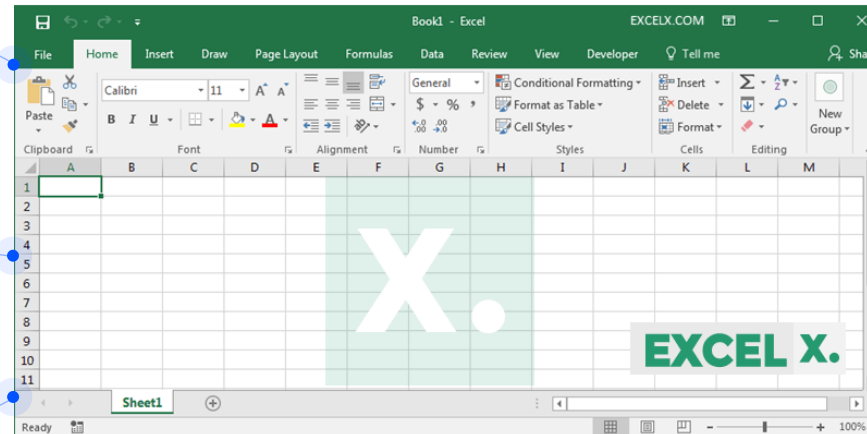
We have about **50 different answers** if you ask about our carbon footprint.”

We cannot **wait a whole year** anymore before we can report on our emissions.”

NO automated data gathering

NO monthly updates

NO data transparency



NO actionable data

NO holistic visibility

Common challenges in measuring supply chain emissions

Limited to annual reporting

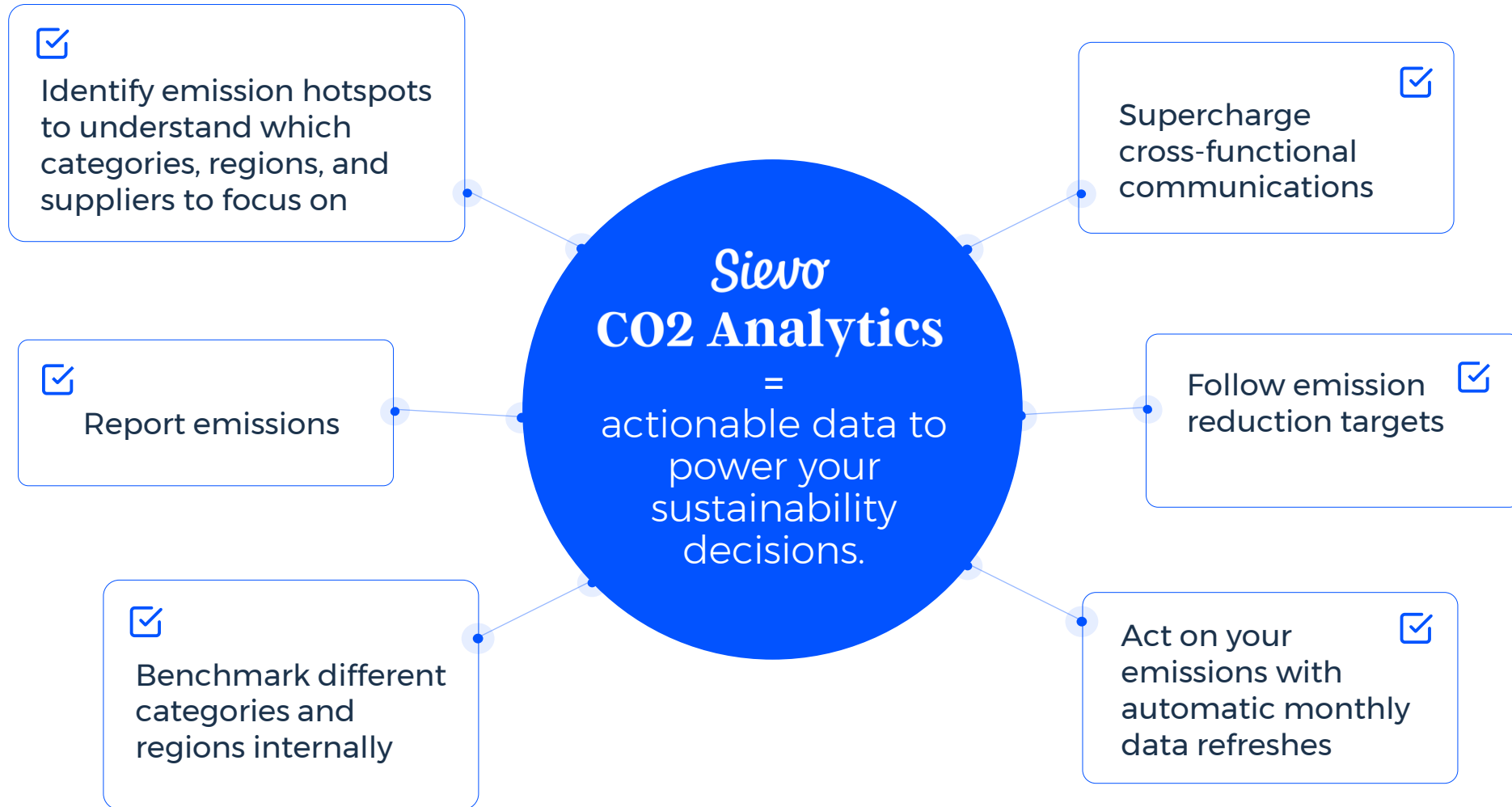
Inaccurate data

Lack of visibility

Very manual process

Lack of engagement

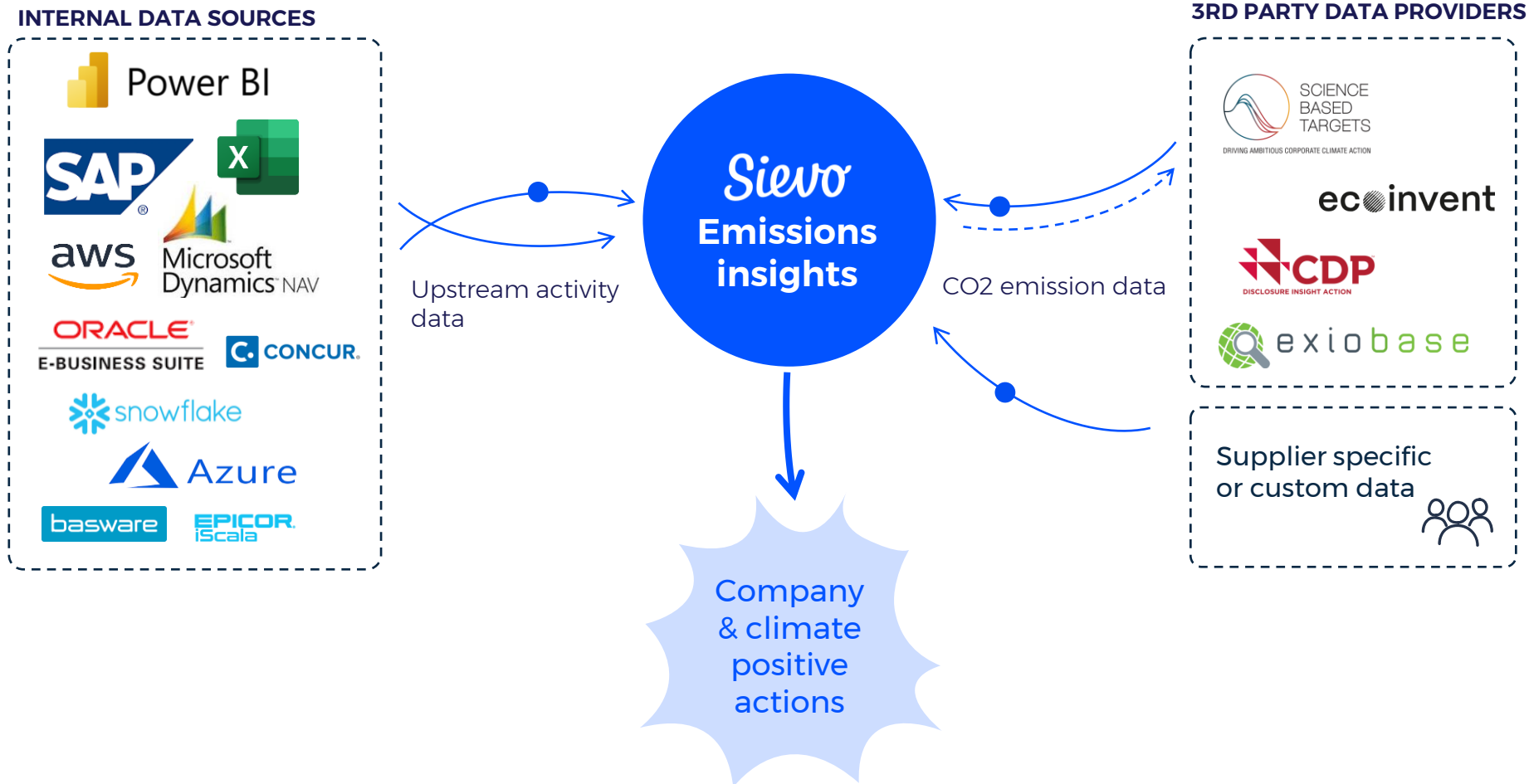
Not yet started



Emissions is the new currency



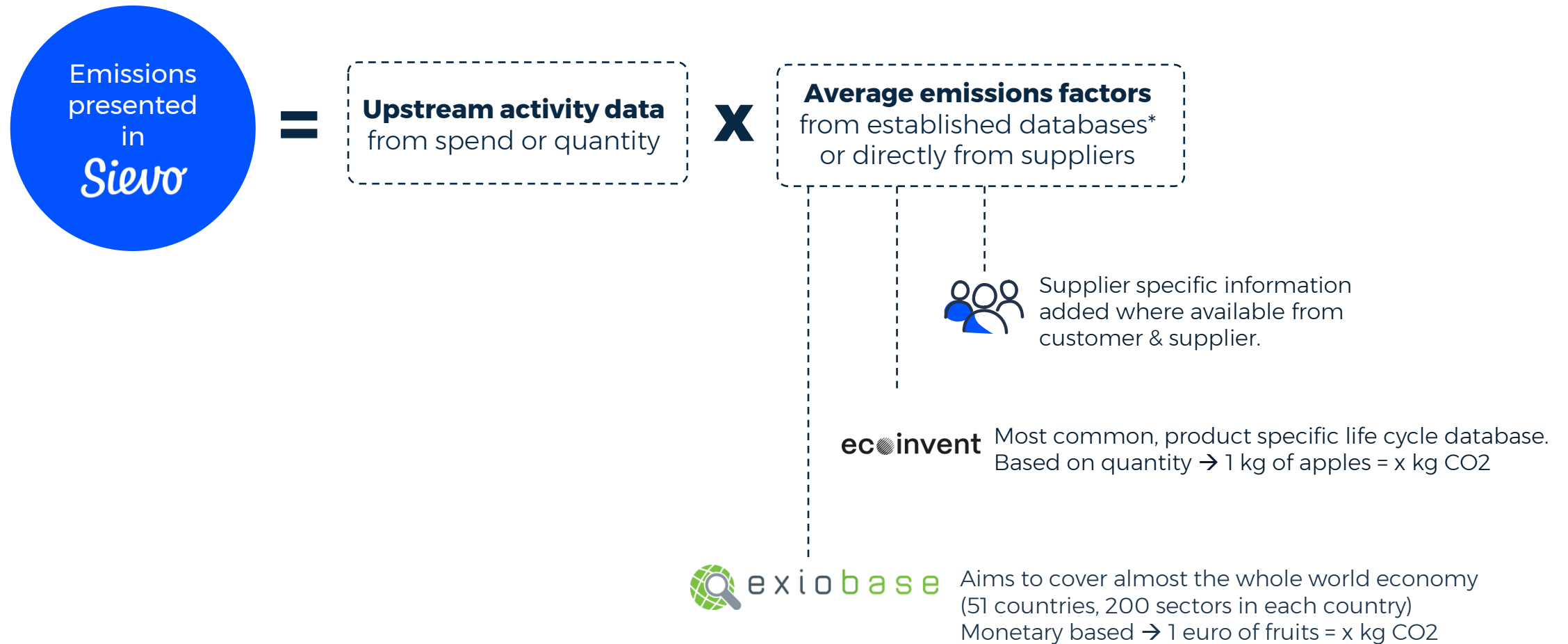
We can combine data from any source you need.



Get more time
to focus on actions
that matter.

- ✓ Monthly automated data gathering
- ✓ Automated mappings
- ✓ Holistic view into emissions
- ✓ Full data transparency and ownership

We help you fill in the visibility gaps, continuously.



*All external databases are included.

Example of Sievo taxonomy being mapped to CO2 emissions

Sievo taxonomy				Results of CO2 mappings			
Category L4	Category L5	Location	UOM	CO2	Mapped from database	DB used	Location
Dairy	Milk	France	kg	*	Skimmed milk, from cow milk	Ecoinvent	France
Dairy	Milk	Denmark	kg	*	Skimmed milk, from cow milk	Ecoinvent	Denmark
Dairy	Skimmed milk powder	France	kg	*	Skimmed milk, from cow milk	Ecoinvent	France
Dairy	Lactose	United States	kg	*	Lactose	Ecoinvent	United States
Dairy	Whey	United States	kg	*	Whey	Ecoinvent	United States
Chemicals	Lactose monohydrate	France	eur	1.330	Chemicals nec	Exiobase	France
Chemicals	Sodium	United States	eur	0.797	Chemicals nec	Exiobase	United States

The emission factors are affected by

- 1) The category/material group name and
- 2) The location where available for specific material

In addition, inflation, unit of measurement, and currency rate conversions are considered

*Ecoinvent licensing limits the display of emission factors in Sievo's CO2 Analytics

hikma.

& Sievo CO2 analytics



“ We wanted one solution that would be updated automatically... ensuring efforts would be focused on driving sustainable change rather than on data mapping processes.”

– Francois Rousselot
Group Head of Procurement at Hikma



Results

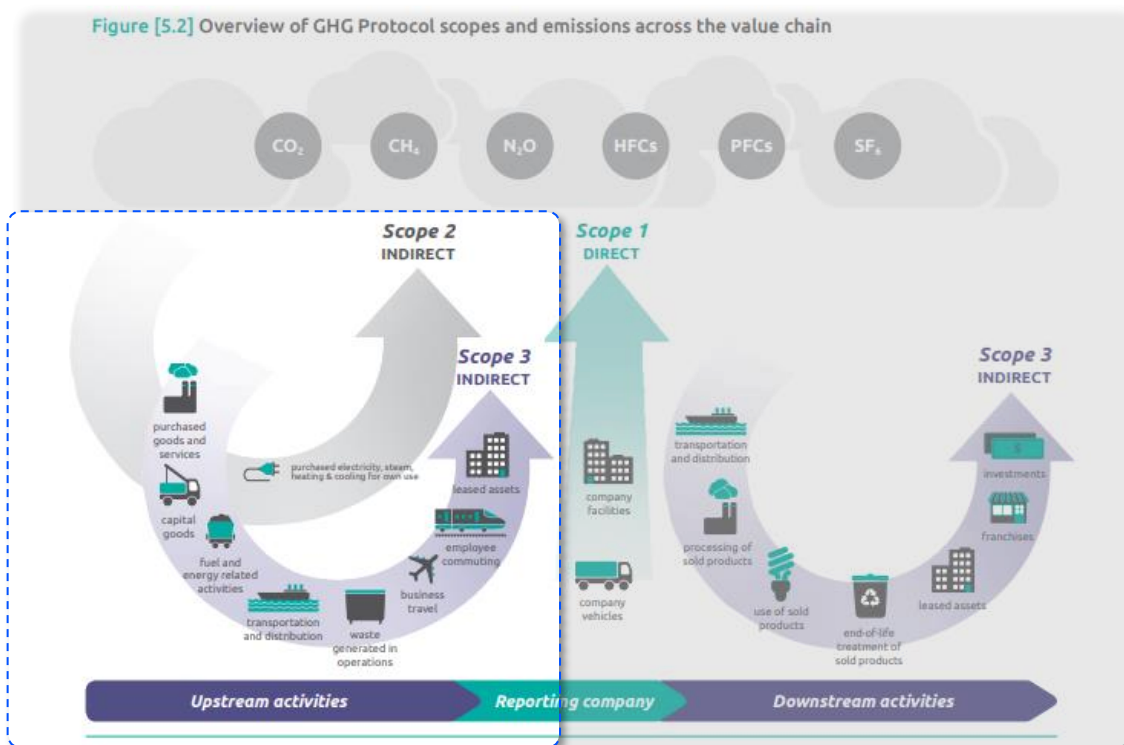
- 95+% scope 3 visibility to indirect and direct categories
- Successful implementation & adoption level
- 100% automated monthly data extractions and refreshes
- Team trusts data and insights thanks to greater mapping accuracy

[Read full case study here.](#)

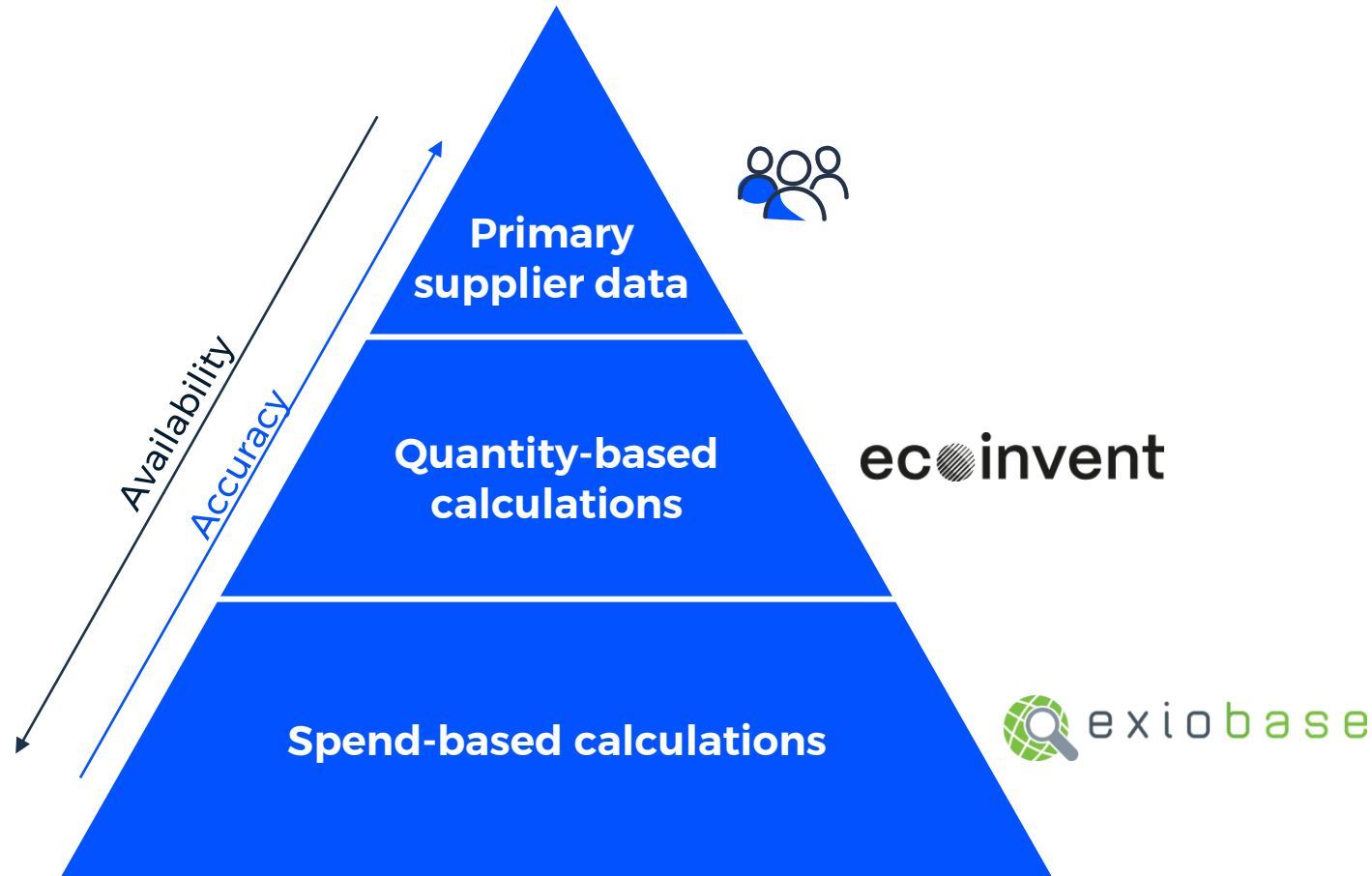
We enable you to become compliant.

- ✓ Verified by one of the big four accounting firms
- ✓ Assurance statement ready
- ✓ Science-based calculations
- ✓ Calculations according to GHG protocol
- ✓ Unique 28 step prioritization approach

Sievo calculates a carbon footprint for all of your upstream activity data.



Continuously develop emission mappings and improve accuracy over time directly in Sievo.



- ✓ Collaboration with Suppliers
- ✓ Up to date emission factors
- ✓ Latest regulation & requirement updates

Sievo Supplier material emissions Questionnaire

Introducing the Supplier material emissions Questionnaire – the ultimate tool for effortlessly gathering emission factors and related information directly from suppliers.

This questionnaire allows Sievo users to inquire about their suppliers’ material-level emission factors. In the future, you will be able to request also operative emissions and e.g. emission reduction efforts through a set of standardized questions.

Supplier responses can be reviewed and validated in Sievo after which the data seamlessly integrates into the emissions analytics platform, providing real-time insights for informed decision-making.

Emission reporting

Calculation method details

Specify the default values here. These will be automatically applied to all material rows below. Modify individual rows by overriding the values if the materials have unique calculation methods.

UOM*

kg CO2-eq/ton

Valid from*

20/03/2020

Valid to*

20/03/2020

Assurance method*

Internal verification

System boundary (of emission factor)*

Cradle-to-grave (Raw material supply, transportatio...

Emission calculation methodology*

ISO 14067 (Carbon footprint of product)

Material specific details

If any values are unavailable, simply uncheck the corresponding row.

How the questionnaires work



Create a new questionnaire from the **Supplier questionnaire** menu under CO2 emissions in Sievo.

Select or search for the supplier from the list of suppliers. Give their contact details and add your custom message.

Select the materials you wish to ask details for. Sievo automatically fetches all the materials based on the master data.



Send the questionnaire forward – the supplier is then tasked with providing the most accurate data they have available.

In case they don't have certain emission factors, they can decide not to provide data for certain materials or leave some additional details empty. **Make sure to review the responses in Sievo.**

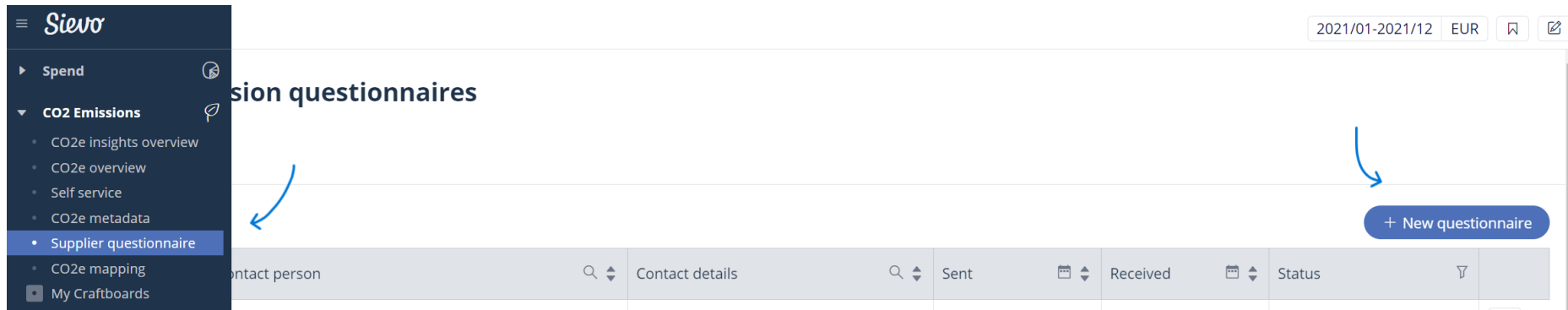


Once completed the questionnaire is sent back to Sievo where you will be tasked to either **confirm** or **reject** the emission factor for each material.



Approved emission factors will be created as **CO2 mapping suggestions** in the [CO2 mapping tool](#).

Once the new CO2 mapping suggestions are approved, they will automatically be applied in all CO2 calculations in Sievo going forward during their validity period.



Sievo’s 28 emission calculation methods ensure the highest reliable accuracy is prioritized every time.

		Emission factors			
		Supplier specific/custom		Established databases	
		Quantity	Monetary	Ecoinvent	Exiobase
Upstream activity data points	Material + Supplier + Category	1	2	15	22
	Material + Supplier	3	4	16	23
	Material + Category	5	6	17	24
	Material	7	9	18	25
	Supplier + Category	8	11	19	26
	Supplier	10	12	20	27
	Category	13	14	21	28

1 = first priority

28 = last priority

CO2 emissions are calculated for each possible/available priority for each transaction. The calculation that 1. is successful and 2. has highest priority order is used to report the realized emissions.

Custom priority order

While Sievo's 28 emission calculation methods provide the highest reliable accuracy, we want to offer more flexibility by providing the possibility to customise the calculation prioritisation order.

For example, if supplier-specific mappings are considered more precise than material-specific mappings, it is possible to adjust the prioritisation accordingly.

How to set up a custom priority solution?
Contact your Sievo representative.

Please note that the calculations will be changed throughout history, for the entirety of the reported data.

Data quality explanation in priority/quality order

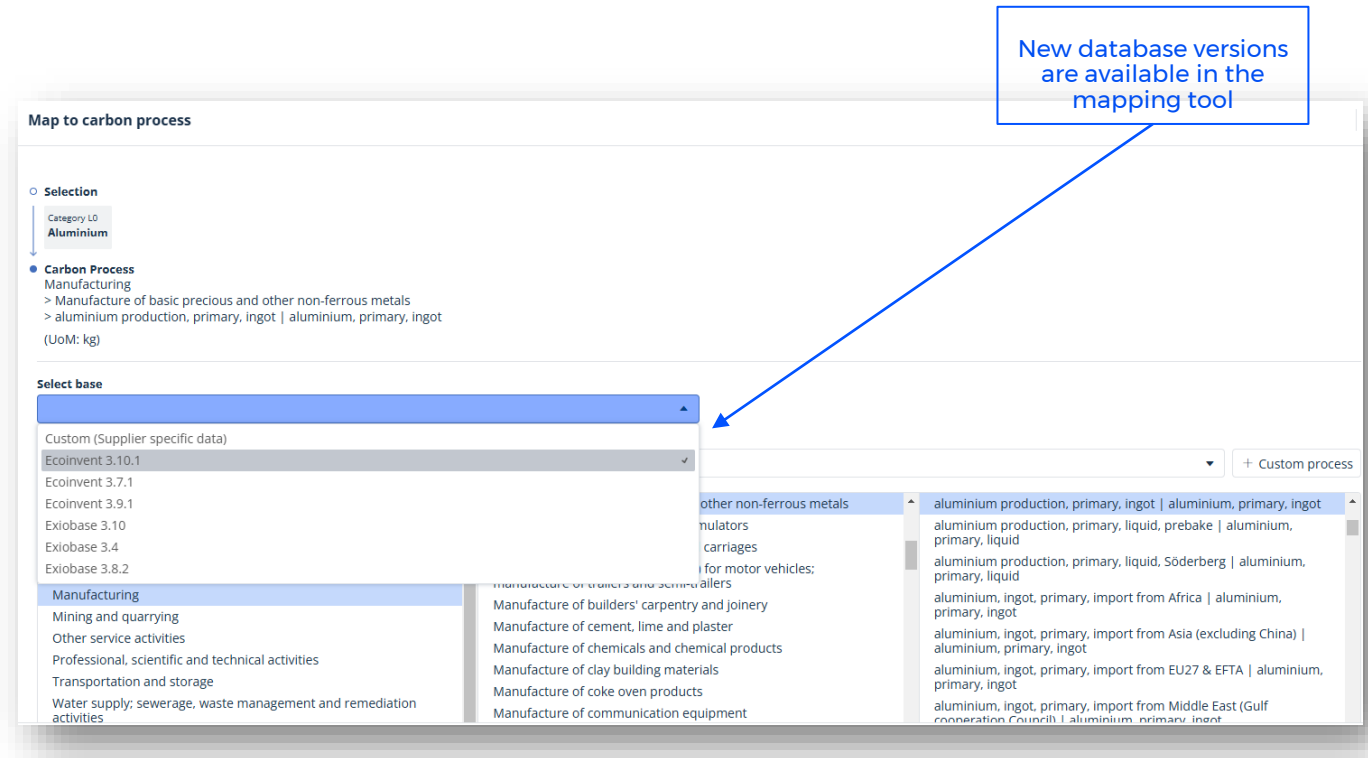
1 = first priority 28 = last priority

Mapping selections	Q	Supplier specifi... (Quant...	Q	Supplier specifi... (Monet...	Q	Establi... databa... (Ecoin...	Q	Establi... databa... (Exiob...	Q
Material-ERP supplier-Category		1		2		15		22	
Material-ERP supplier		3		4		16		23	
Material-Category		5		6		17		24	
Material		7		9		18		25	
ERP supplier-Category		8		11		19		26	
ERP supplier		10		12		20		27	
Category		13		14		21		28	

Database update

Sievo updates Exiobase and ecoinvent databases regularly to provide users with reliable and up-to-date emissions data

- Both Exiobase and ecoinvent release new database versions every year and they are made available through database update
- Each new version provides latest available emissions data and ecoinvent also introduces new emission processes with each update



ecoinvent

exiobase

What are the benefits of database updates?



New emission processes

- New emission processes are added with each new ecoinvent version → more options to support mapping decisions



Up-to-date emission data

- Most recent emission data added through database update → more accurate emission factors and less uncertainty related to inflation correction



Multiple database versions

- Possibility to choose between database versions → cover spend data with adequate timeline with selection of database version

Mapping suggestions

Enhanced data quality is just a few clicks away with our mapping suggestions. On this page, you'll discover mapping suggestions created by Sievo. Currently, all our suggestions stem from database updates, but stay tuned for the upcoming addition of AI-generated data enhancement suggestions.

The confidence levels, graded on a scale from 1 to 3, provide an approximation of the confidence associated with each suggestion. For example, a 1-to-1 match carries a level 3 confidence rating, signifying a 100% certainty.

CO2 mapping

Mapping tool Suggestions Mapping log Custom processes

Set validity and approve selected

✓ Approve selected ✗ Reject selected

Accept / reject	Category	Material	Supplier	Mapping base	Process	Valid from	Valid to	Source	Confidence (1-3)
<input type="checkbox"/>	Raw materials...			Exiobase 3.9	Railway transportation services	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...			Exiobase 3.9	Supporting and auxiliary transpo...	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...			Exiobase 3.9	Hotel and restaurant services (55)	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...		Windler, Wilkinso...	Exiobase 3.9	Food products nec	01/07/23	01/07/33	Data update	1
<input checked="" type="checkbox"/>	Raw materials...			Exiobase 3.9	Dairy products	01/07/23	01/07/33	Data update	1
<input checked="" type="checkbox"/>	Raw materials...	Practical Rubber S...	Gorczyani - Gorcza...	Exiobase 3.9	Chemicals nec	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Licensed Cotton H...	Dickens - Heaney	Exiobase 3.9	Other business services (74)	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Handmade Cotto...	Mosciski, Moen a...	Exiobase 3.9	Other land transportation services	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Sleek Frozen Shirt		Exiobase 3.9	Sale, maintenance, repair of mot...	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Awesome Steel C...	Gislason - Watsica	Exiobase 3.9	Railway transportation services	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Intelligent Steel C...	Johnson, Schuppe...	Exiobase 3.9	Supporting and auxiliary transpo...	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Licensed Rubber...	Farrell - Monahan	Exiobase 3.9	Hotel and restaurant services (55)	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Unbranded Wood...	Hudson Group	Exiobase 3.9	Food products nec	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Licensed Frozen B...	Marvin LLC	Exiobase 3.9	Other business services (74)	01/07/23	01/07/33	Data update	1
<input type="checkbox"/>	Raw materials...	Intelligent Fresh T...	Hackett - Blanda	Exiobase 3.9	Other land transportation services	01/07/23	01/07/33	Data update	1

Show 20

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Approve one-by-one or in bulk

Mapping suggestions

Approving a mapping suggestion

To create a mapping out of the suggestion, you need to set the validity period. This works the same way as when creating mappings.

You can either keep the existing dates or set new validity dates by creating a new mapping from current, start or cutoff dates. You can also set custom dates for the validity.

The screenshot displays the 'CO2 mapping' interface. On the left, a sidebar shows a list of suggestions with columns for 'Accept / reject' and 'Category'. The main area is titled 'Map to carbon process' and contains a table of 'Selected decisions'. Below the table, a modal titled 'Mapping validity period' is open, showing options for setting the validity dates.

Category	Material	Supplier	Mapping base	Process	Valid from	Valid to
Raw materials...		Windler, Wilkin...	Exiobase 3.9	Food products nec	01/07/23	01/07/33
Raw materials...			Exiobase 3.9	Dairy products	01/07/23	01/07/33
Raw materials...	Practical Rubber...	Gorzany - Gor...	Exiobase 3.9	Chemicals nec	01/07/23	01/07/33
Raw materials...	Licensed Cotton...	Dickens - Hean...	Exiobase 3.9	Other business services...	01/07/23	01/07/33
Raw materials...	Handmade Cott...	Mosciski, Moe...	Exiobase 3.9	Other land transportatio...	01/07/23	01/07/33

Mapping validity period

Mapping validity ⓘ

☒ Keep dates

☐ Create new mapping from current date (31/12/23)

☐ Create a new mapping from start date (31/12/21)

☐ Create a new mapping from cutoff date (31/12/19)

☐ Custom / free edit

Close Save

Filtering in Mapping log & Custom processes

New filtering options

New filters are available in Mapping log allowing filtering based on validity periods of mappings. New *Last updated* column is also introduced to help track the latest changes in mappings.

Same filters and *Last modified* column is also added for Custom processes tab.

Custom processes with emissions set to zero are displayed as 0 instead of empty cells.

CO₂e mapping

Mapping tool Suggestions Mapping log Custom processes

Category	Material	Vendor	UoMs	Source	Mapping	Valid from	Valid to	Created date	Last updated
	Plastic Closures 1 Piece		kg	Ecoinvent 3.10.1	polypropylene production, gran...	19/11/2024	19/11/2034	04/03/2025	04/03/2025
Adhesives	Technomelt 25Kg 2		kg	Ecoinvent 3.9.1	bitumen adhesive compound pr...	31/12/2022	31/12/2032	02/12/2024	02/12/2024
	Natriumcitrat Other	Caldic Ingredients Sweden AB	ton	Supplier specific data	Caldic Ingredients Sweden AB - ...	04/11/2024	01/09/2040	04/11/2024	04/11/2024
	Natriumcitrat Other	Caldic Ingredients Sweden AB	ton	Supplier specific data	Caldic Ingredients Sweden AB - ...	04/09/2022	04/11/2024	25/09/2024	04/11/2024
Emission Fees			EUR	Exiobase 3.4	Other business services (74)	01/01/1970		27/06/2024	27/06/2024
Emission Fees			EUR	Exiobase 3.8.2	Other business services (74)	27/06/2024	01/01/2029	27/06/2024	27/06/2024
Emission Fees			EUR	Exiobase 3.8.2	Other business services (74)	01/01/2019	27/06/2024	27/06/2024	27/06/2024
Paper Cup			EUR	Exiobase 3.8.2	Pulp	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Corrugated Pads			EUR	Exiobase 3.8.2	Pulp	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Train			EUR	Exiobase 3.8.2	Railway transportation services	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Material Handling Machinery			EUR	Exiobase 3.8.2	Machinery and equipment n.e.c...	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Pos Hardware			EUR	Exiobase 3.8.2	Office machinery and computer...	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Outdoor Maintenance			EUR	Exiobase 3.8.2	Real estate services (70)	01/01/2019	01/01/2029	14/06/2024	14/06/2024
Insects			kg	Ecoinvent 3.7.1	2-methylpentane to generic ma...	01/01/1970		29/05/2024	29/05/2024
	Bag Return Cans		MJ	Ecoinvent 3.9.1	diesel, burned in building machi...	24/05/2024	31/12/2032	24/05/2024	24/05/2024
	Bag Return Cans		m3	Ecoinvent 3.7.1	biogas purification to biometha...	24/05/2024		24/05/2024	24/05/2024
	Bag Return Cans	NPA Plast AB	Item(s)	Ecoinvent 3.7.1	market for maintenance, bicycle...	01/01/1970	01/05/2020	22/05/2024	22/05/2024
	Bag Return Cans		MJ	Ecoinvent 3.9.1	diesel, burned in building machi...	31/12/2022	24/05/2024	22/05/2024	24/05/2024
	Liquid Sugar Crystal	Suomen Sokeri Oy	kg	Supplier specific data	Suomen Sokeri Oy - Liquid Suga...	01/01/2022	01/01/2027	14/05/2024	14/05/2024

Not only do your emissions matter.

In addition to measuring your own emissions, you can follow your supplier's emission reduction targets.

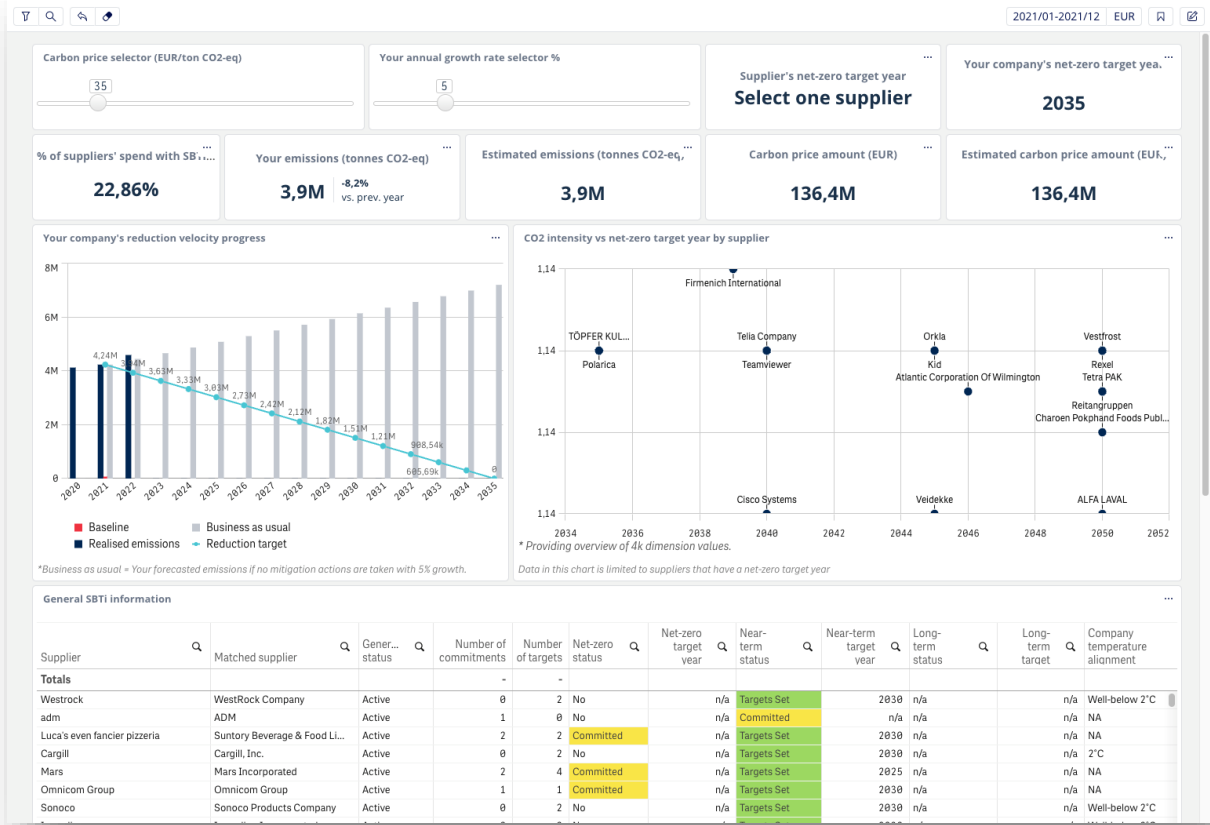
Sievo brings transparency to your supplier's targets by combining science-based targets with your spend data.

Science-based targets initiative (SBTi)

Science-based targets provide companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals. More than 4,000 businesses around the world are already working with the Science Based Targets initiative (SBTi).

More about SBTi: <https://sciencebasedtargets.org/>

Note: SBTi data will be available when the new supplier service is taken into use



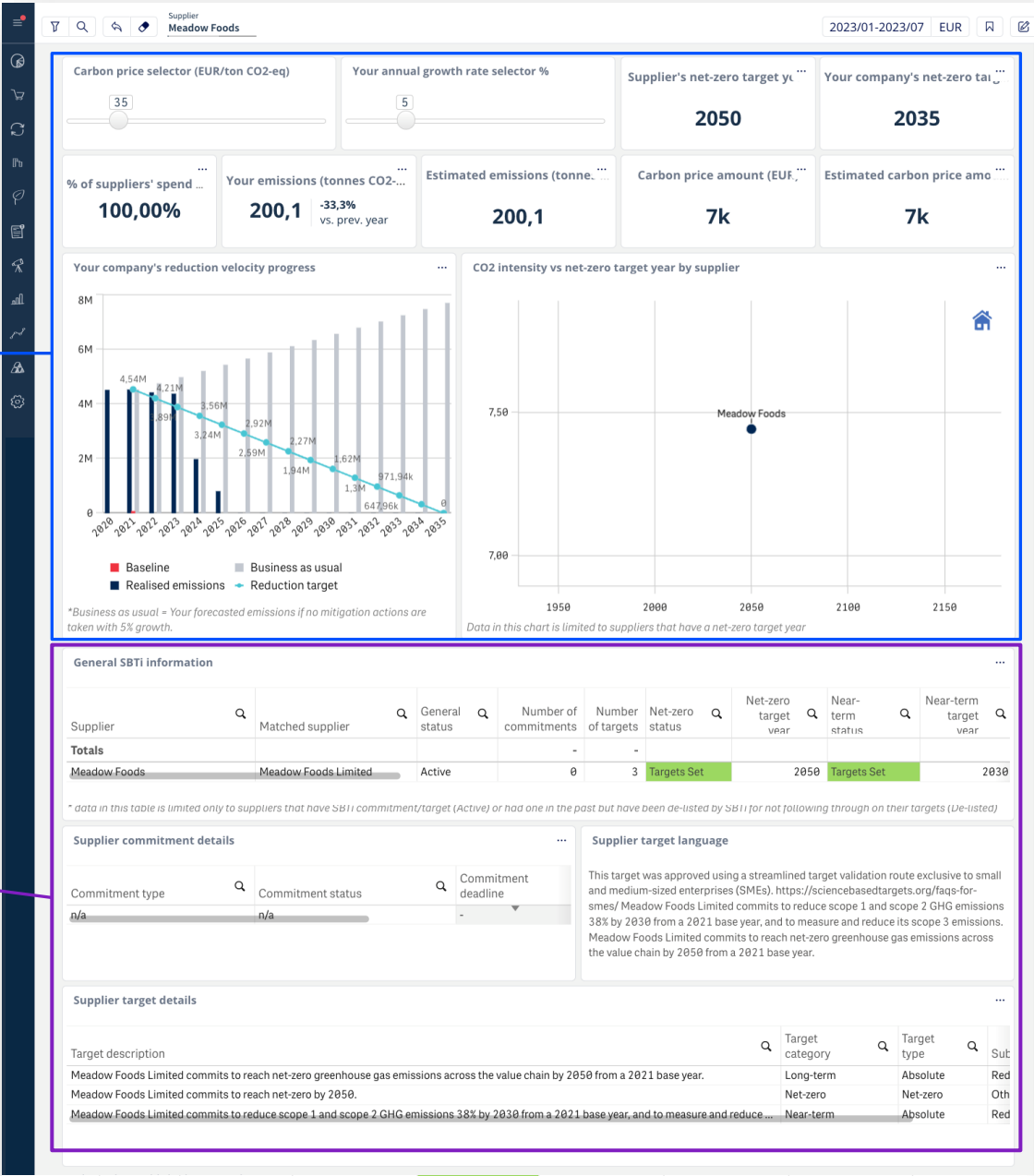
Monitoring targets

Your targets

Set scenarios and follow your emission reduction and carbon price forecast by adjusting the estimated carbon price, your target year and your annual growth.

Your supplier's targets

Identify carbon-intensive suppliers with no targets or with targets far in the future.



We empower you for embedding sustainability **into every decision.**



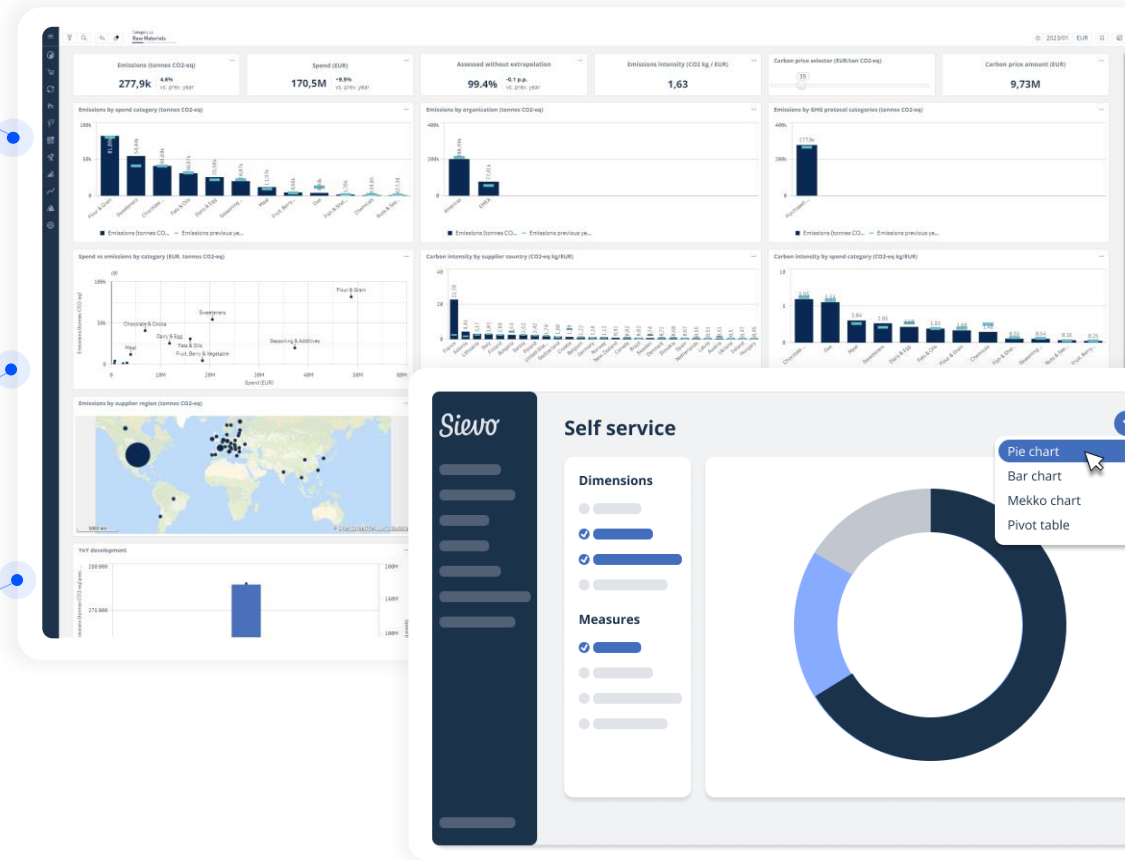
Unlimited users



Follow targets



Discover hotspots to prioritize actions



On-demand onboarding materials available



Drill down from high level to details



User friendly dashboards and charts

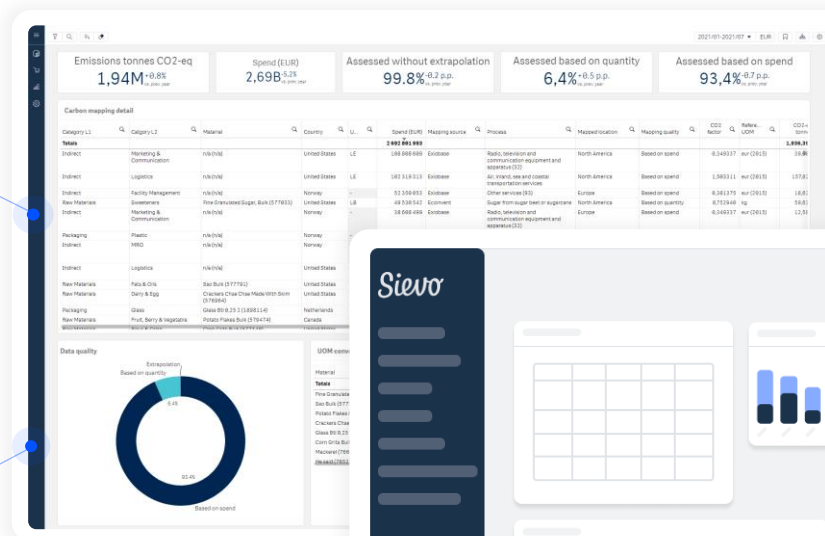
We are **the flexible partner** as your needs, data or requirements change.



Full control of data



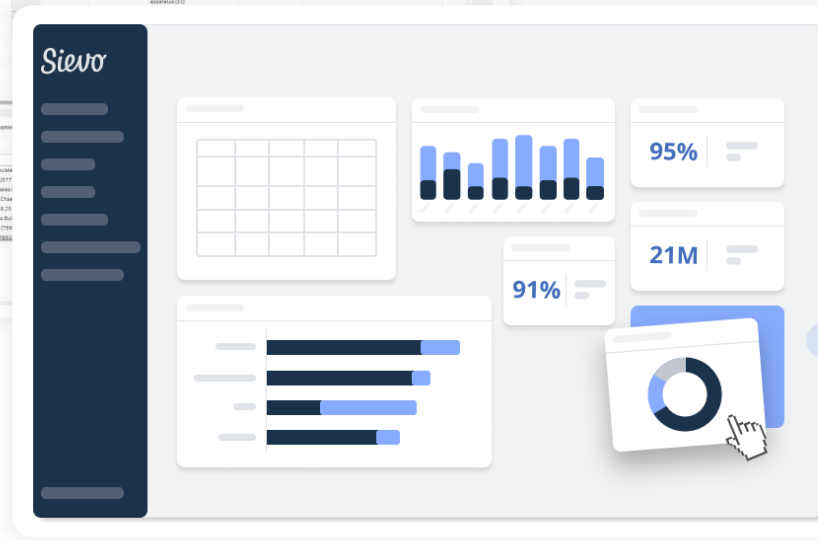
Full data transparency



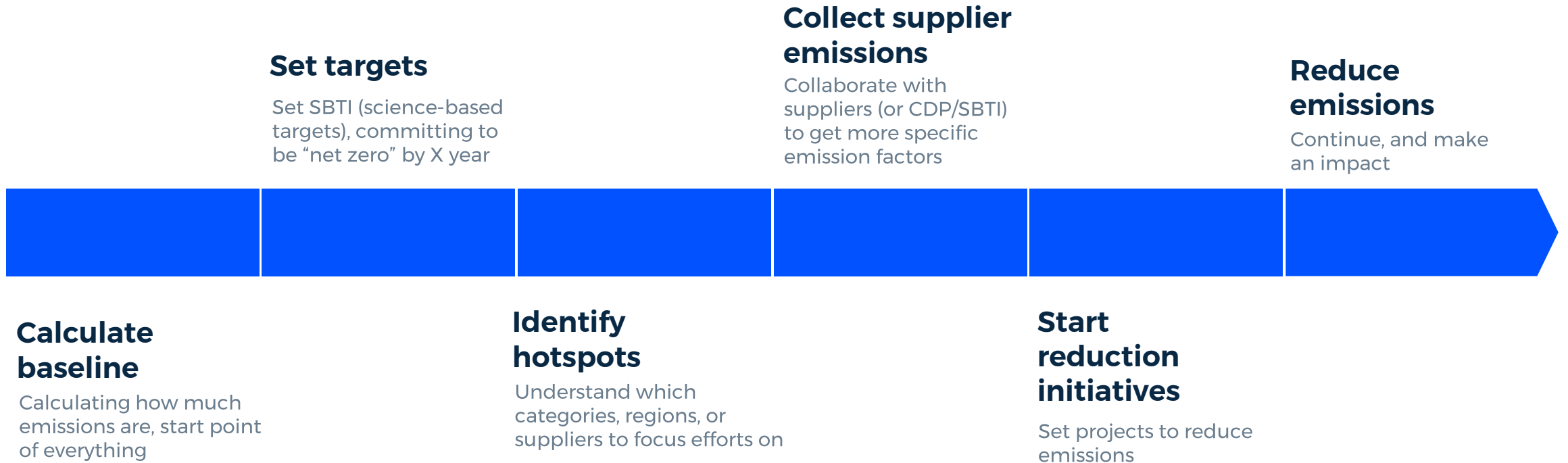
Continuous product development



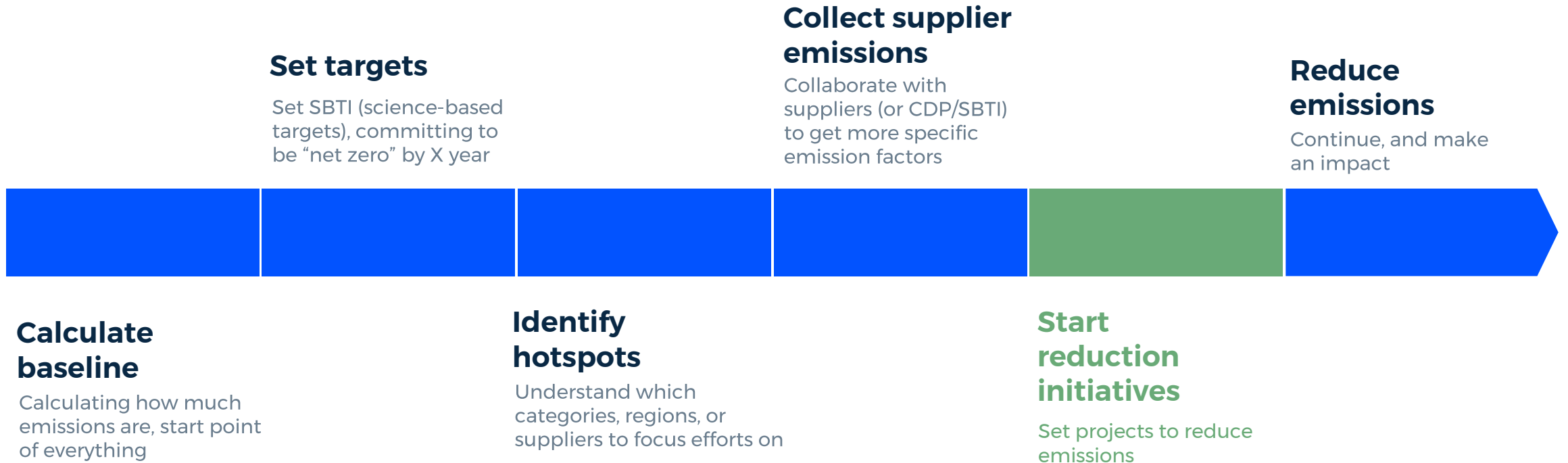
Fully customizable charts



All-in-one emissions reduction journey with Sievo



All-in-one emissions reduction journey with Sievo



Track & turn reduction initiatives into action

With our Carbon Reduction Tracker in Sievo Savings Program Management**



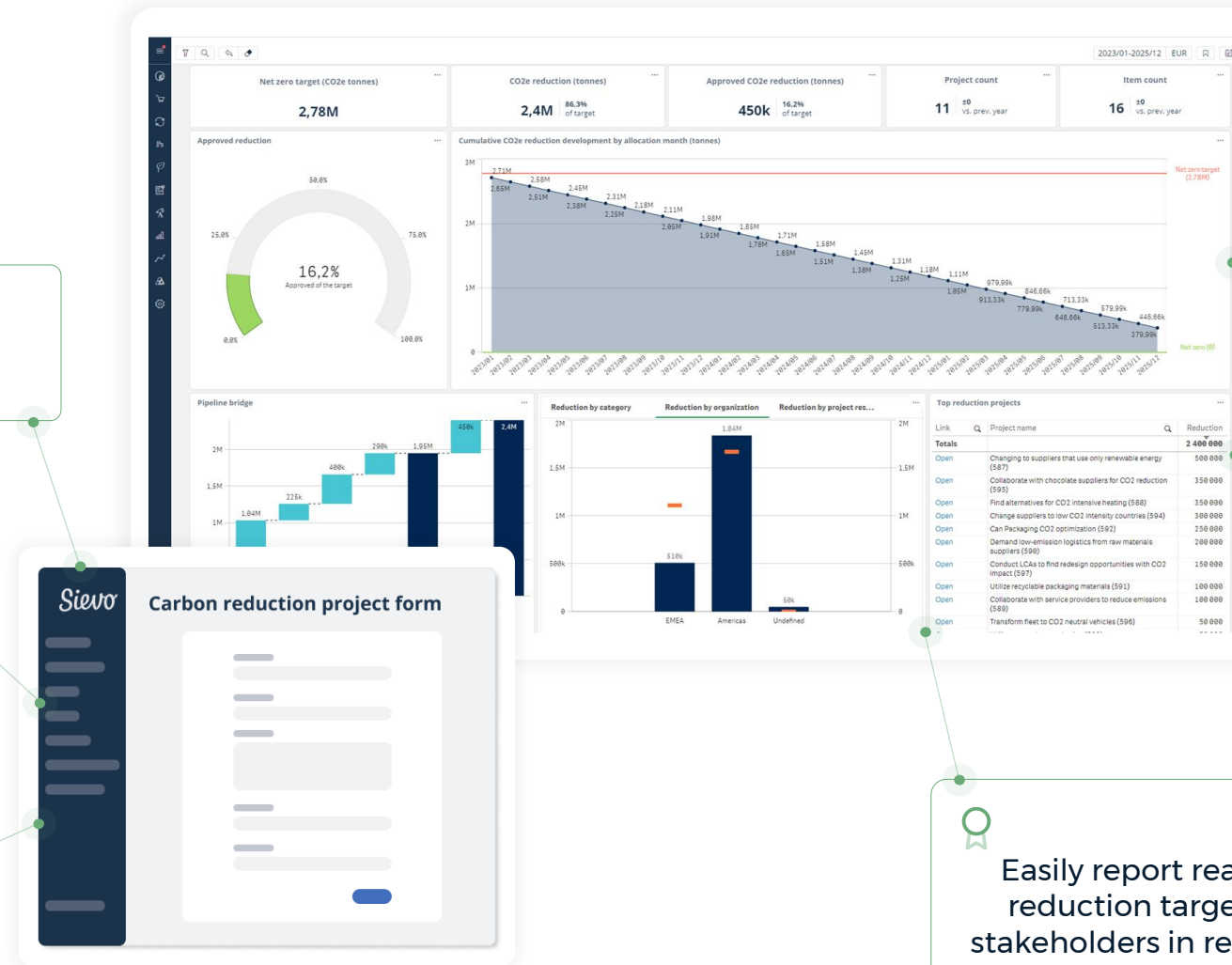
Collect & prioritize
reduction projects



Accelerate
execution with
globally harmonized
project structure



Easy stakeholder
collaboration via built-in
approval workflow



Track forecasted
emissions reduction
progress



Gain transparency to
carbon reduction
initiatives



Easily report realized
reduction targets to
stakeholders in real-time

** Separate fee

With Sievo **CO2 Analytics**

We enable you to become **compliant**.

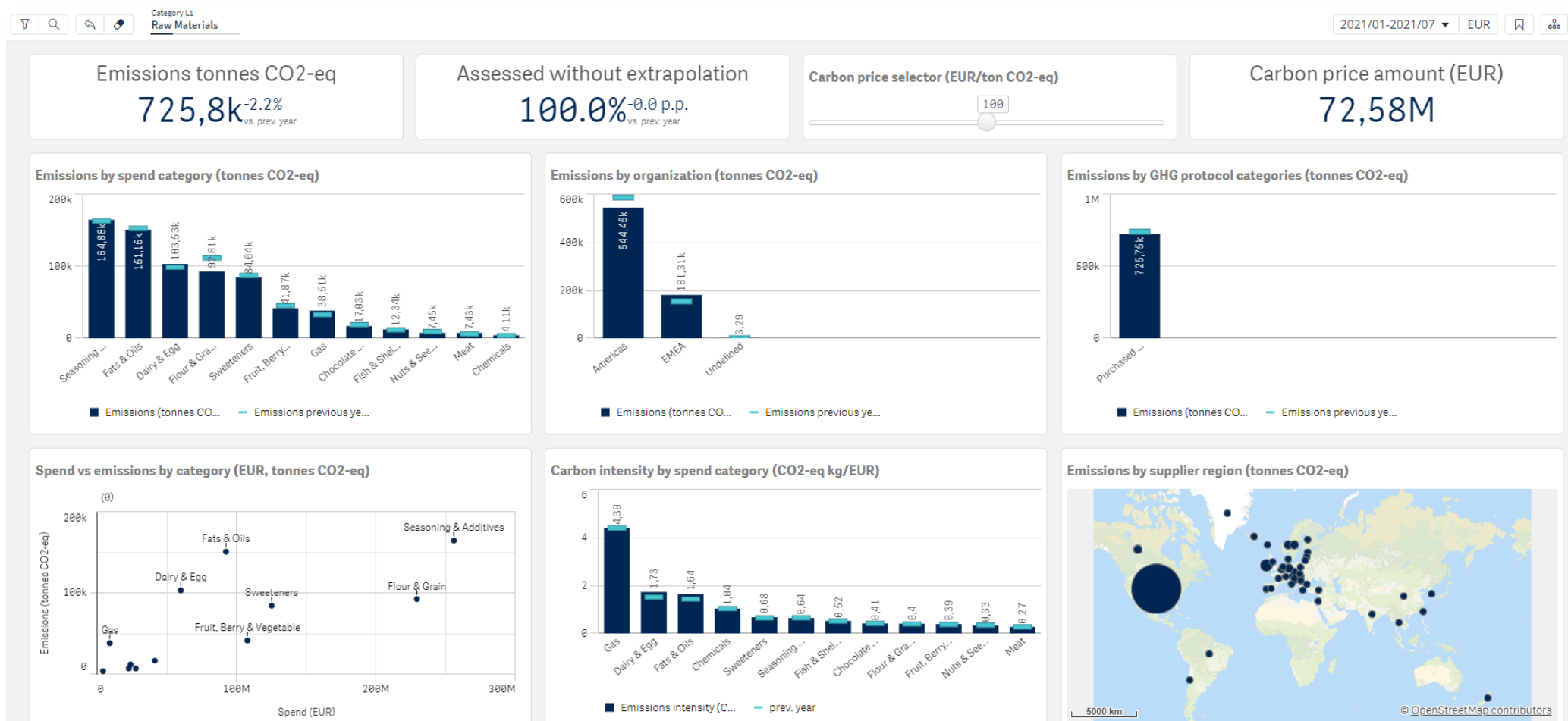
We give you **more time** to focus on the actions that matter.

We empower you for embedding sustainability **into every decision**.

We are the flexible partner in your **growth journey** as your needs, data, or requirements change.

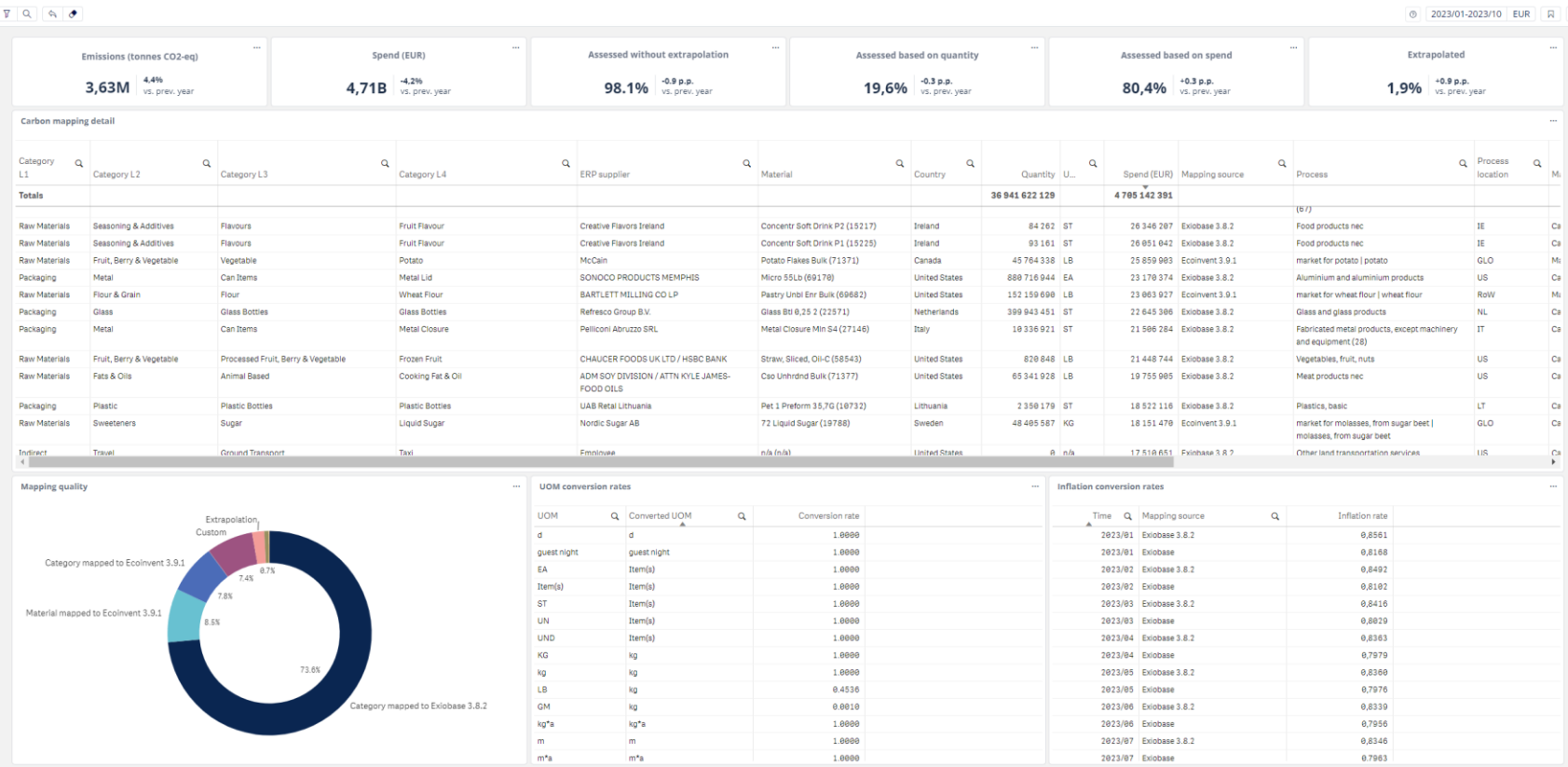
Our sustainability and analytics expertise gives you **the competitive upper hand**.

Sievo CO2 Analytics dashboard example



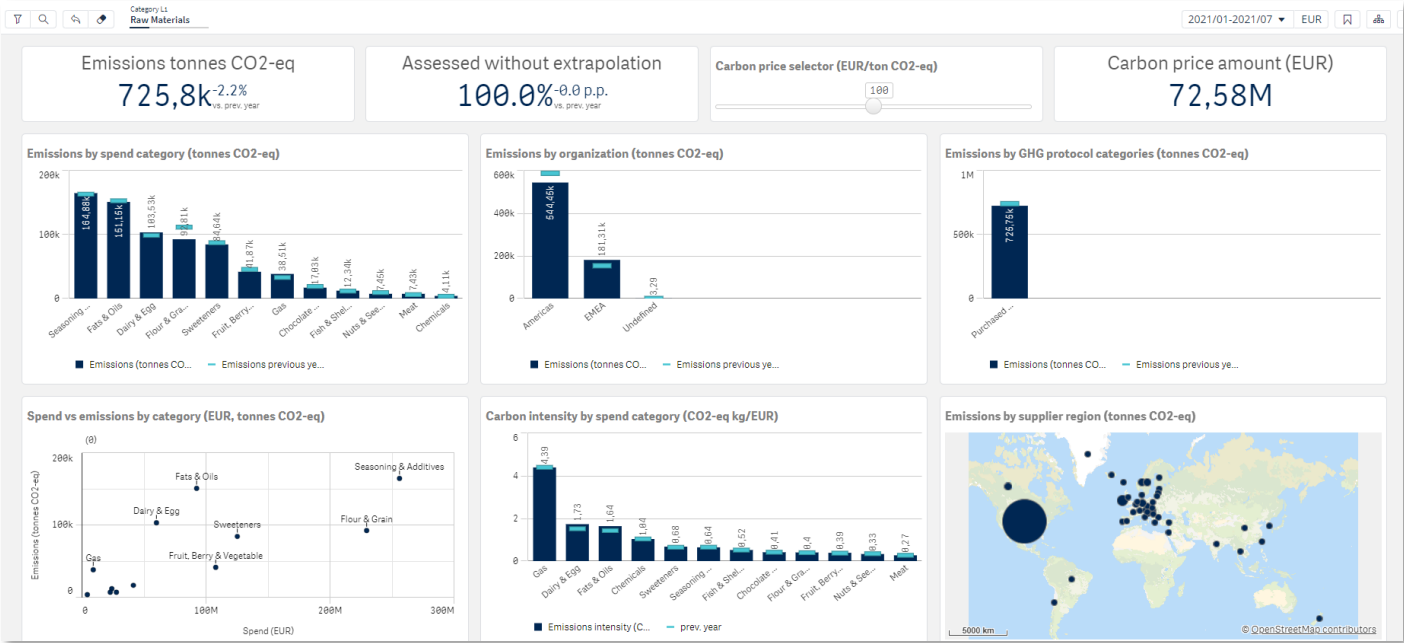
Understand the underlying data

In the calculations, all relevant information such as inflation, unit of measurement, and currency rate conversions are taken into account, and you are provided with full visibility



Example: Finding hotspots and opportunities for reductions

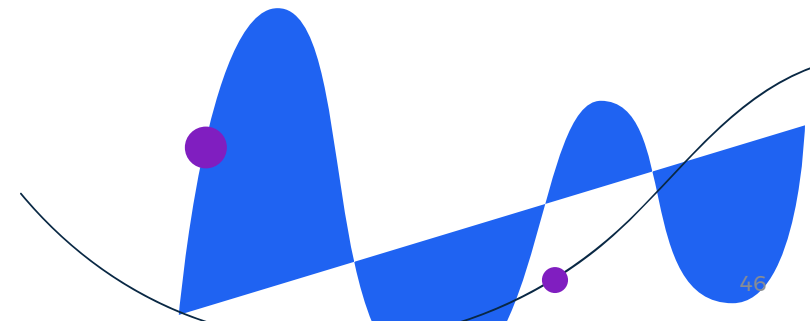
Tanya, a sustainability manager, has committed with their team to set a science based target to reduce emissions to become net zero in 2035. Now they need to identify where these emissions are coming from. They slice and dice the data to find that a lot of the emissions are coming from the packaging category, and that the category is more carbon intense in Americas than in EMEA. They identify the key supplier, and contact them to find more information on their emissions to start reduction initiatives.



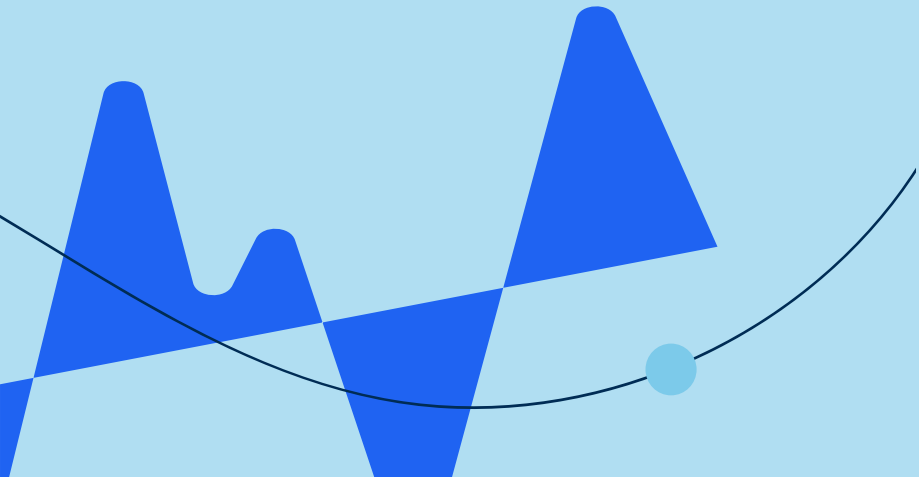


“It’s just mind-boggling that the emissions data is all just there, so fast and so easy. The purchased goods and services category has been a real headache for us, so this is a huge win.”

- Sustainability manager at a US company



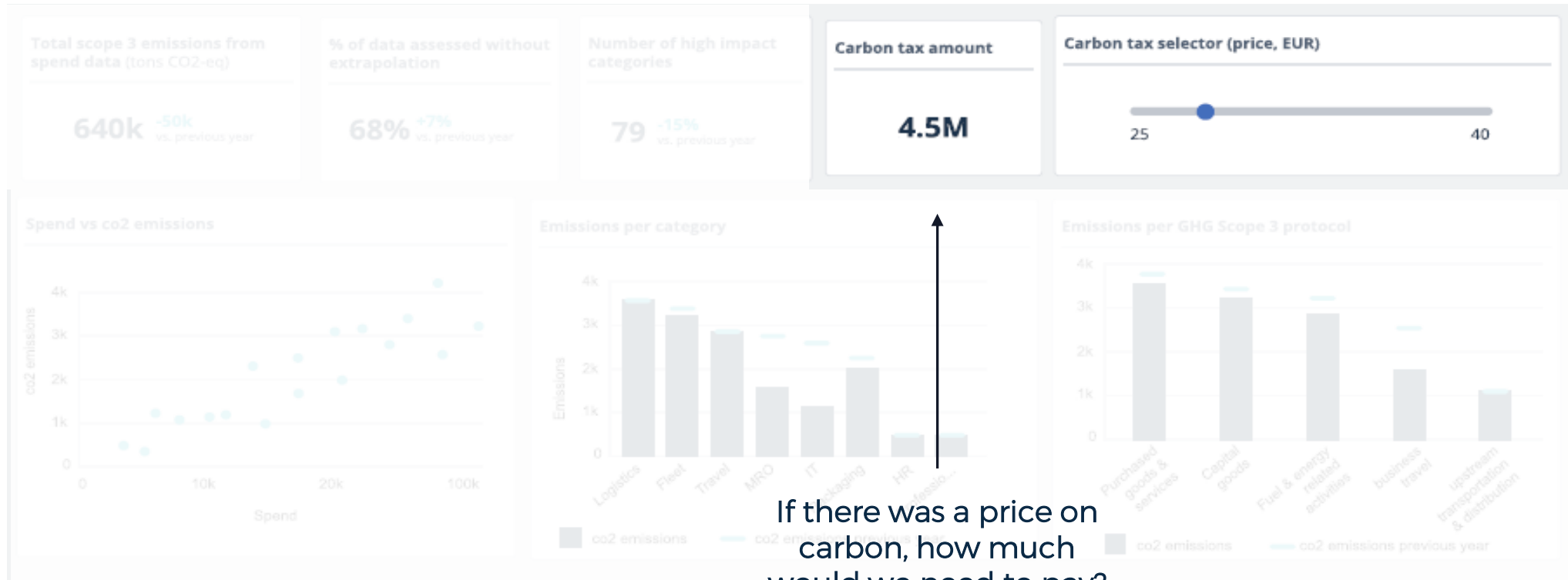
What does the tool look like?



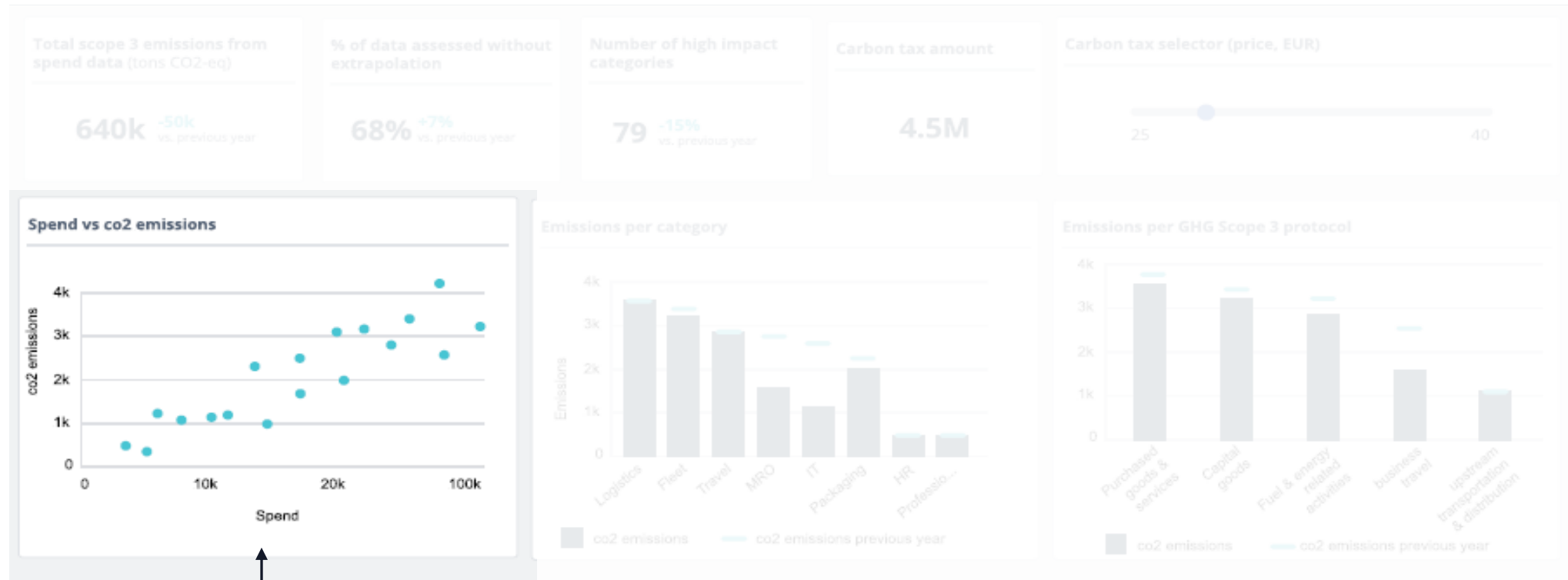
Dashboard gives holistic view of emissions



Dashboard gives holistic view of emissions

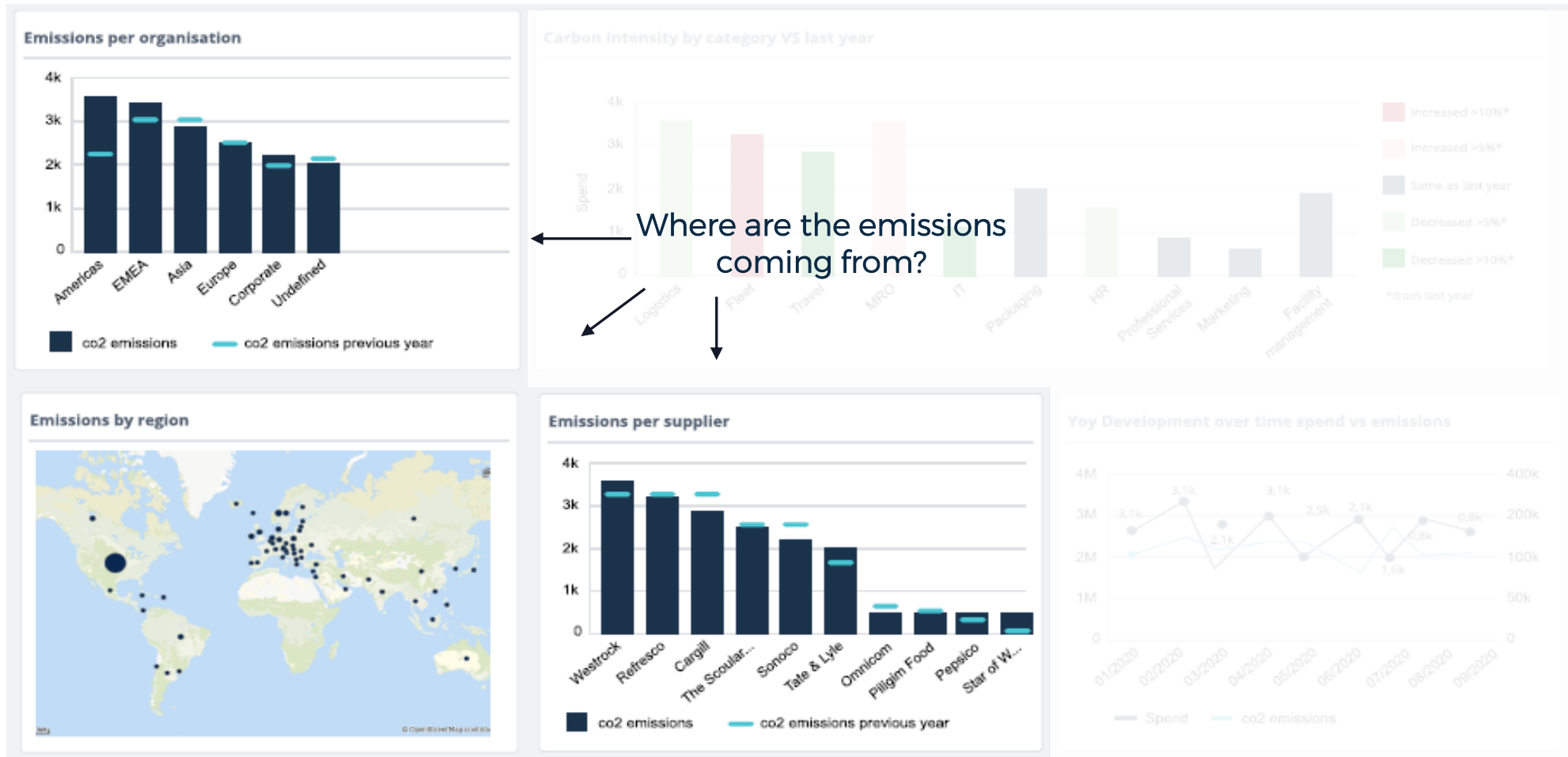


Dashboard gives holistic view of emissions



Which categories are the most carbon intense?

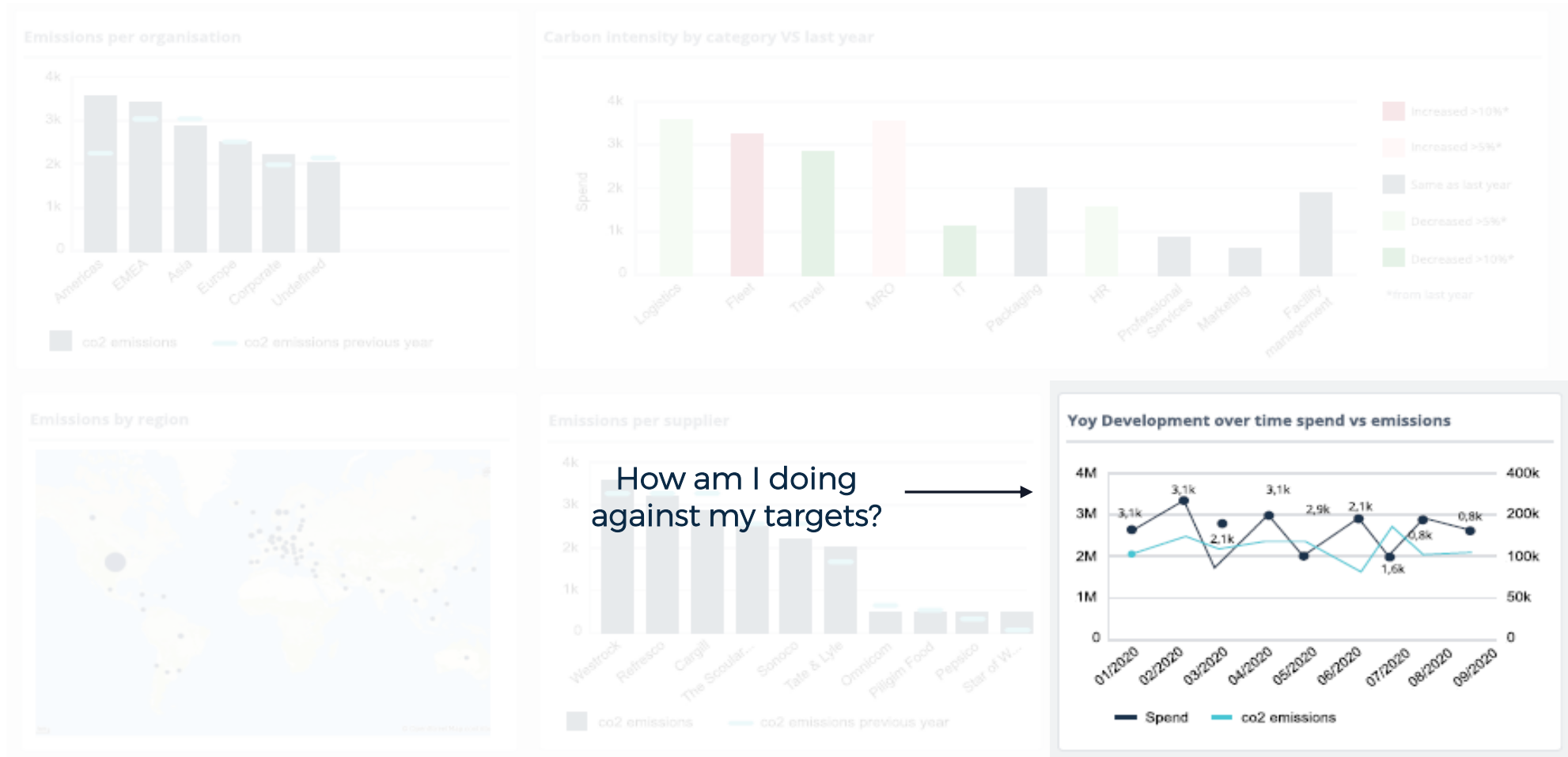
Dashboard gives holistic view of emissions



Dashboard gives holistic view of emissions



Dashboard gives holistic view of emissions...



...and full access to the data to make improvements

Map to carbon process

○ Selection

Category LO
Air Freight

Vendor
Posten Norge AS

● Carbon Process

Select base

Custom (Supplier specific data)

Carbon process

Search for Carbon Process

Create new custom mapping

Description

Posten Norge emissions from CDP 2022

Emissions factor

0.3

p*km

With Sievo **CO2 Analytics**

We enable you to become **compliant**.

We give you **more time** to focus on the actions that matter.

We empower you for embedding sustainability **into every decision**.

We are the flexible partner in your **growth journey** as your needs, data, or requirements change.

Our sustainability and analytics expertise gives you **the competitive upper hand**.

**Now,
it's your turn**

