

De Haan Altés.

We measure to make decisions and we
make decisions to improve.

inédit


DE HAAN ALTÉS
VINS & CELLERS

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Introduction

Carbon Footprint.



What is it?

The Carbon Footprint is the **total amount of greenhouse gases (GHGs)** emitted directly or indirectly. The **carbon dioxide equivalent (CO₂-eq)** is the unit of measurement used to express the **global warming potential (GWP)** of different greenhouse gases by converting their mass value to the equivalent of CO₂. The following gases are taken into account when calculating the **Carbon Footprint** due to their direct impact on climate change: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).

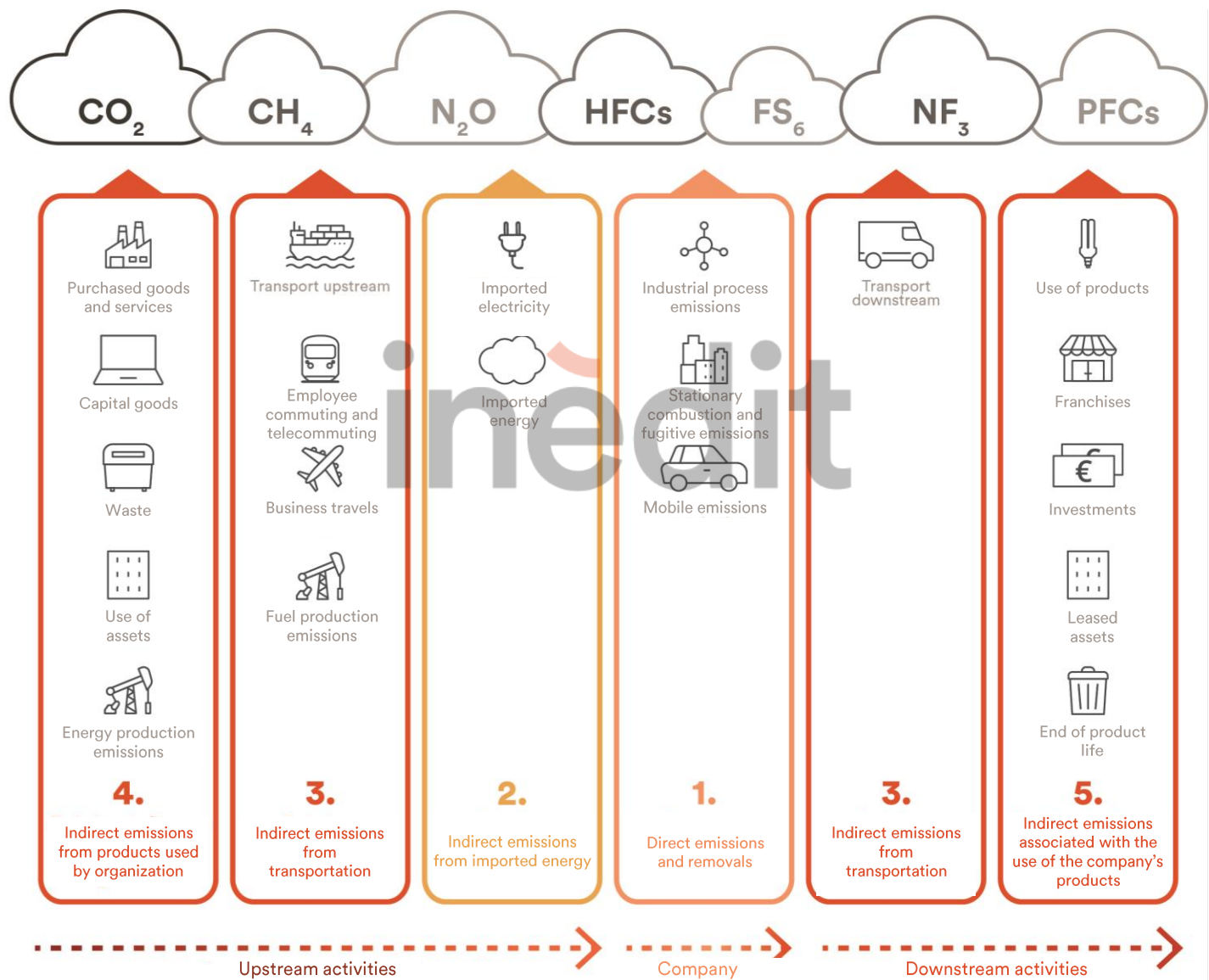
The organization's carbon footprint can be used to:

- **Identify the starting point** of the organization in terms of emissions
- Analyze the **distribution of impacts**
- Detect potential **areas of improvement**
- **Monitor implemented improvements**

Carbon Footprint.

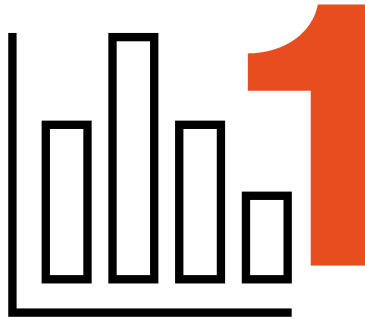


What is it?



Carbon Footprint.

What is it used for?



Quantify



**Action plan and measures
taken to reduce**



Offset emissions

1. Calculation.*

2. Analysis and implementation of actions to reduce emissions. Reduction of target setting.

3. Overview of achieved milestones, planning of further emission-reduction actions and, if applicable, emission offsetting.

4. Skillset for rigorous internal and external communication.

**It is not common to communicate the results of the Carbon Footprint unless it is legal imperative as in the non-financial information statement. Companies prefer to communicate positive messages about their emission neutrality commitments or reductions.*

Carbon Footprint.

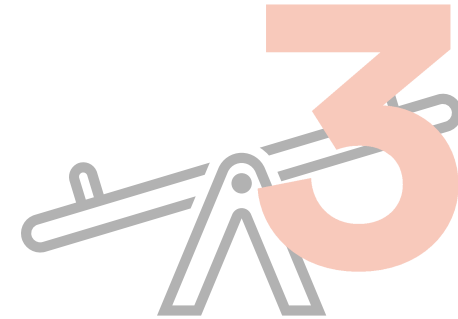
What is it used for?



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Carbon Footprint.

Project objectives.



The project's main objective is to **calculate the Carbon Footprint of the De Haan Altés organization for the year 2021** according to the ISO 14064:2018. For that, the following steps will be taken:

- **Building of the inventory** of the material and energy resource consumption, and the generation of waste and emissions associated with the operation of the organization.
- **Quantification of the Carbon Footprint** of the entire organization, by scopes and emission categories.
- **Interpretation the results** of the Carbon Footprint, identifying the main emission sources on which reduction and/or mitigation measures should be applied.
- **Comparison pf the results** obtained for 2021 with those of the previous year (2020).

Results

Carbon Footprint 2021

Carbon Footprint.



Overall results.

Category	Carbon Footprint 2021 (kg of CO ₂ eq.)	Contribution 2021 (%)
C1. Direct emissions and removals	105.083	8,12%
Stationary combustion	141.113	10,91%
Mobile emissions	20.052	1,55%
Fugitive emissions	0,21	0,00%
Land use	-56.083	-4,34%
C2. Indirect emissions from imported energy	0	0,00%
Imported electricity	0	0,00%
C3. Indirect emissions from transportation	332.464	25,71%
Energy production emissions (mobile emissions)	4.442	0,34%
Employee commuting	35.453	2,74%
Client and visitor transport	19.982	1,54%
Downstream transport and distribution of goods	238.729	18,46%
Upstream transport and distribution of goods	32.010	2,47%
Business travels	1.848	0,14%
C4. Indirect emissions from products used by organization	846.921	65,48%
Energy production emissions (stationary combustion)	26.808	2,07%
Waste disposal	12.920	1%
Purchased goods	692.578	53,55%
Use of services that are not described in the above categories	114.614	8,86%
C5. Indirect emissions associated with the use of the company's products	8.880	0,69%
End of life stage of the product	8.880	0,69%
Total	1.293.348	100,00%

Carbon Footprint.

Overall results.

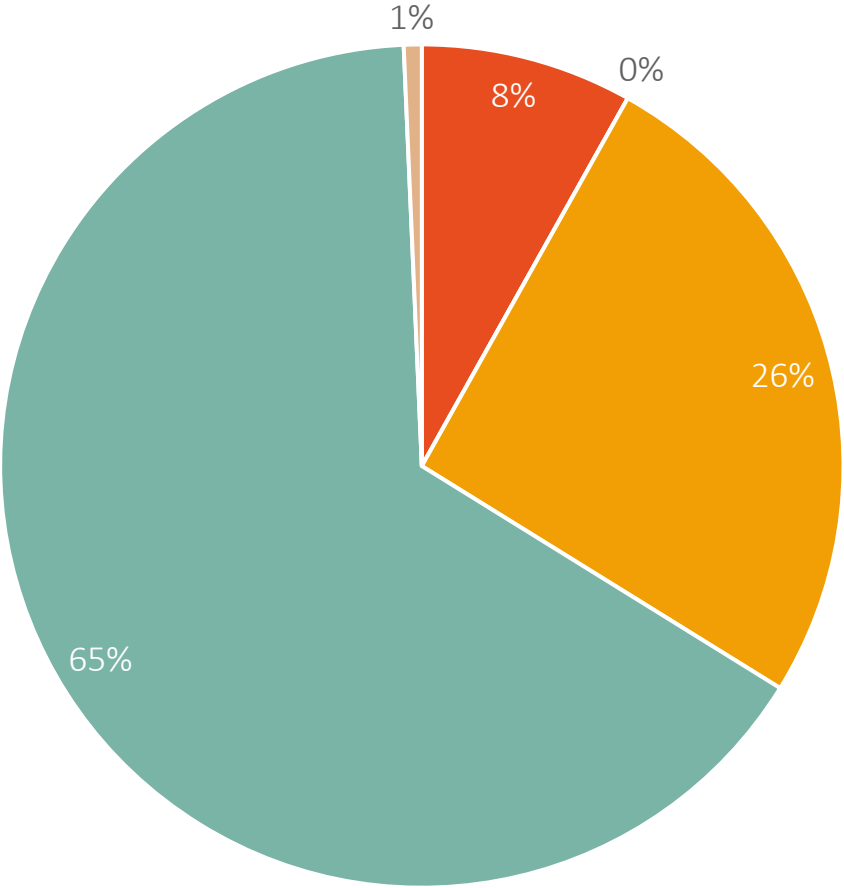


Category	Carbon Footprint 2021 (kg of CO ₂ eq.)	Contribution 2021 (%)	Carbon Footprint 2020 (kg of CO ₂ eq.)	2021 vs. 2020 (%)
C1. Direct emissions and removals	105.083	8,12%	204.273	-48,56%
Stationary combustion	141.113	10,91%	175.477	-19,58%
Mobile emissions	20.052	1,55%	23.233	-13,69%
Fugitive emissions	0,21	0,00%	5.562	-100,00%
Land use	-56.083	-4,34%	0	NA
C2. Indirect emissions from imported energy	0	0,00%	0	NA
Imported electricity	0	0,00%	0	NA
C3. Indirect emissions from transportation	332.464	25,71%	211.723	57,03%
Energy production emissions (mobile emissions)	4.442	0,34%	3.588	23,8%
Employee commuting	35.453	2,74%	28.489	24,44%
Client and visitor transport	19.982	1,54%	Excl.	NA
Downstream transport and distribution of goods	238.729	18,46%	169.367	40,95%
Upstream transport and distribution of goods	32.010	2,47%	8.837	262,23%
Business travels	1.848	0,14%	1.442	28,16%
C4. Indirect emissions from products used by organization	846.921	65,48%	581.211	45,72%
Energy production emissions (stationary combustion)	26.808	2,07%	32.064	-16,39%
Waste disposal	12.920	1%	Excl.	NA
Purchased goods	692.578	53,55%	549.147	26,12%
Use of services that are not described in the above categories	114.614	8,86%	Excl.	NA
C5. Indirect emissions associated with the use of the company's products	8.880	0,69%	Excl.	NA
End of life stage of the product	8.880	0,69%	Excl.	NA
Total	1.293.348	100,00%	997.209	29,70%

Carbon Footprint.



Distribution of results by categories.

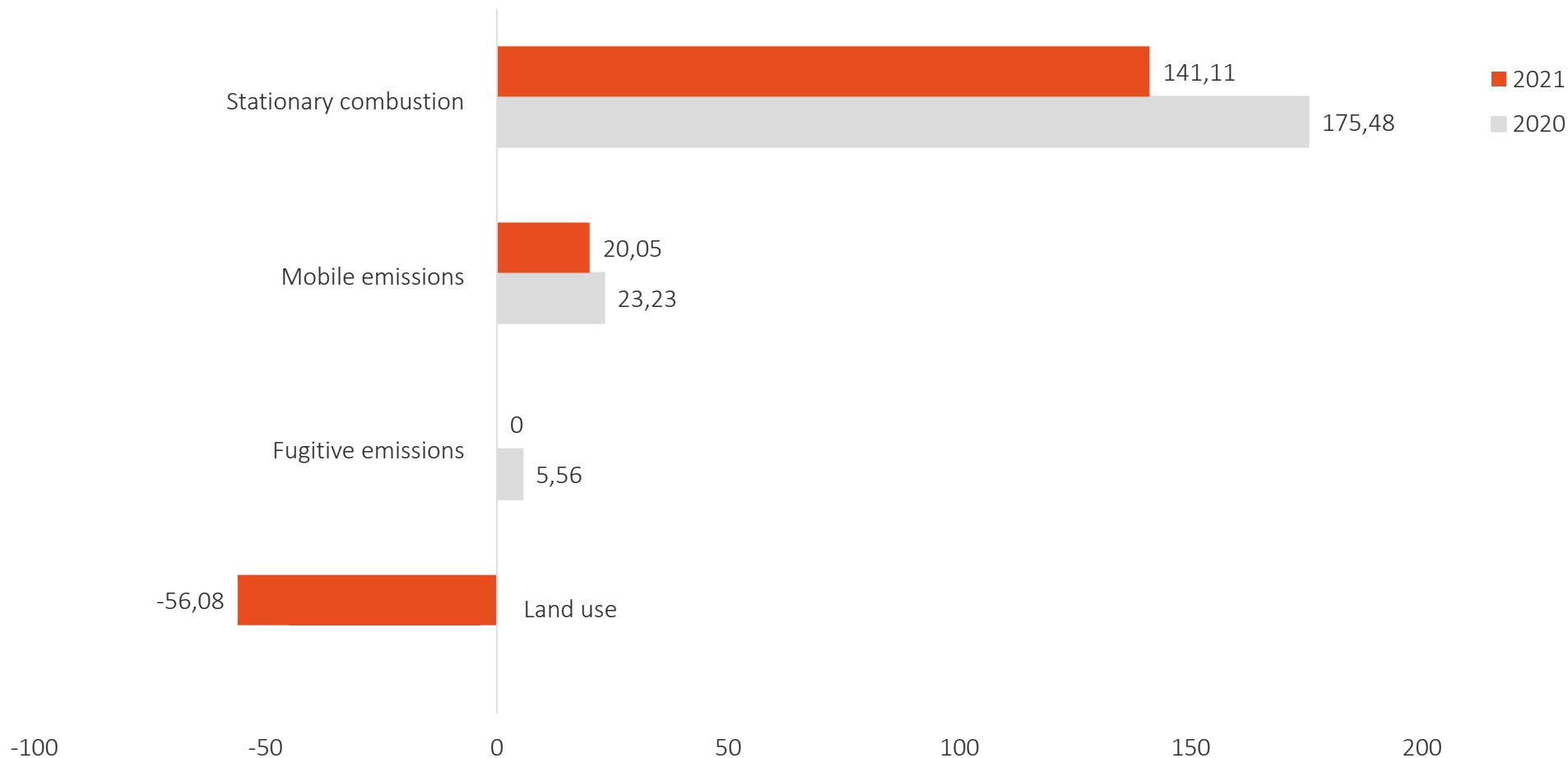
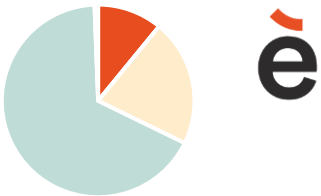


- C1. Direct emissions and removals
- C2. Indirect GHG emissions from imported energy
- C3. Indirect emissions of GHG by transport of people and assets
- C4. Indirect GHG emissions from products used by the organization
- C5. Indirect GHG emissions associated with the use of the company's products

Carbon Footprint.

Distribution of results by categories.

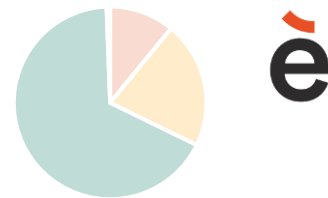
Category 1. Direct emissions and removals (Tn CO₂ eq.)



Carbon Footprint.

Distribution of results by categories.

Category 2. Indirect emissions from imported energy (Tn CO₂ eq.)

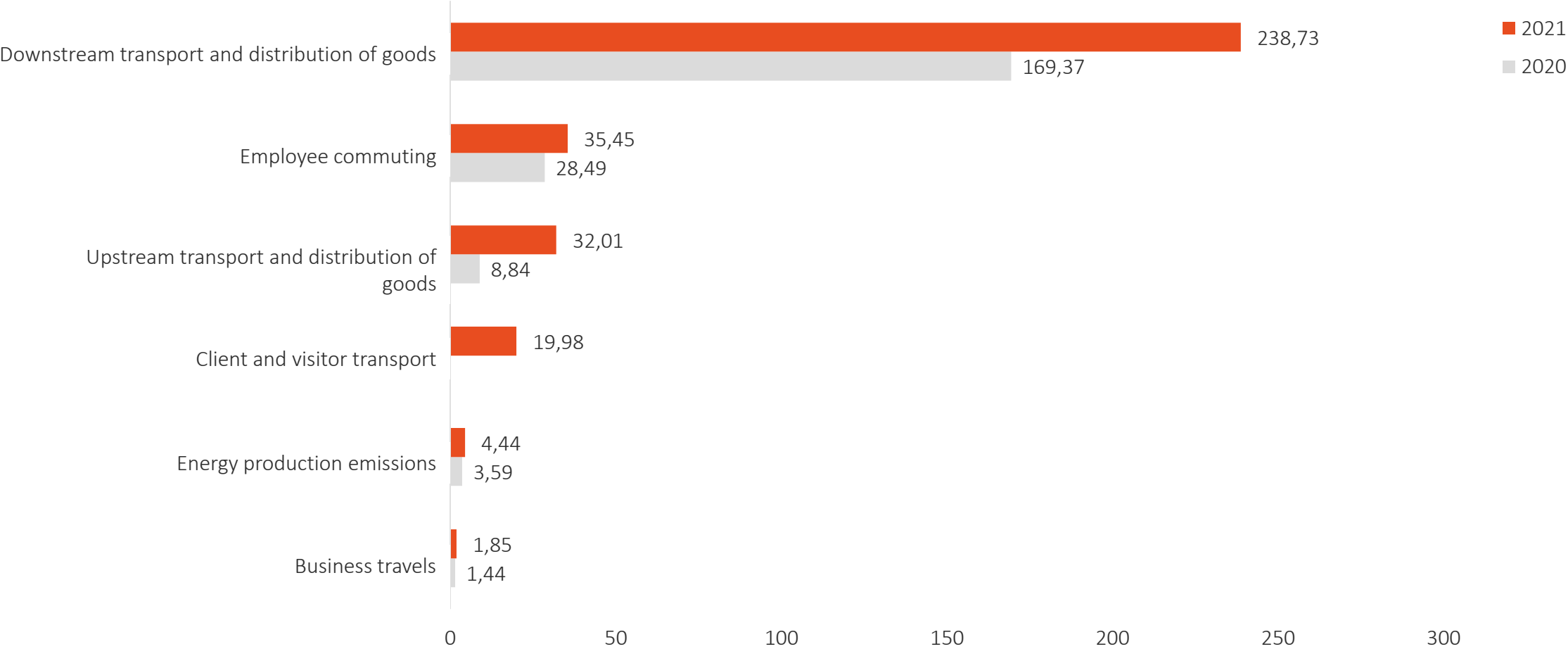
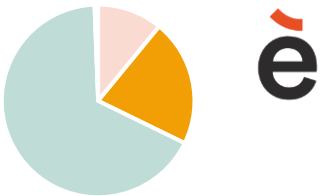


There are **no indirect emissions derived from electricity** consumption given that all electricity consumed comes from photovoltaic solar energy installed within the facility.

Carbon Footprint.

Distribution of results by categories.

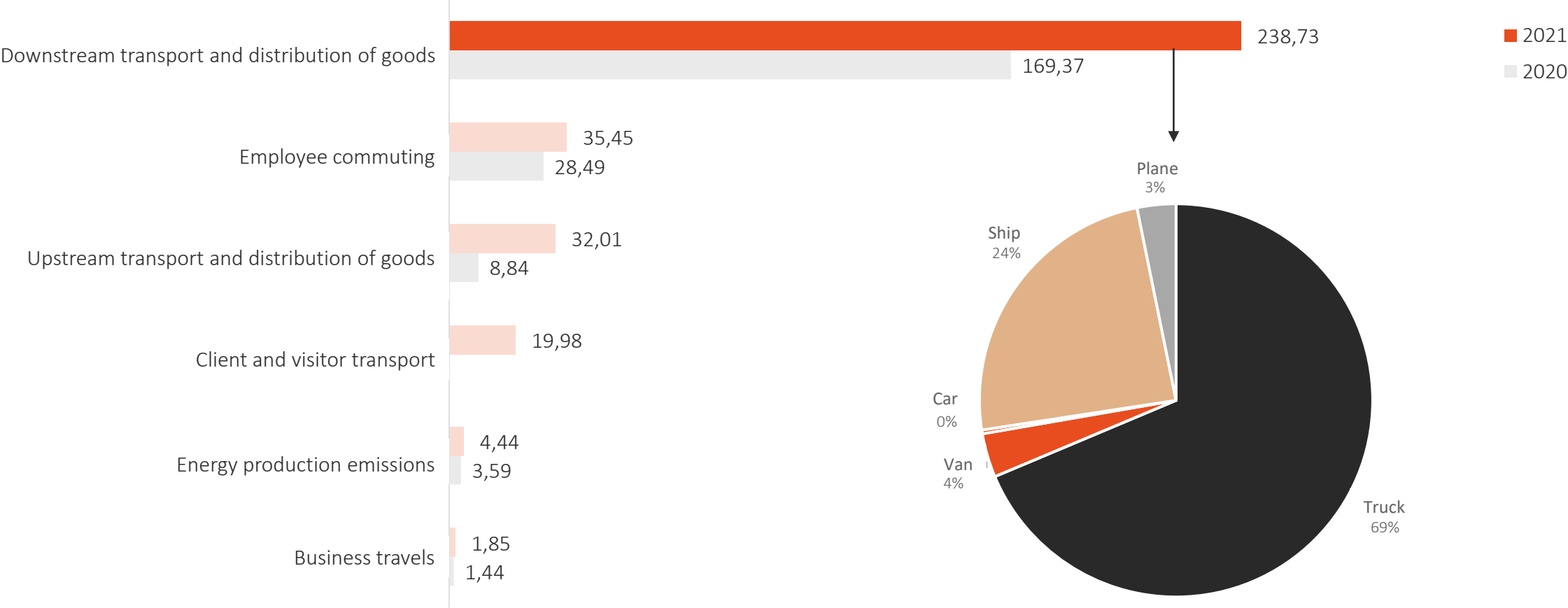
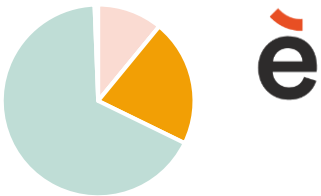
Category 3. Indirect emissions from transportation (Tn CO₂ eq.)



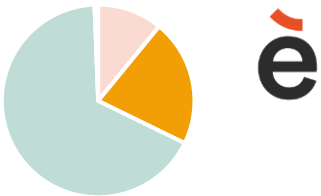
Carbon Footprint.

Distribution of results by categories.

Category 3. Indirect emissions from transportation (Tn CO₂ eq.)



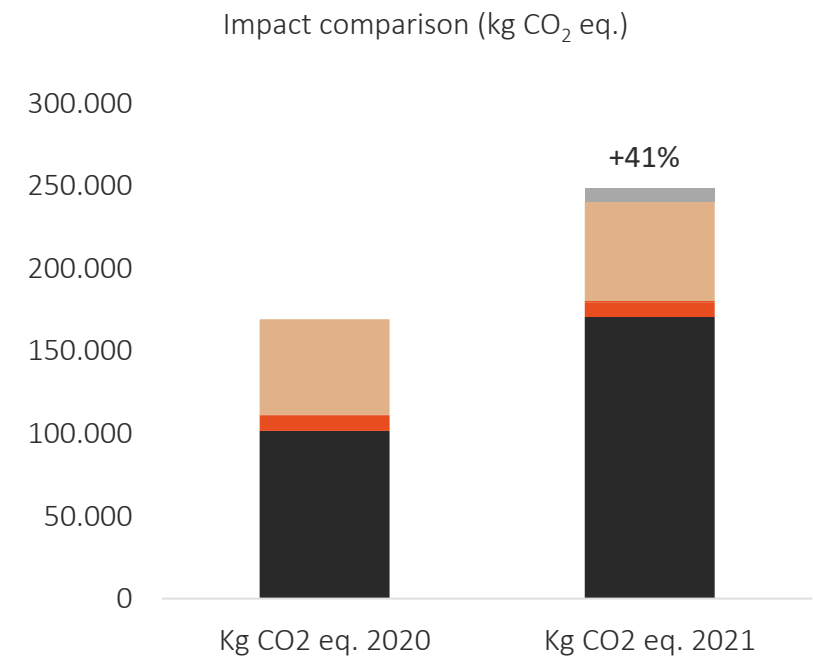
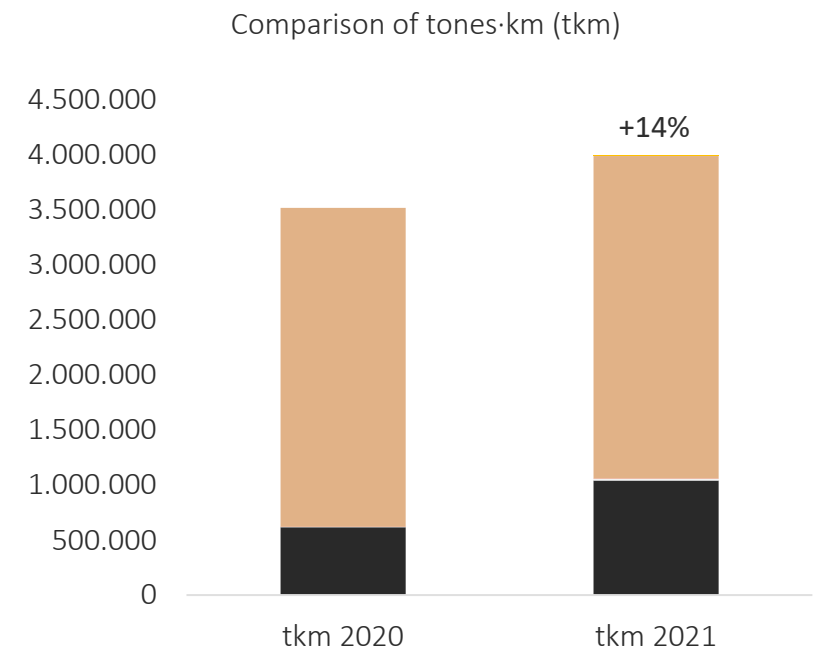
Carbon Footprint.



Distribution of results by categories.

Category 3. Indirect emissions from transportation (Tn CO₂ eq.)

Transport and distribution of final product.



Truck

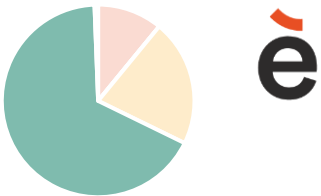
Van

Car

Ship

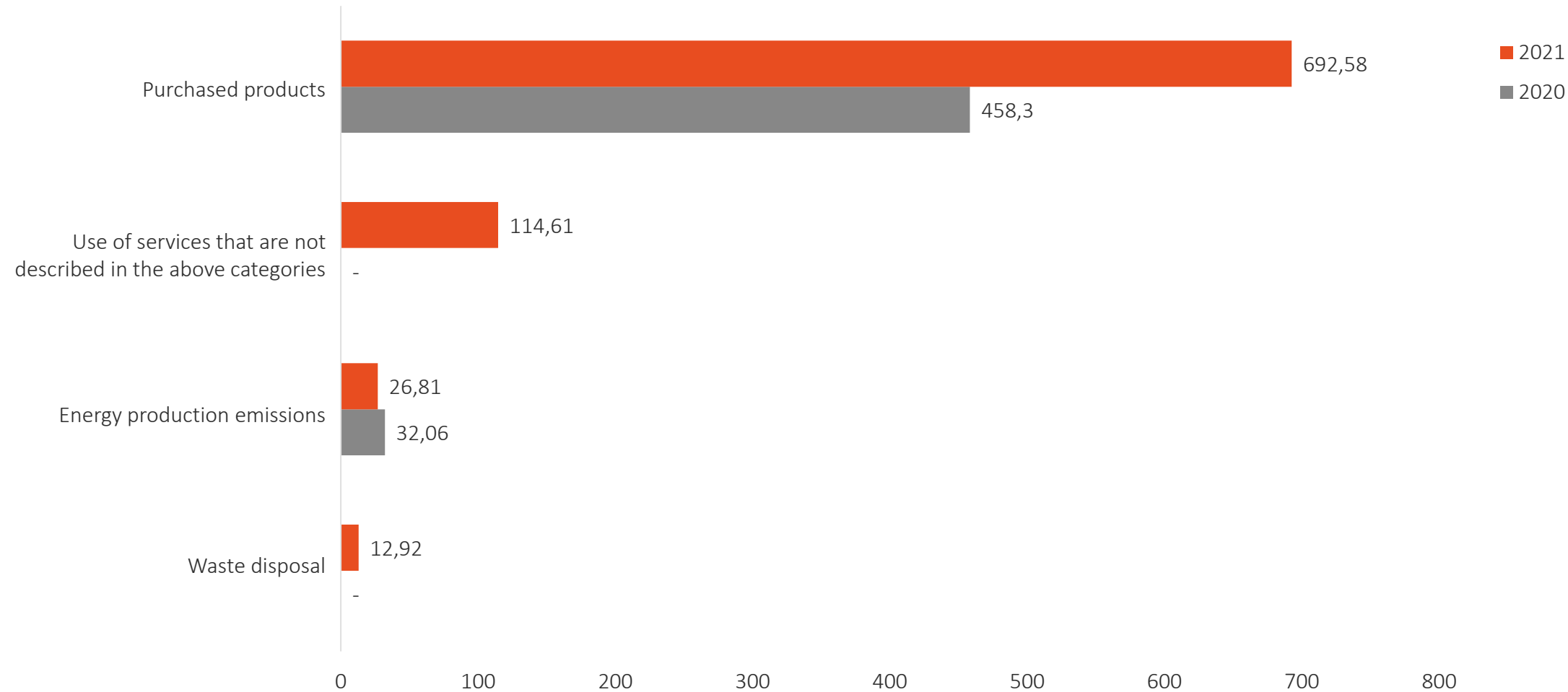
Plane

Carbon Footprint.

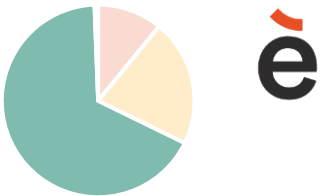


Distribution of results by categories.

Category 4. Indirect emissions from products used by the organization (Tn CO₂ eq.)

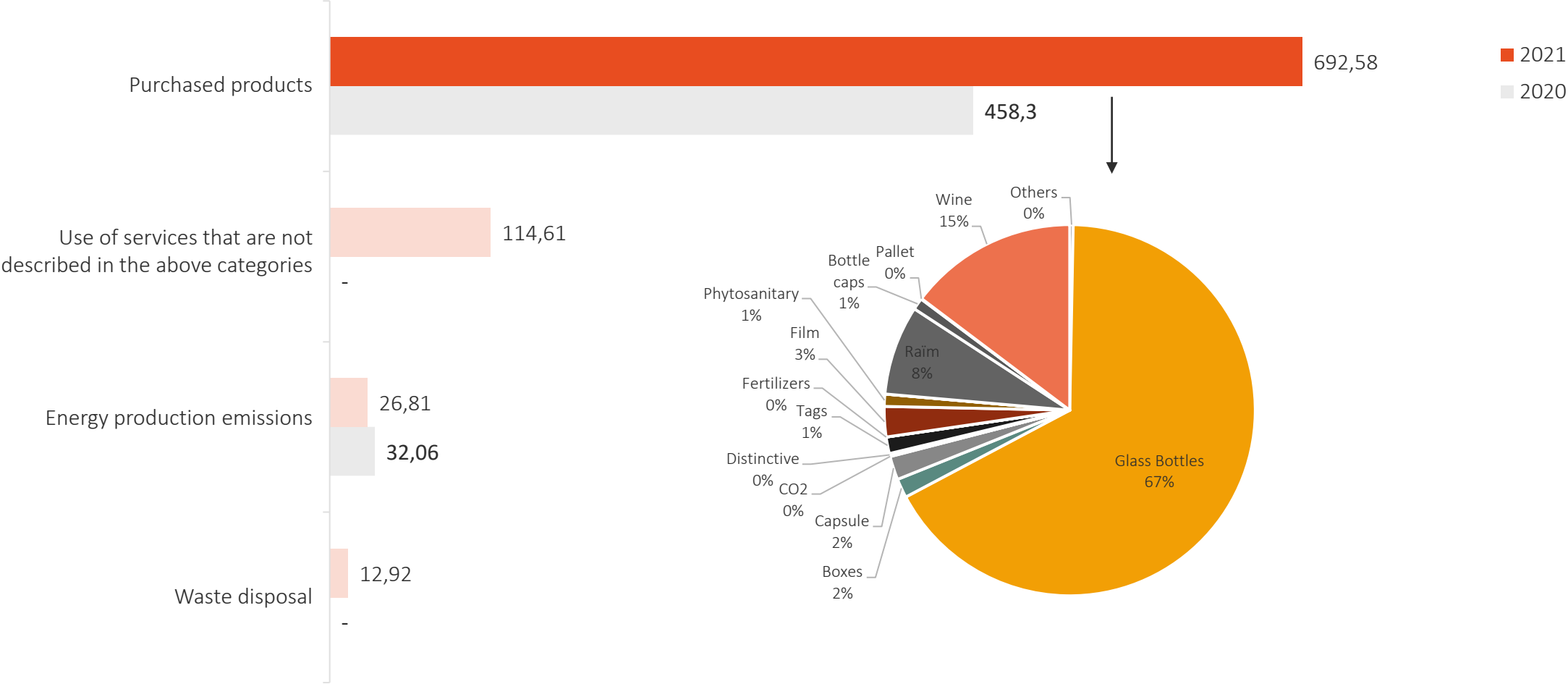


Carbon Footprint.

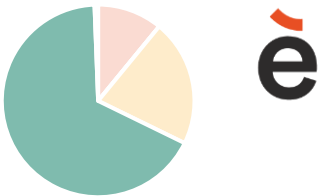


Distribution of results by categories.

Category 4. Indirect emissions from products used by the organization (Tn CO₂ eq.)



Carbon Footprint.

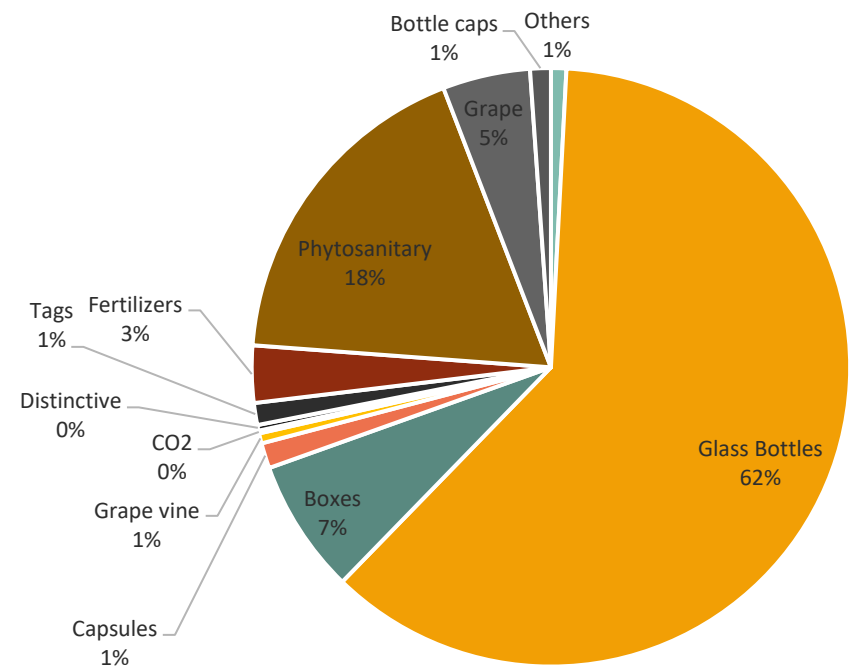


Distribution of results by categories.

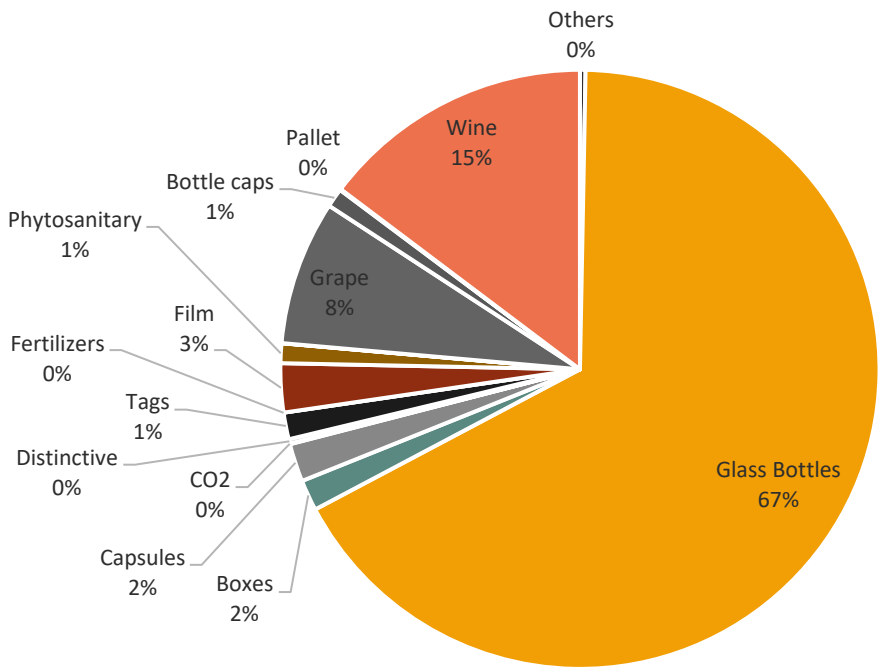
Category 4. Indirect emissions from products used by the organization (Tn CO₂ eq.)

Purchased products.

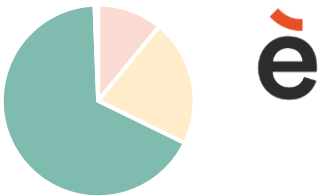
Impact distribution for purchased products 2020 (%)



Impact distribution for purchased products 2021 (%)

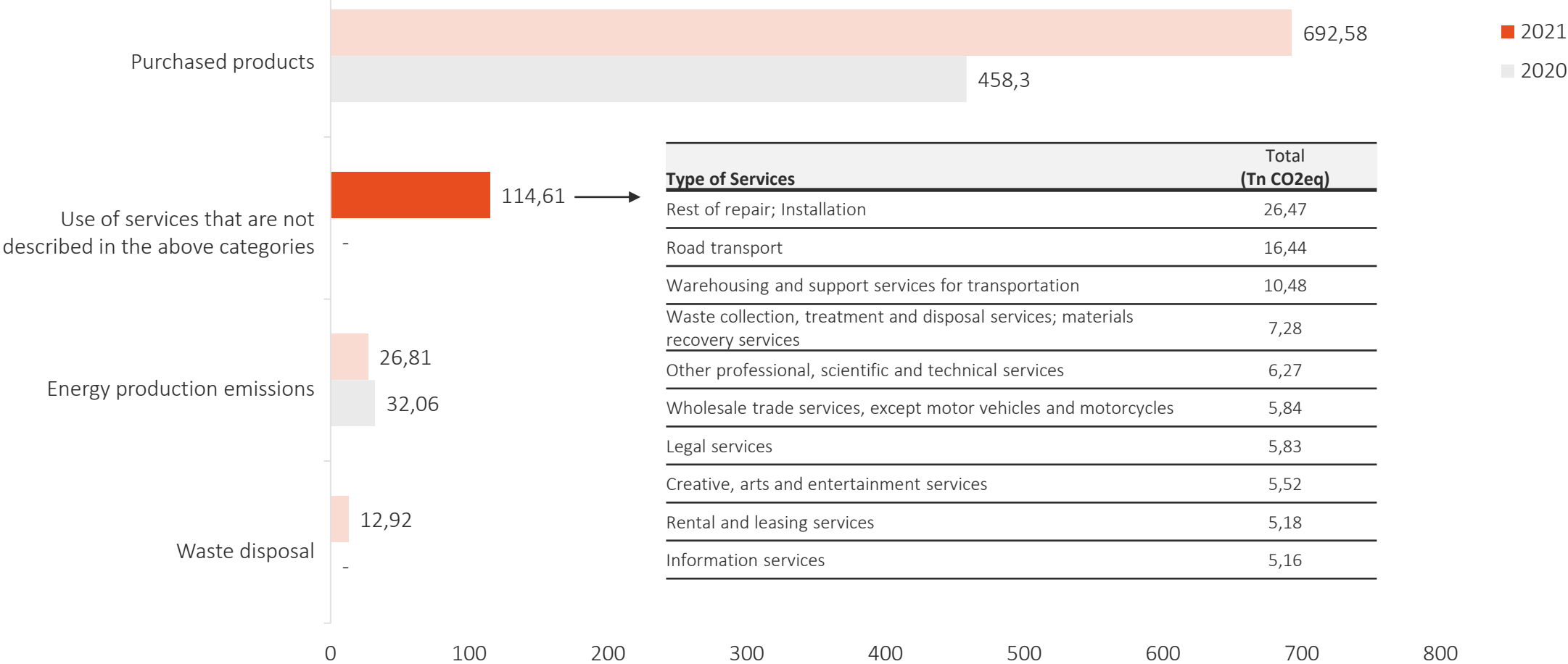


Carbon Footprint.

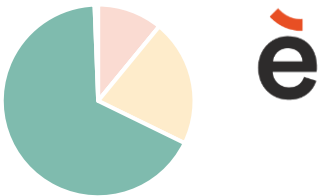


Distribution of results by categories.

Category 4. Indirect emissions from products used by the organization (Tn CO₂ eq.)
Purchased products.

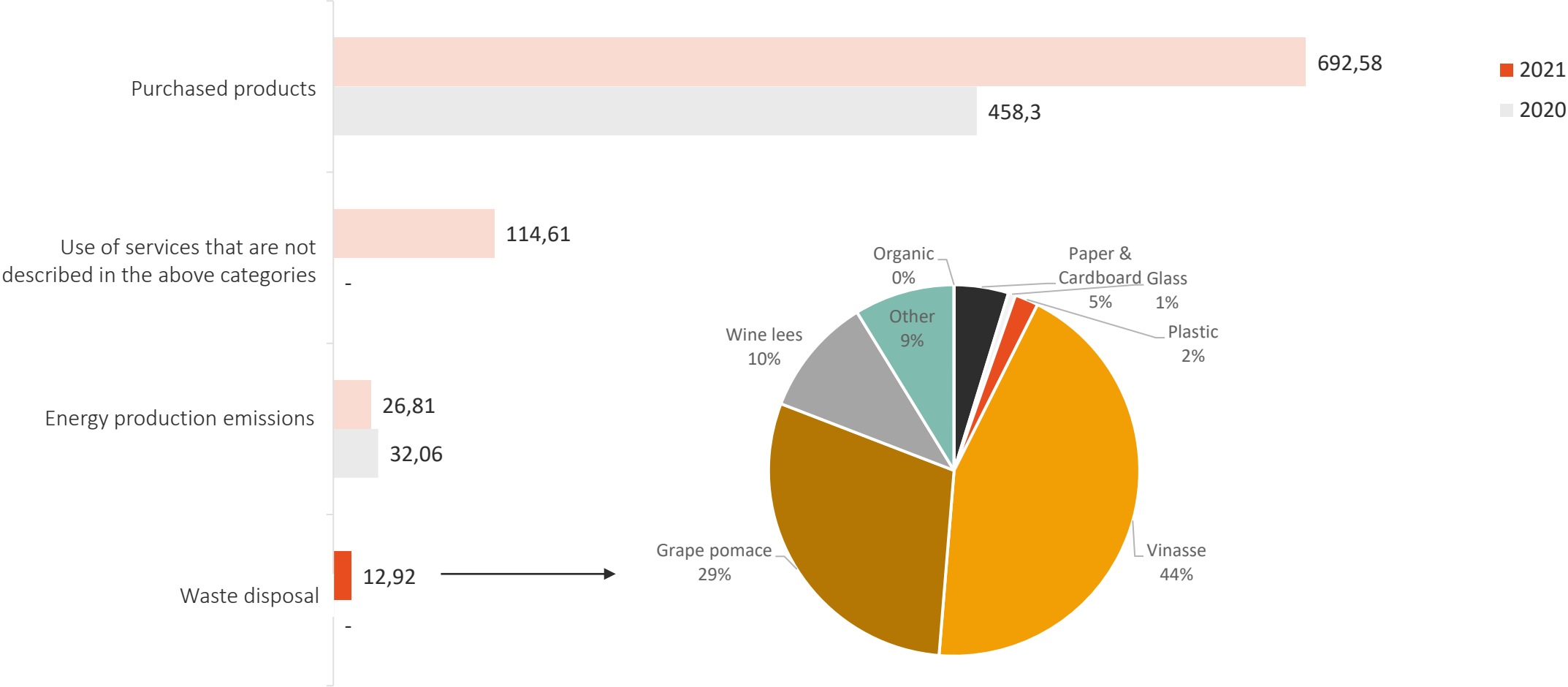


Carbon Footprint.

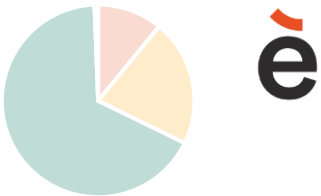


Distribution of results by categories.

Category 4. Indirect emissions from products used by the organization (Tn CO₂ eq.)

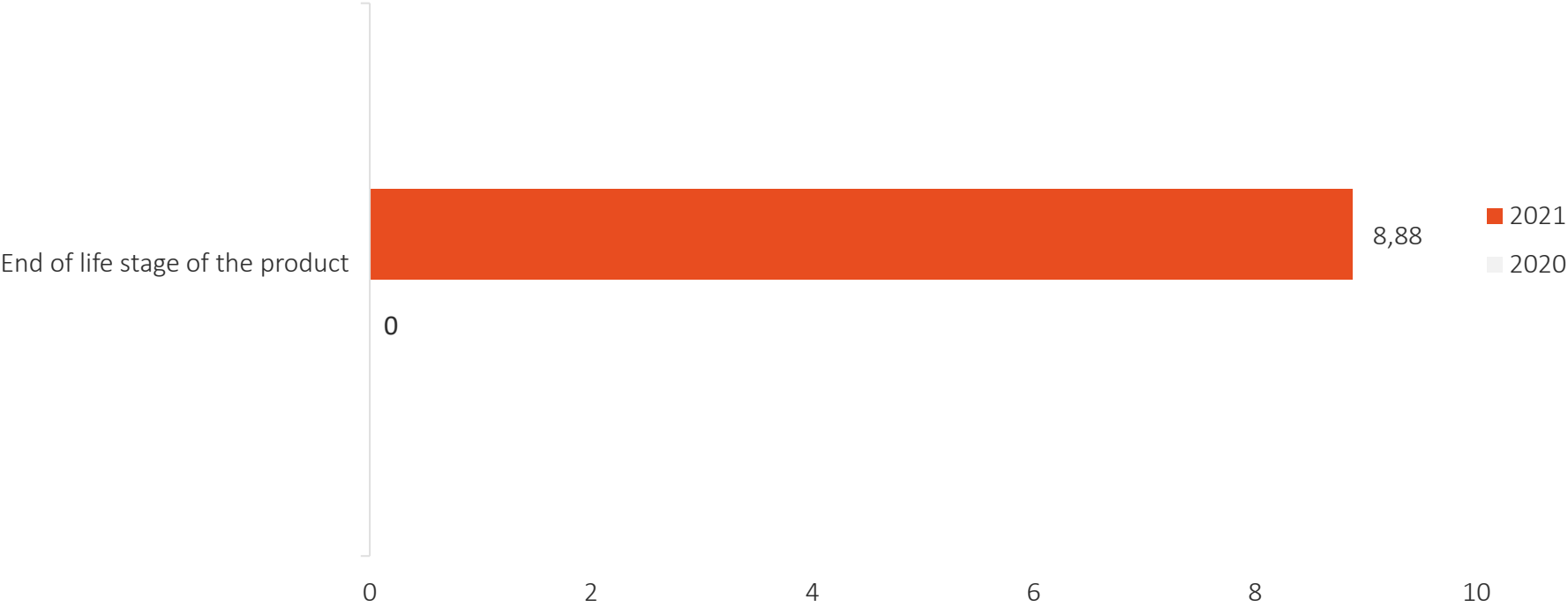


Carbon Footprint.

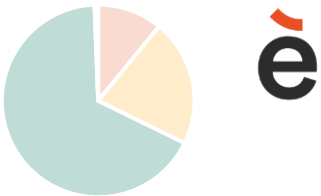


Distribution of results by categories.

Category 5. Indirect emissions associated with the use of the company’s products (Tn CO₂ eq.)

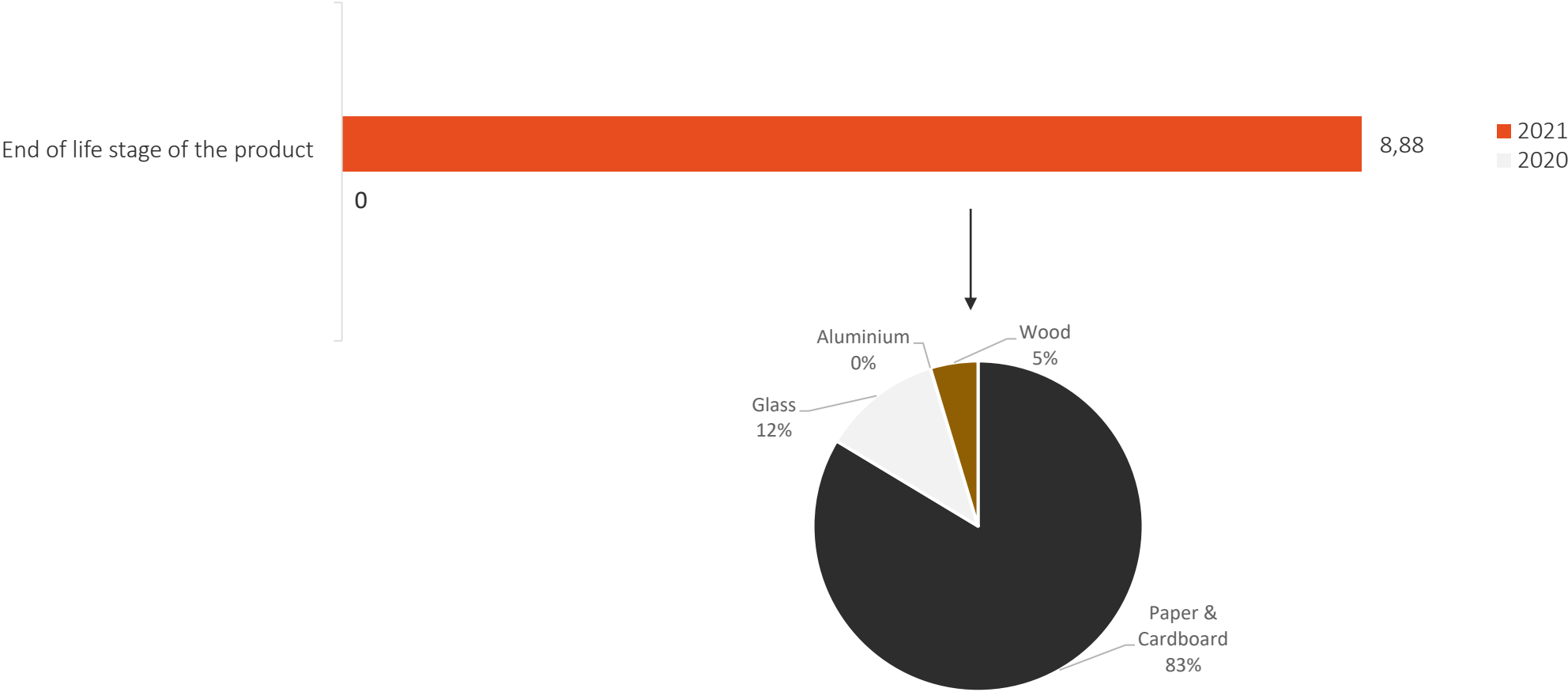


Carbon Footprint.



Distribution of results by categories.

Category 5. Indirect emissions associated with the use of the company’s products (Tn CO₂ eq.)



Conclusions

Conclusions



Results and next steps.

The **Carbon Footprint has increased by 30% compared to the base year 2020**. The reasons behind such increase include:

- The expansion of the scope to obtain a more complete calculation (11 subcategories in 2020 vs 15 subcategories in 2021).
- The increase in the quantity and quality of the information collected.
- The increase in the company's activity (+26%).

To conclude, with the current calculation of the Carbon Footprint, De Haan Altés has a more realistic starting point to build their **roadmap towards decarbonization**.

Annex

Annex. Estimation of the theoretical sequestration of CO₂.

Methodology for the evaluation of agricultural sinks by Catalan Climate Change Office (OCCC).

The estimation of the theoretical sequestration of CO₂ is based on the third report on climate change in Catalonia by the Catalan Climate Change Office (*Oficina Catalana del Canvi Climàtic, OCCC*) and the following considerations can be made:

- Vineyards are considered woody crops. Air and underground biomass are taken into account.
- Two vineyards age groups have been established:
 - 20.63 ha of vineyards < 10 years.
 - 24.63 ha of vineyards > 10 years.
- The **average carbon stock** per hectare of the biomass of woody crops varies significantly depending on the type of species and agronomic variables such as plantation density and age. In the case of the vineyard, the values can go from 4.7 to 11.5 Mg C ha⁻¹ in mature vineyards (35 years), according to the planting density (Williams et al., 2011). Currently in Catalonia, the vineyards store **4.7 Mg C/ha**. The **initial stock is NOT considered in the annual emission inventory**.
- The average annual **sequestration value** of the vineyards is **0.24 Mg C/ha year**.

Annex. Estimation of the theoretical sequestration of CO₂.

Methodology for the evaluation of agricultural sinks by Catalan Climate Change Office (OCCC).

The 45.3 hectares of vineyards present an **annual carbon sequestration of 15.3 Mg C/year.**

Therefore, **carbon sequestration from the vineyards in 2021 is 56.1 tones of CO₂.**

Due to a lack of data, it is not possible to calculate the annual carbon sequestration of the vegetation grown within the organization fields using the OCCC evaluation method, so further assessment methods should be considered.



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