

A photograph of a modern office interior. In the foreground, a white ergonomic office chair with a beige seat and backrest is positioned in front of a white desk. The desk has a black base and a black mat. In the background, another similar chair and desk are visible, along with a large window looking out onto a cityscape. A desk lamp is on the desk in the background.

ALVERO
office furniture rental

insight into Alvero's emissions

CO₂ report for 2023

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the future: more data of higher quality

Alvero wants to provide transparency regarding emissions with this CO₂ report and share the measures being taken to reduce them. In future reports, we will share the progress of the initiatives. Additionally, we will improve data quality and add supplementary CO₂ categories that have not yet been calculated this year.

If you have any questions or feedback about the report, please contact me at ardaanspruijt@alvero.nl.

introduction

sustainable ambitions for the entire chain

As an office furniture rental company, Alvero feels responsible for making a difference in the fight against climate change. Our business model is inherently sustainable, as it revolves around the use of furniture rather than ownership. More and more companies are partially moving away from owning office furniture due to sustainability considerations or because factors such as economic changes and the rise of remote work demand significant flexibility in a sustainable manner.

Alvero's furniture is utilized in offices, home workspaces, and at events, whether for short periods or the long term. Because Alvero is committed to taking extra sustainable steps, we are gathering data on our CO2 emissions and starting initiatives to reduce them. This report presents an analysis at the corporate level. Alvero identifies the largest sources of CO2 emissions and develops improvement plans to reduce them.



Maximizing the use of existing furniture makes renting sustainable. When our customers no longer need furniture, Alvero ensures that it is repurposed elsewhere. This reduces the demand for new furniture. In this way, we help customers make their work environments more sustainable. They are using existing furniture that has been used before and is not left unused in their storage. Through rental and repurposing, we prevent waste of raw materials and limit emissions to only transport. Furthermore, we extend the lifespan of each piece of furniture by performing thorough maintenance, deep cleaning, and repairs. Without exception, our furniture goes through multiple usage cycles.

To achieve our goals, collaboration within our value chain is crucial, especially the role of our suppliers. As a major buyer, we can provide our suppliers with the necessary insights to improve office furniture designs, extend lifespans, and reduce CO2 emissions. Our goal is not only to minimize our own environmental impact but also to inspire and support our customers and partners in making more sustainable choices in office furniture.



method

The reporting organization for this measurement is Alvero Kantoormeubelverhuur B.V., which includes Alvero Netherlands, Alvero Belgium, and the Alvero Furniture Management System. In this report, we measure the Scope 1, 2, and 3 emissions for the years 2022 and 2023, according to the Greenhouse Gas Protocol. The year 2022 will serve as the reference year for future years and for establishing objectives. The most significant emission categories have been identified, taking our business activities into account.

See the categories highlighted in red in Table 1.

table 1
GHG Protocol Categories

scope 1	scope 2	scope 3
gas consumption for heating	electricity consumption	purchased furniture
fuel consumption in trucks		commuting
		indirect emissions
		business travel

Some categories that are relevant to Alvero have been excluded from this measurement due to the incompleteness of reliable data. This applies to capital goods (such as purchased trucks), as there are few life cycle analysis (LCA) factors known for the capital goods we acquire. Additionally, indirect transport activities of our partners, both upstream and downstream, are excluded due to their limited scope. We will include these transport activities when they represent a significant share. Furthermore, we do not report on CO2 emissions from waste based on the advice of CO2emissiefactoren.nl, due to the lack of a uniform emission factor. We report separately on our waste streams, as this fits within the context of the circular economy.



The CO2 measurements in this report follow the guidelines set forth by the Greenhouse Gas (GHG) Protocol. This study measures all greenhouse gases according to the Global Warming Potential 100 (GWP100) and refers to the results as the equivalent of carbon dioxide (CO2e). This means that all greenhouse gases have been converted to carbon dioxide equivalents, providing a more comprehensive view of the total units of greenhouse gases that have a negative impact on global warming.



CO₂ footprint

table 2
total emissions and per scope

	2022	2023	%
scope 1 emissions	425,6 tCO ₂ e	367,9 tCO ₂ e	-13,6%
scope 2 emissions	108,4 tCO ₂ e	91,8 tCO ₂ e	-15,3%
scope 3 emissions	1906,7 tCO ₂ e	1346,8 tCO ₂ e	-29,4%
total emissions	2440,7 tCO ₂ e	1806,5 tCO ₂ e	-26,0%
tCO ₂ e / revenue €	0,158 KG CO ₂ e / €	0,126 KG CO ₂ e / €	-20,2%

scope 1, 2 and 3

In 2023, the CO₂ footprint of our organization was 2,144 tCO₂e. Our largest footprint is found in this measurement within the scope 3 emissions.

Figure 1 and Table 3 show the emissions per category. Most emissions fall under purchased furniture, followed by fuel consumption, employee commuting, electricity consumption, and business travel.

total CO₂

figure 1





renting leads to 31.3%
less CO2 emissions
compared to buying

table 3
2023 emissions in % and tCO2e per category

#	scope	category	share	emissions (tCO ₂ e)
1	scope 1	fuel consumption in trucks	14,6%	340 tCO ₂ e
2	scope 1	gas consumption for heating	1,6%	28 tCO ₂ e
3	scope 2	electricity consumption	4,1%	92 tCO ₂ e
4	scope 3	purchased furniture	71 %	1474 tCO ₂ e
5	scope 3	commuting	2,3%	57 tCO ₂ e
6	scope 3	business travel	0,2%	4 tCO ₂ e
7	scope 3	indirect emissions	6,2%	151 tCO ₂ e

purchased furniture

To calculate the emissions from purchased furniture, we use various types of CO2 factors.

First, we have asked our suppliers for LCA factors. When these are not available, we use furniture category-based factors from existing studies or LCA databases. For the remaining furniture, for which we cannot find a factor, we have used a price-based factor.

Purchased furniture is the largest CO2 category for Alvero. Currently, our total CO2 emissions for purchased furniture in 2023 amount to 1,473.9 tCO2e. Despite purchasing more furniture this year, the purchase price was often lower, resulting in reduced CO2 emissions.



table 4
purchased furniture

year	pruchased furniture	tCO ₂ e
2022	76,579	1864
2023	79,375	1474

To reduce this emission category, we aim to work with suppliers to gain a better understanding of the CO2 factors for each purchased piece of furniture. Based on this data, we can engage in discussions with suppliers about how to reduce the CO2 emissions per piece of furniture and, where necessary, purchase alternative furniture with lower CO2 emissions.

Additionally, Alvero is continually looking for ways to decrease the number of purchased furniture items by extending their lifespan through optimized repair and refurbishment.

the CO₂ impact of renting versus buying

To analyze the CO2 emissions of renting versus buying office furniture, we conducted a life cycle assessment (LCA) on a commonly used office chair. This analysis reveals that renting leads to 31.3% less CO2 emissions compared to buying, due to the longer lifespan across multiple usage cycles. Rented chairs undergo more regular maintenance and repairs, and their circular use significantly reduces the need for new production.

This results in a substantial reduction in CO2 impact through decreased raw material consumption. In summary, renting furniture is an effective strategy to minimize the CO2 footprint of your furniture. For more details on our LCA analysis and how it supports the benefits of renting, we are ready to provide further information.



fuel consumption of our trucks

The emissions from our trucks are calculated by multiplying the number of liters of fuel consumed by location-specific factors for the fuel types. Alvero fuels some of the trucks with the biofuel HVO100. In 2022, 2.7% of our fuel consisted of biofuel HVO100. HVO100 is made from renewable raw materials and has lower CO2 emissions compared to traditional diesel. In 2023, we have increased this to 10.5%. This has led to a significant decrease in CO2 emissions per kilometer driven by 8.1%.

table 5
HVO-100 consumption

year	number of kilometers driven	fuel share HVO100	CO2 efficiency* (grams CO2 / driven KM)	delta
2022	806.151	2,7 %	475	
2023	778.850	10,5 %	436	-8,1 %

*The CO2 efficiency is based on a Well-to-Wheel calculation.

electricity consumption - the transition to 100% green energy from the Netherlands

In 2022 and 2023, Alvero used a gray energy mix, and for converting to emissions, we used location-based CO2 factors from CE Delft. In 2023, we investigated whether alternative energy suppliers could provide 100% renewable energy from the Netherlands. Starting January 1, 2024, Alvero will use 100% green energy generated in the Netherlands.

Furthermore, Alvero conducts an energy audit each year, through which we implement energy-saving measures. This allows Alvero to continually seek opportunities to further reduce electricity consumption. As a result, there was a 2.9% decrease; in 2023, Alvero used 231,764 kWh.





waste streams - a higher recycling rate, better source separation

Alvero values the reuse of raw materials as much as possible and the clean separation of waste. Table 6 provides an overview of all waste streams for 2023. The waste collector was not yet able to provide market-based emission factors for the measured data of 2023. We will continue discussions with the collector to obtain this data in the future.

Most waste streams are nearly fully recyclable, with the exception of commercial waste. The total recycling rate for all waste streams is 82%.

table 6
waste streams

waste stream	ton kg in 2022	ton kg in 2023	delta
A / B mixed wood	65.1	66.6	2,3 %
commercial waste	16.8	26.2	56,5 %
metals	20.84	22.7	8,9 %
paper and cardboard	45.94	33.05	- 28,1 %
plastic foil	3.9	2.6	- 33,3 %



targets 2030

In accordance with the Paris Agreement of 2015 and the Dutch Climate Agreement of 2019, Alvero is committed to limiting global warming to 1.5 degrees Celsius above pre-industrial temperatures. Therefore, we have aligned one of our objectives with the Science-Based Targets initiative (SBTi, 2024).

Alvero has set two targets: an absolute SBTi+ target for Scope 1 + 2 and an intensity target for Scope 1 + 2 + 3.

absolute SBTi+ target (scope 1+2)

The first objective is an absolute target, validated by the Science-Based Targets Initiative (SBTi). We completed this in early 2024, and our goals have since been confirmed. The SBTi aims to reduce Scope 1 and Scope 2 greenhouse gas emissions by at least 42% by 2030, with 2022 as the reference year.

This target has been validated by the SBTi. Internally, we have raised this target to 60% and refer to it as the SBTi+ target.



Alvero commits to the Science-Based Targets initiative and aims to reduce Scope 1 and Scope 2 emissions by 60% by 2030 compared to 2022.

This objective concerns an absolute emission reduction, meaning it involves a direct and measurable decrease in total emissions, regardless of the scale of business activities. In the table below, you can see how much CO2 emissions were achieved in 2023 and how much still needs to be realized.

table 7
SBTi+ target

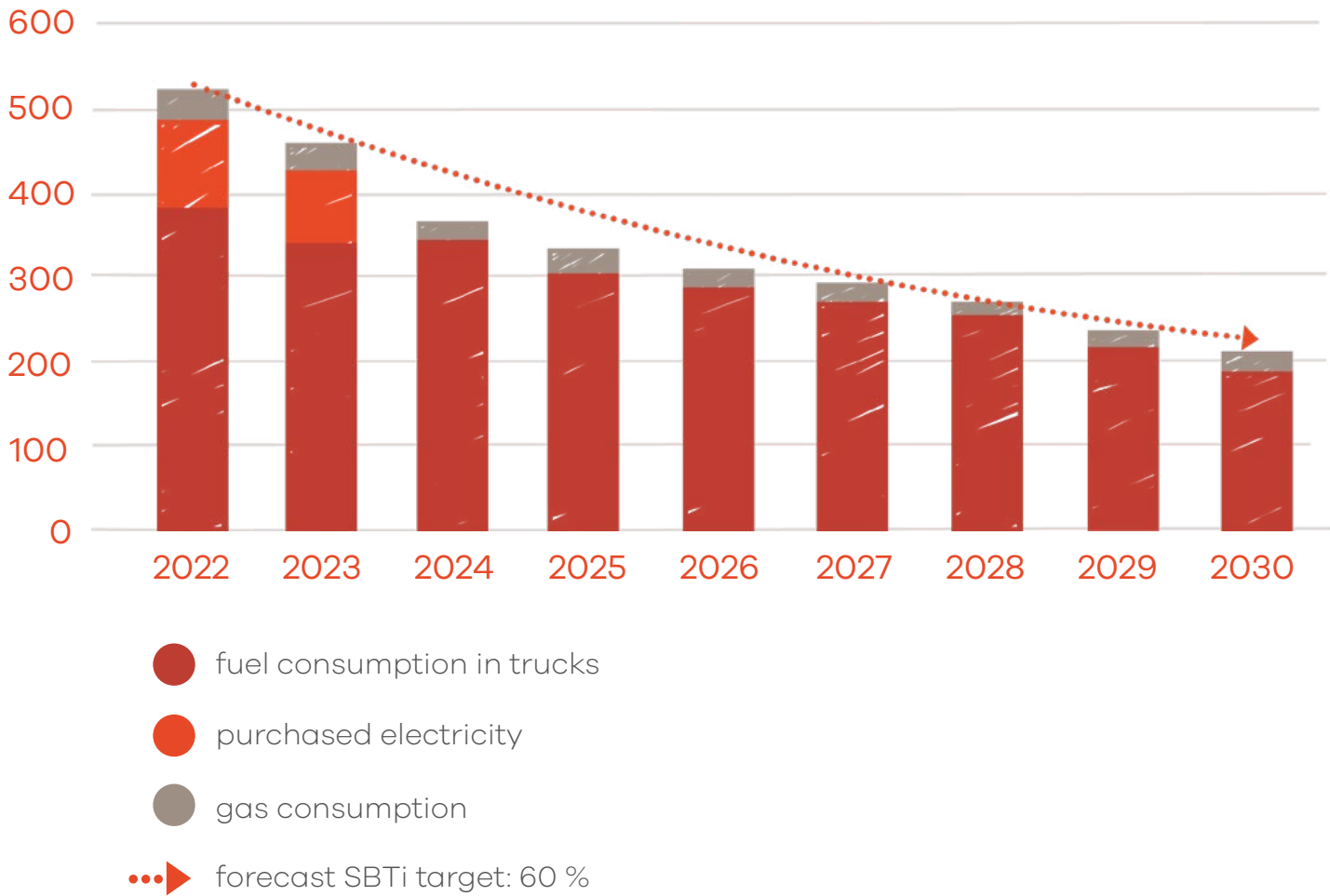
	2022	2023	2030 SBTi+ target
scope 1 + 2	534 tCO ₂	476 tCO ₂	214 tCO ₂
reduction compared to 2022		13,9 %	60 %

To achieve the set objectives, Alvero has developed a transition plan for Scope 1 and 2, illustrated in Figure 2.

Starting January 1, 2024, Alvero will switch to Dutch green electricity to significantly reduce CO2 emissions. Additionally, Alvero will realize a large portion of the CO2 reduction through increased use of HVO100 in the trucks. Currently, this fuel is used in two of the fourteen trucks. The plan is to switch to HVO100 with one additional truck each year starting in 2025, so that by 2030, eight trucks will be running on this fuel. This policy will continue until electric trucks provide a feasible alternative for transporting to customers.

Finally, we assume in the current transition plan that we will not replace gas consumption and that consumption will remain constant.

figure 2 - transition plan scope 1 & 2
realized and expected emissions in tCO2



intensity target (scope 1, 2, and 3) - CO2 reduction in combination with business growth

Alvero aims to continue growing in the coming years. As a result, certain categories, particularly within Scope 1 and Scope 3, may increase.

To achieve growth while simultaneously pursuing CO2 reduction, Alvero will set an intensity target. This target focuses on reducing emissions per unit of economic output. The goal is to reduce the relative CO2 emission intensity (kg CO2 per euro revenue) by 50% by 2030 within Scope 1, Scope 2, and Scope 3, with 2022 as the reference year. To achieve this, Alvero will primarily focus on reducing emissions within purchased furniture.

table 8
intensity target 2030

	2022	2023	2030 SBTi+ target
scope 1 + 2 + 3	0,169 KG CO ₂ e/€	0,149 KG CO ₂ e/€	0,085 KG CO ₂ e/€
reduction compared to 2022		11,9 %	50 %

overview of initiatives for CO2 reduction in 2024

In the upcoming year, the initiatives listed below will be implemented to reduce CO2 emissions. An overview of these initiatives can be found in Table 9.

table 9
overview of initiatives

scope	category	initiatives 2024
scope 1	fuel for trucks	HVO100 to 14 %
scope 2	electricity consumption	switch to 100% renewable energy from the Netherlands
scope 3	waste processing	better separation of residual waste stream
scope 3	purchasing of furniture	a. optimization of reuse b. more accurate CO2 measurement of purchased furniture

sources

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