SignMax AB

YEAR 2019-2020

Skyltmax.se

In collaboration with

TRICORONA
CLIMATE PARTNER

Table of contents

Background

SignMax AB, established 2008, is a company specialized in digitalized sign manufacturing. The company with office and production is located in Landvetter with global sales and shipping. During 2020 and in collaboration with Tricorona Climate Partner (Tricorona), SignMax AB (SignMax) has quantified the climate impact of its operations for the period 1 May 2019 – 30 April 2020. Calculations have been undertaken by Tricorona Climate Partner AB and are based on activity data provided by SignMax.

The total carbon footprint of SignMax operations during 2019–2020 amounts to 862 tonnes CO_2e.

Scope

In accordance with the Greenhouse gas-protocol the greenhouse gas emissions are divided in three scopes based on the company's operations. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the purchased energy. Scope 3 emissions are all other indirect emissions.

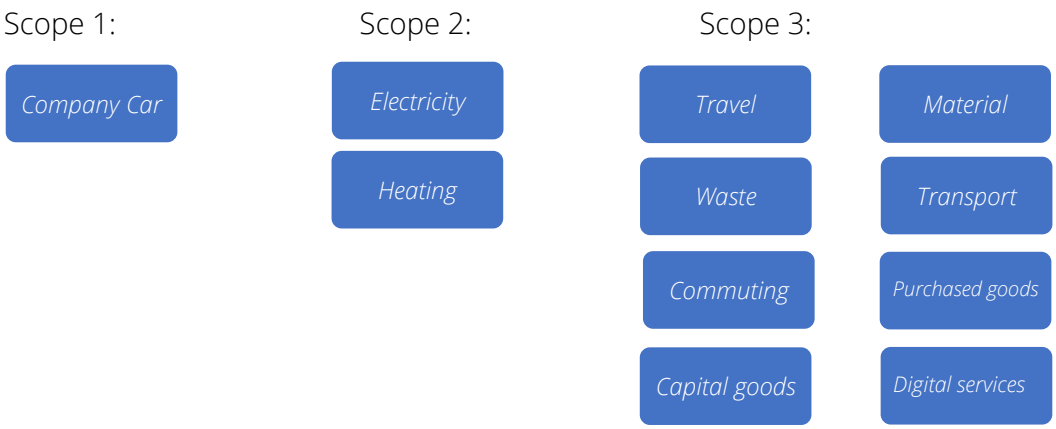

Table 1. Total climate impact (tonnes CO_2e) divided by scope

GHG-scope	Climate impact (tonnes CO_2e)	Share
Scope 1	2,0	0,2%
Scope 2	2,1	0,2%
Scope 3	858,2	99,5%
Total climate impact	862,4	100%

As presented in Table 1 the main part of SignMax's operations' climate impact is found in scope 3. The greenhouse gas emissions mainly derive from material and transportation.

Method

The method for quantification of the carbon footprint is based on the below listed documents.

- GHG protocol Corporate Standard
- GHG Protocol Scope 2 Guidance
- GHG Protocol Corporate Value Chain (scope 3)

The GHG protocol has been selected because it is one of the most established and frequently applied standards to quantify climate impact of businesses. The carbon footprint of the selected subject is calculated based on an operational control approach. Emissions from electricity have been calculated using the market-based approach.

The following greenhouse gases have been included in the calculations.

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitric Oxide (N_20)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SH_6)

Each gas's corresponding global warming potential is obtained from the IPCC Assessment report 5 (2014). Total emissions are measured in CO_2 equivalents (CO_2e). All emissions in scope 1 and 2 relevant to the applied system boundaries are included and have been quantified, as well as all relevant and feasibly quantifiable emissions in scope 3. Emission reporting categories are unchanged throughout the reporting period.

Total climate impact is presented in tonnes carbon dioxide equivalents (CO_2e).

Scope 1

In scope 1 fuel from the company cars is reported.

Scope 2

Scope 2 include emissions from electricity and heating used in offices as well as in the production process.

Scope 3

The following categories of scope 3 emissions are relevant and have been quantified

- Category 1 – Purchased goods and services
- Category 2 – Capital goods
- Category 3 – Fuel and other energy-related activities
- Category 4 – Upstream transportation and distribution
- Category 5 – Waste generated in operations
- Category 6 – Business travel

- Category 7 – Employee commuting
- Category 9 – Downstream transportation and distribution

Data and data sources

In calculating SignMax's climate impact, both primary and secondary data have been used. Primarily, primary data has been used. Where this has not been possible, secondary data based on average values or estimates have been used in the climate calculations.

All activity data have been supplied by SignMax. Information about the employee commuting have been gathered from the employees.

Emission factors used to quantify the greenhouse gas emissions from the operations comes from established databases and sources such as DEFRA, The Swedish Transport Administration (Trafikverket), Network for Transport Measures and others.

Values for activity data used in the climate calculation are supplied by SignMax. Tricorona has in turn developed and selected emission factors and templates used in the climate calculation. The factor used by Tricorona to account for the high-altitude effects of air travel is 1.9.

Uncertainty

The secondary data used in the calculations are regarded as the biggest source of uncertainty and have been minimized to greatest extent possible. Moreover, the use of average emission factors always implies some degree of uncertainty.

Results

SignMax climate impact during the business year 2019-2020 amounts to 862 tonnes CO_2e, where materials have the biggest share, 49%, followed by transportation 31%, see Figure 1 below. The business' climate impact compared to turnover amounted to 9,1 tonnes CO_2e/MSEK, which is a decrease by 4,9% from 9,6 tonnes CO_2e/MSEK 2018-2019.

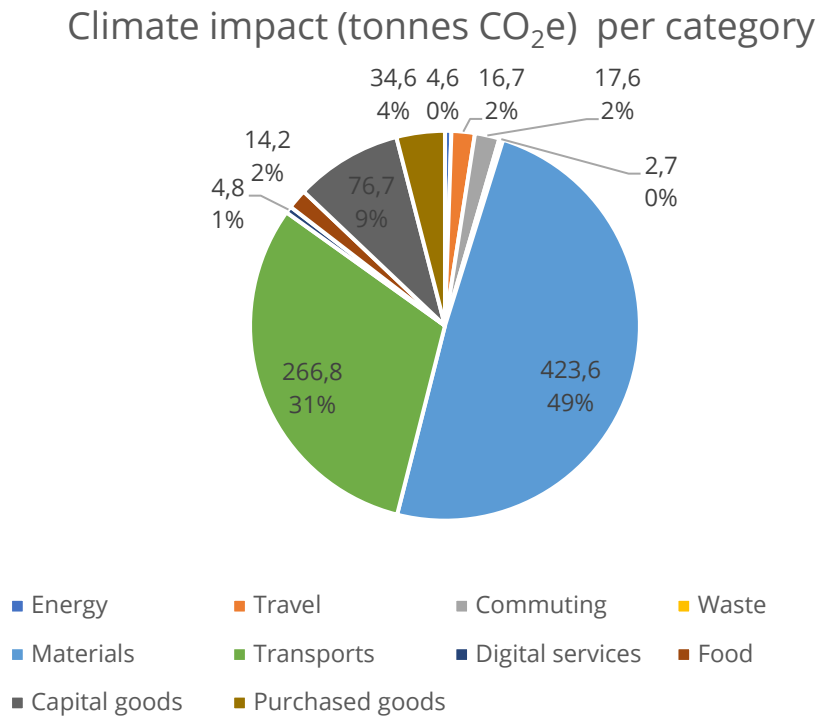

Figure 1. Climate impact (tonnes CO_2e) per category.

Energy is the climate impact derived from used electricity and heating in SignMax premises. Travel contains all traveling made with train, boat, on road, flights and hotel accommodations. Materials are all the materials used in SignMax production. Transports upstream refers to transportation of purchased materials and goods to SignMax. Transports downstream refers to all transportation from SignMax to costumers globally. Purchased goods includes climate impact from purchases not included in capital goods or food, such as electronics and clothes for example.

Category	Total (tons CO_2e) 2018/2019	Total (tons CO_2e) 2019/2020	Difference %	Part of total emissions
Capital goods	82,8	76,7	-7,4%	8,9%
Commuting	17,5	17,6	0,6%	2,0%
Digital services	4,5	4,8	6,4%	0,6%
Energy	12,3	4,6	-62,8%	0,5%
Food	11,6	14,2	22,6%	1,6%
Materials	332,5	423,6	27,4%	49,1%
Purchased goods	12,6	34,6	175,1%	4,0%
Transports downstream	181,0	256,5	42%	29,7%
Transport upstream	30,4	10,2	-66%	1,2%
Travel	45,3	16,7	-63,1%	1,9%
Waste	2,9	2,7	-5,6%	0,3%
Total	**733,3**	**862,4**	**18%**	**100%**

Table 1. Climate impact (tonnes CO_2e) per category.

SignMax has during the operation year 2019/2020 increased sales and therefore their climate impact has increased as well.

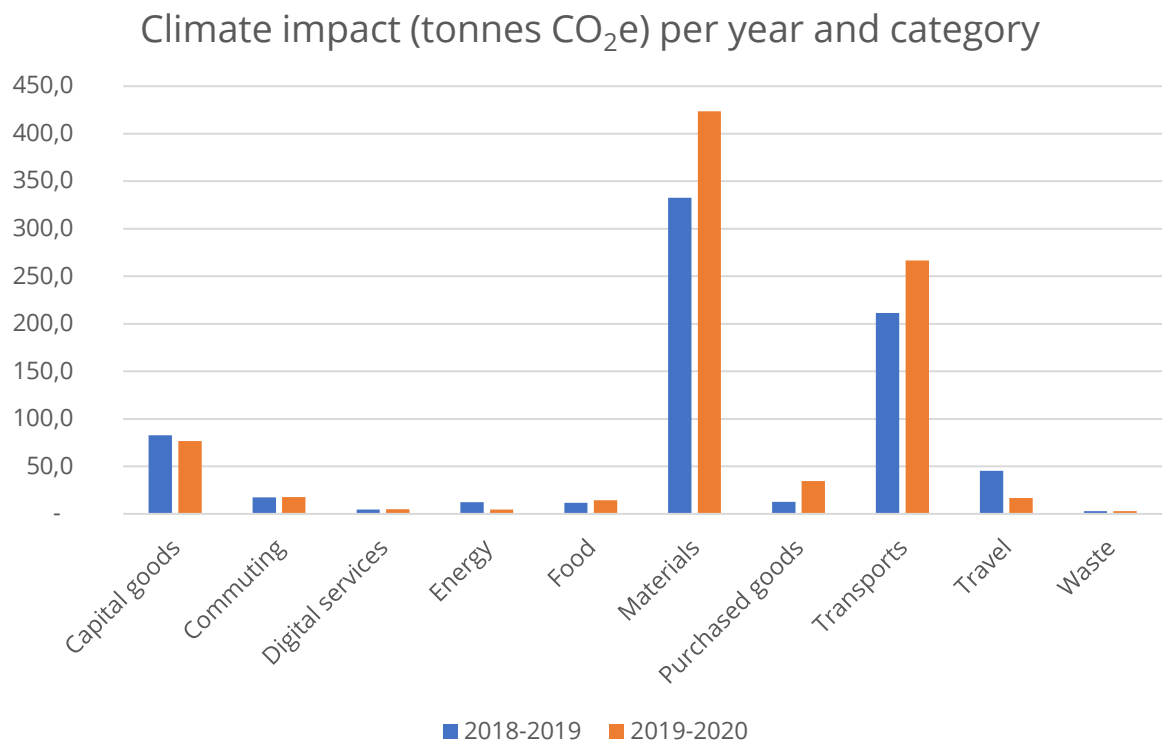

Figure 2. Climate impact (tonnes CO_2e) per category and year.

Material	Total (tons CO_2e) 2018/2019	Total (tons CO_2e) 2019/2020	Part of total emissions	Difference %
Adhesiv	1,67	0,31	0,07%	-81%
Akryl	25,88	39,96	9,43%	54%
Alkaline degreaser	2,03	1,93	0,46%	-5%
Aluminium	133,80	187,94	44,37%	40%
Beads, glass/plastic	0,99	1,48	0,35%	49%
Brass	8,42	10,79	2,55%	28%
Cell cast acrylic (PMMA)		0,42	0,10%	
Cleaning cloth	2,21			
Cleaning fluid	0,22	0,14	0,03%	-35%
Elastic band	0,06	0,07	0,02%	18%
Envelope	0,19	0,23	0,05%	20%
Fluorescerande tejp	-	-	-	-
Foam plastic	4,92	5,41	1,28%	10%
Förnicklad mässing	2,23			
Inc	1,29	0,80	0,19%	-38%
Inc/chemicals		0,50	0,12%	
Magnet	15,27	14,31	3,38%	-6%
Metal	24,70	20,44	4,83%	-17%
Mjukplast och papper	2,47			
Mjukplats med ahesiv och bakpapper	0,29			
Nickel-plated brass		1,82	0,43%	
Non-rigid plastic	5,85	3,15	0,74%	-46%
Non-rigid plastic & paper		5,36	1,27%	
Paper	2,44	7,83	1,85%	221%
Paper label	1,94	3,84	0,91%	99%
Papptejp	0,66	1,32	0,31%	100%
PET	1,11	1,15	0,27%	3%
Plast/Aluminium Gobiod	6,05	6,59	1,56%	9%
Plastic	29,34	31,89	7,53%	9%
plastic/metal	0,98	0,53	0,13%	-46%
PP tejp acrylic	1,67	3,49	0,82%	109%
PVC	34,32	46,24	10,92%	35%
Recycled plastic		0,02	0,01%	
Stainless steel	6,20	3,43	0,81%	-45%
Textile	0,56	2,74	0,65%	392%
Vinyle	0,77	1,43	0,34%	85%
Wellpapp	11,40	15,65	3,69%	37%
Wood	2,57	2,40	0,57%	-6%
Total	**332,48**	**423,61**	**100,00%**	**27%**

Table 2. Climate impact (tonnes CO_2e) per material

Climate impact management plan

Table 3 specifies the activities SignMax plan to undertake in order to reduce their carbon footprint during the coming years. SignMax's goal is to reduce its emissions in relation to turnover each year. For the business year 2019-2020 the greenhouse gas emissions amounted to 9,0 tonnes CO_2e/MSEK.

Table 2. Climate impact management plan

Reduction measure	Description	Implementation period	Expected reduction (CO_2e)	Expected reduction (%)
Material	Reduce the share of virgin aluminium	2019-onwards	To be quantified	-
Material	Substitute virgin aluminium with gobond	2019-onwards	To be quantified	-
Material	Substitute a share of plastic signs with eco board	2020-onwards	To be quantified	-

Carbon offsetting plan

SignMax AB has chosen to offset through the project Tropical Mix. Tropical Mix is a land use forestry project situated in Panama. The project is verified by Gold Standard and climate impact reductions are generated by reforestation and conservation of forest. The offset credits will be cancelled in the Impact registry and SignMax will be provided with a certificate of offsetting. The cancellation of the credit will also be publicly documented on Tricorona's website: https://www.tricorona.se/makuleringsintyg/

Appendix A: Exclusion of emissions sources

Relevant scope 3-categories are included in the carbon calculations.

Table 3. Included and excluded scope 3-categories.

Category scope 3	Included/excluded	Justification
Purchased goods and services	Included	
Capital goods	Included	
Fuel and other energy-related activities	Included	
Upstream transportation and distribution	Included	
Waste	Included	
Business travel	Included	
Employee commuting	Included	
Upstream leased assets	Excluded	Not relevant
Downstream transport and distribution	Partly included	Possible trips by consumers connected to sales are excluded.
Processing of sold products	Excluded	Not relevant
Use of sold products	Excluded	Not relevant
End of life treatment of sold products	Included	
Downstream leased assets	Excluded	Not relevant
Franchises	Excluded	Not relevant
Investments	Excluded	Not relevant

Table 6 below lists the one category that are excluded from the calculations. It has been excluded as it is expected to amount to less than 1% of total emissions and there is uncertainty regarding the choice of emission factors.

Table 4. Test for exclusion of activities.

Activity/Component	Total amount	Unit	Emission factor for 1% of total (kg CO_2e/kg)
Fluorescent tape	74	kg	108
Porcelain	34	kg	227
Other	16	kg	497