

Results and methodology report for Kid ASA

This report outlines emissions results for Kid ASA, for the reporting period of 2022. The underlying calculation has been done by 2050 Consulting and is based on data reported by Kid ASA as a part of the membership in the Swedish Textile Initiative for Climate Action - STICA.

Firstly, key results are presented, followed by a description of the applied methodology and a short analysis. Further results can be seen in the separate result files.

Key results

Total emissions

The total emissions for Kid ASA for the reporting period of 2022 are 155 824 ton CO₂e, of which 98 % are emissions in scope 3. The distribution of emissions per scope is illustrated in the figure below.

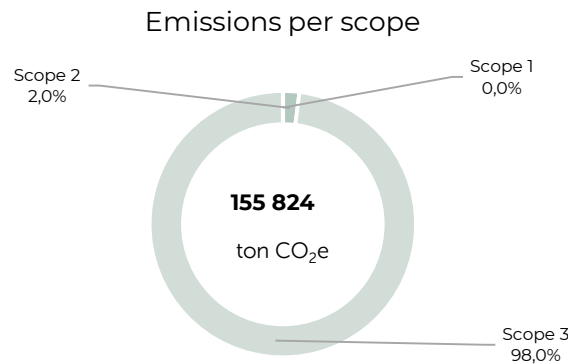


Figure 1. Division of emissions between GHG scopes.

Emissions per category are presented in the figure below. The largest category of emissions is Purchased goods and services, which stands for 95 % of the total emissions. The category Purchased goods and services consists of tier 1; Manufacturing, tier 2-4; Material and textile production and packaging material. The categories' share is shown in figure 3 below.

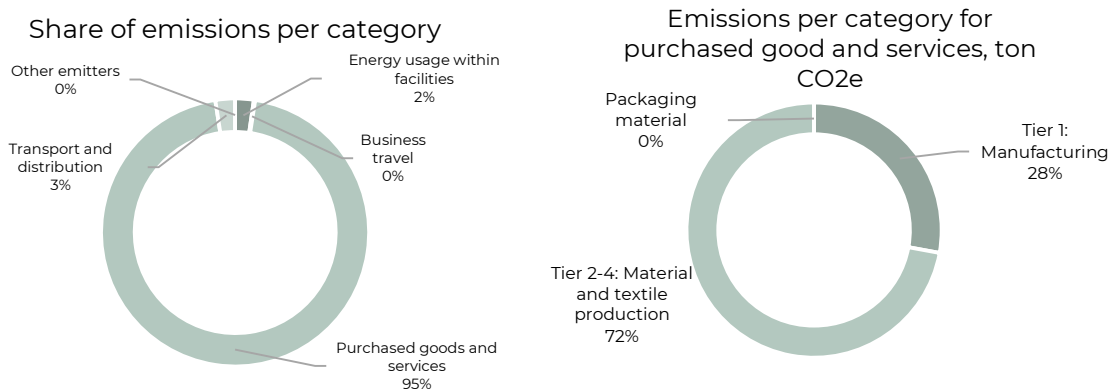


Figure 2 and 3. Emissions per category in scope 1, 2, and 3 and emissions per category for purchased goods and services, ton CO₂e.

Detailed results for emissions

The total emissions from the included scopes are 155 824 ton CO₂e. Details for emissions per category and scope can be seen in Table 1 below.

Table 1. Emissions per category and scope.

DETAILED EMISSIONS PER CATEGORY [ton CO₂e]	Scope 1	Scope 2	Scope 3	Total emissions 2022
Energy usage within facilities	0	3 072	422	3 495
Electricity	-	2 096,9	314,5	2 411
Heating	-	975,3	75,0	1 050
District cooling	-	0,2	-	0
Steam	-	-	-	-
Fuel use for own heat or electricity production	0	-	0,9	1
Third party warehouses	-	-	31,6	32
Concessions stores	-	-	-	-
Other facilities	-	-	-	-
Business travel	36	0	188	224
Company operated cars	35,9	0,326	11,1	47
Flight travel	-	-	130,5	131
Train travel	-	-	-	-
Taxi travel	-	-	-	-
Hotels	-	-	28,4	28
Other	-	-	17,9	18
Purchased goods and services	-	-	148 420	148 420
Tier 1: Manufacturing	-	-	41 312	41 312
Tier 2-4: Material and textile production	-	-	106 969	106 969
Packaging material	-	-	31	31
Transport and distribution	-	-	3 675	3 675
Air freight	-	-	275,8	276
Ocean freight	-	-	1 447,4	1 447
Train freight	-	-	61,4	61
Road freight	-	-	1 890,1	1 890
Other emitters	10	-	-	10
Refrigerant leakage	9,90	-	-	10
Company operated transports	-	-	-	-
Total	46	3 073	152 705	155 824

Target progression

Following STICA reporting, Kid ASA have defined a target for emission reduction. Below shows the target progression for Kid ASA and the projected reduction until 2030.

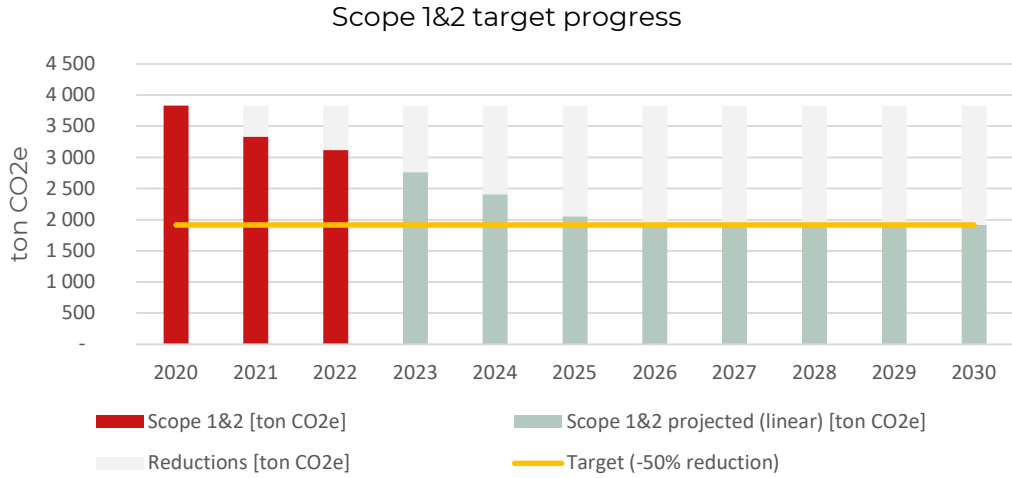


Figure 4. Target progression for scope 1&2.

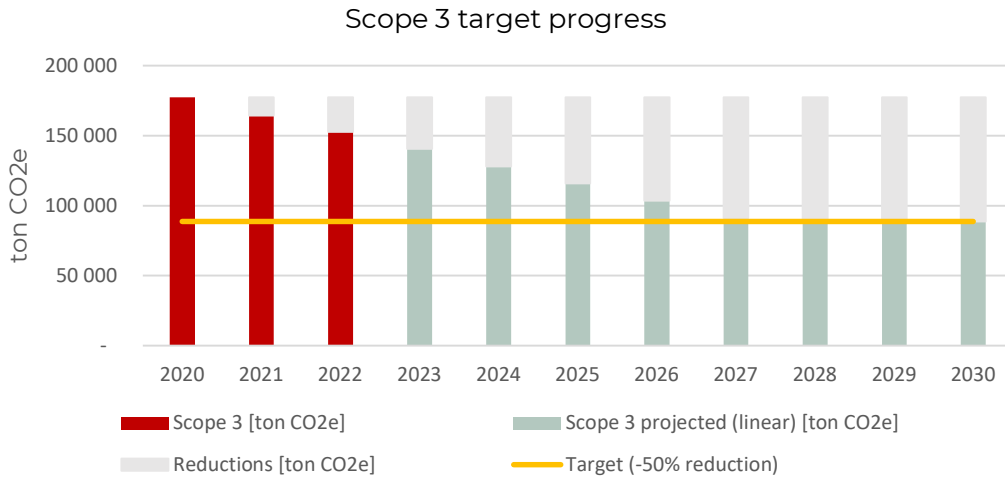


Figure 5. Target progression for scope 3.

In figures 4 and 5, the yellow line indicates the required emission levels to reach the respective targets for scope 1&2 and scope 3. The red bars show the progression so far from the base year, and the green bars illustrate emissions if Kid ASA have a linear reduction of emissions from this year until 2030.

Below shows an annual comparison for Kid ASA emissions per category.

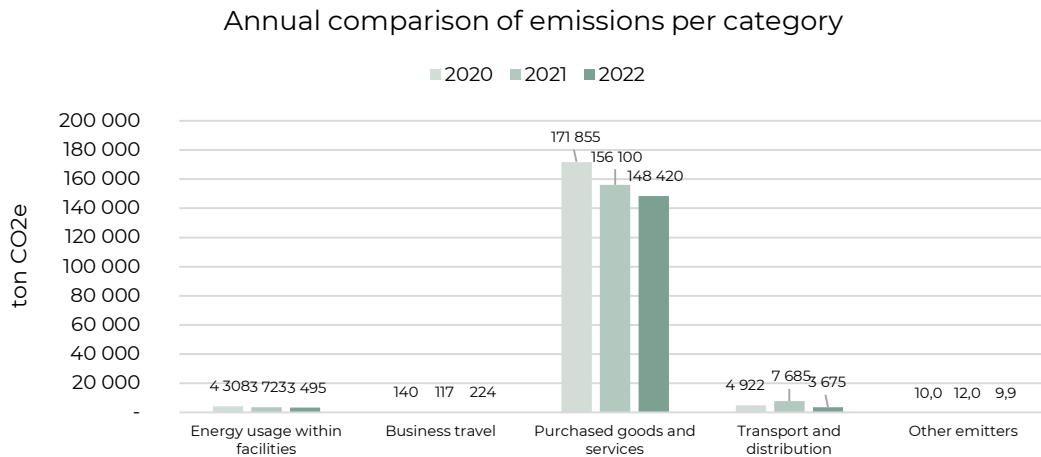


Figure 6. Emissions per category for 2022 and previous years.

Common Methodology

The greenhouse gas protocol

All calculations and reporting conform to the guidelines set out in the Greenhouse Gas (GHG) Protocol. Accordingly, the company’s emissions have been divided into three scopes (1-3), where scope 1 includes the direct emissions, scope 2 includes the indirect emissions from producing purchased energy and scope 3 includes all other indirect emissions. In the figure below the division of categories between scopes are shown.

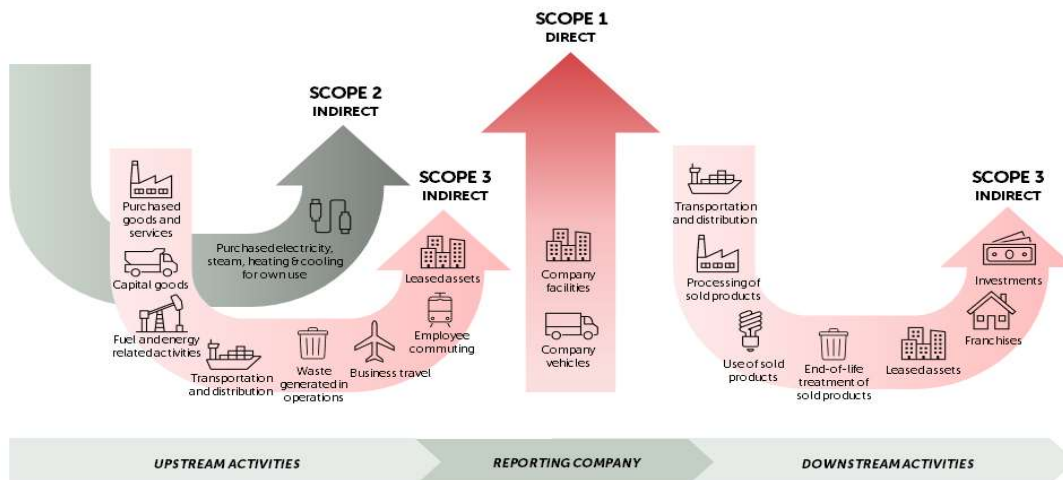


Figure 7. GHG Protocol including scope 1, scope 2 and scope 3 categories¹.

Control approach

The division of categories, direct and indirect emissions between the scopes, depends on the chosen control approach.

- **Financial control approach** – direct GHG emissions are defined as emissions from sources where the company has financial control.
- **Operational control approach** – direct GHG emissions are defined as emissions from sources in which the company has operational control.

For the climate calculations in this report, an **operational control approach** has been used.

Methods for scope 2 accounting

According to the guidance of the GHG Protocol, there are two distinct methods for scope 2 accounting where both methods are useful for different purposes. The methods are:

- **Location-based method** – the emission factor is represented by the average emissions intensity of the grid on which the energy consumption occurs. In this method, no regard to the origin of the energy is taken. All energy consumed get the same emission factor.
- **Market-based method** – the emission factor is represented by the emissions from electricity sources that companies purposefully have chosen. This means that if the company has bought electricity with guarantees of origin, the emission factors reflect that. All other electricity that is delivered without guarantees of origin represents the remaining electricity production, a so-called residual mix.

In this climate accounting report, the **market-based method** has been applied.

According to the GHG Protocol, the chosen method for calculating scope 2 emissions should be presented along with the non-chosen method. In the table below, the difference between market-based and location-based methods are presented.

Table 2. Emissions with market-based versus location-based method.

CALCULATION METHOD, SCOPE 2	Emissions [ton CO ₂ e]
Market-based	3 072,8
Location-based	759,8
Difference	2 313,0

¹ Adapted from: [GHG Protocol Corporate Value Chain \(Scope 3\) Standard](#)

Process description & System boundaries

All calculations are primarily based on actual activity data from Kid ASA's own operations. The activity data reported from Kid ASA have been matched to emission factors to calculate the climate impact from the operations.

Where data gaps have been identified estimations have been made based on best available knowledge. As presented in the figure below, the division of emissions based on measured data are 72% and estimated data accounts for 28%, own calculations account for 0% and data based on spend account for 0%.

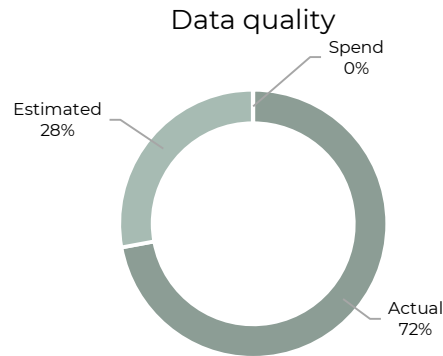


Figure 8. Division of emissions based on estimated vs. actual activity data.

System boundary and GHG scopes

The scope 1 emissions of Kid ASA are represented by*:

- Company operated vehicles.
- Refrigerant leakage in offices, stores, and warehouses.

The scope 2 emissions of Kid ASA are represented by*:

- Electricity consumed in offices, stores, and warehouses.
- District heating consumed in offices, stores, and warehouses.

The scope 3 emissions of Kid ASA are represented by*:

- Purchased goods and services (representing tier 1-4 and packaging materials).
- Transportation and distribution (upstream & downstream).
- Energy (electricity, heat and fuels) consumed in third party warehouses, concession stores, and other facilities.
- Fuel and energy related activities.
- Business travel.

**If other system boundaries have been made by the company it is specified in the 'Company-specific Methodology & Assumptions' section below.*

Detailed methodology

In this section, detailed methodology and most common assumptions are presented. If specific assumptions or deviations from the detailed methodology section have been done for Kid ASA these are described in the following section: 'Company-Specific Methodology & Assumptions'.

Scope 1&2

Scope 1 and 2 was calculated using, to the greatest extent possible, actual activity data, such as kilowatt-hours or kilometres. The emission factors used in the calculations come from the Swedish Transport Administration (Trafikverket), The Swedish Energy Markets Inspectorate (Ei), IEA and AIB European residual mixes.

Assumptions in scope 1 and 2 often include estimates for electricity, heating and refrigerant leakage. Emissions from refrigerant leakage have if actual data is missing, been estimated based on the total facility area in which district cooling is not used. Where no activity data was available for energy consumption, estimates for different facility types from the Swedish Energy Agency (Energimyndigheten) were used.

Purchased goods and services

The category purchased goods and services consists of a data collection representing the emissions from suppliers in tier 1, another separate data collection and calculation for material to cover tier 2-4, as well as a calculation for packaging.

For suppliers in tier 1, data collection includes the total number of products divided between the main categories: Apparel, Footwear, Non-textile accessories, and Home textiles. For each product category, a general emission factor representing CO₂e emissions per kg product has been adopted.

For tier 2-4, calculations were done based on the total weight of materials in Kid ASA's products. Emission factors for materials are from the Higg database. The emission factors were adapted to account for if the material is for example recycled or organic. If a material was not included in the Higg database, a similar material or an average company-specific material factor was used.

For packaging, calculations were done by using the total weight of materials. Emission factors are from the Higg database, and these were adapted to account for if the material is recycled. All packaging material from tier 1 suppliers to end customer is included.

Transportation and distribution (upstream & downstream)

Emissions from transportation and distribution are primarily based on actual emission data provided by the carrier, secondly by calculations based on provided information about transported weights and distances. Emission factors used for the calculated emissions are gathered from the Network of Transport Measures (NTM).

Fuel and energy related activities

Fuel and energy related activities are calculated using the activity data for electricity and heating in all facilities and fuels used for company-operated vehicles. Emission factors for calculations are from the Swedish Transport Administration (Trafikverket), The Swedish Energy Markets Inspectorate (Ei), IEA and AIB European residual mixes.

Business travel

Emissions from business travel are calculated by using the best available activity data and emission factors. The emission factors come from ICAO Carbon Calculator (adjusted for RFI 2,7), Trafikverket, Hertz Sustainability report 2019, the report "Branschläget 2018" by Svenska Taxiförbundet, NTM, and "Travel and climate, Methodology Report. Version 2.0," by Larsson & Kamb (2019).

The activity data can come from many different sources, thus resulting in highly varying data quality. Data directly from service suppliers, such as Taxi Stockholm or SJ, is seen as high quality, whereas spend data from multiple varying sources requires more estimations in the calculations.

Other facilities

Other facilities are represented by facilities that are utilized but not operated by employees of Kid ASA, for example, third party warehouses and concession stores. The emissions are calculated the same way as for facilities in scope 1 and 2, but all emissions are included in scope 3 in accordance with the GHG protocol. Activity data for electricity, heating and fuels are included.

Emission factors used are from AIB Residual Mixes 2018 and 2020, and Värmevärde: SNV 2018.

Company-Specific Methodology & Assumptions

Several deviations from the common methodology have been made for Kid ASA. The company-specific assumptions for the different categories are presented below.

Purchased Goods and Services

Tier 1 emissions have been estimated based on data derived from the number of purchased products and different reference values for tier 1 processes depending on product complexity. The emissions for apparel are based on an average emission factor for manufacturing of tops, pants and outerwear based on studies conducted by Roos et.al. (2015), Cotton Incorporated (2012) and the Institute for Sustainable Resources Queensland University of Technology (2009). Tier 1 for glass production is based on “Klimatberäkningar i glasindustrin (2050)” and tier 1 for candles are based on primary data from similar companies.

Kid have some products where the whole product production emissions are accounted for with one emissions factor, these are for FY2022; chocolate, battery, olive oil, hygiene products, coffee, tea, spices and pasta. The remaining products are calculated and separated into tier 1 and tier 2-4 production processes.

For the products that are accounted for as a whole, emission factors remained the same for the products that were included in last year's calculations. Some new products were added this year and for these materials, several assumptions were done. Almonds, liquorice, and caramel were assumed to have similar emission characteristics as chocolate. Sauce, pesto and dressing were assumed to have similar emission characteristics as olive oil. For crackers, the same emission factor as for pasta was used.

Tier 2-4 emissions were calculated based on actual material weight, when available. Where MSI Higg or EcoInvent could not provide an accurate emission factor for a particular material, it was replaced by a material with similar emission characteristics. Beeswax, wax, soy wax and candle wax were assumed to be stearic acid. Ceramics clay, marble, sand, slate and stone were all assumed to be ceramic tile. Sisal and sponge were estimated to have similar emission characteristics as the emission factor for plant-based material. Finally, two changes in assumptions from last year were made. Latex was assumed to be natural rubber and not average plastic like last year. Metals were assumed to be brass and not stainless steel to be in line with other STICA assumptions.

For the materials that were unknown or for which no similar material was available in the Higg MSI or EcoInvent database, the weighted average emissions per kilogram were calculated. This was based on the weight and emissions of all known materials for Kid. This method was used for 171 093 kg fabric and corresponds to 1 356 ton CO₂e.

Kid did not have data for packaging material so this data was hence based on last year's numbers. To account for a increase in the number of purchased products, the amount of packaging materials was scaled up by 16%.

Transports

For all air freight transports, the freight forwarders did not consider the greenhouse gas effect caused by flights at high altitudes, where evaporation causes additional cloud formation. This effect was considered by 2050 Consulting by adjusting the carriers' emissions from air freight with a Radiative Forcing Index (RFI) of 2.7, as recommended by STICA and IPCC.

Some transports did not have emissions including well-to-wheel (WTW) only tank-to-wheel (TTW). An estimation of the emissions from the well to the tank was hence estimated based on data from NTM.

Some transports only had data for CO₂ and not CO₂e, the equivalent were estimated by adding 5% to the final emissions.

Electricity and heating

For those facilities where energy consumption was unavailable, an estimate based on the approximate facility area provided by Kid was made based on reference values for energy use per square meter.

Special emission factors from CEMAsys were used for district heating in Norway and district cooling in Norway.

Refrigerant leakage

Refrigerant leakage was estimated for all facilities except the Norwegian facilities which had cooling with district cooling instead.

Business travel

Spend data in NOK was recalculated to SEK according to the average exchange rate in 2022 (1 NOK = 1,05 SEK) according to Riksbanken.

Kids' spend data for "Kost og Logi" was assumed to be hotel nights. The spend data for "Øvrige Utlegg" was split into hotels and public transport tickets.

It is not known if business travel by air reported by Egencia included an RFI of 2,7 as recommended by STICA. Since this has not been recalculated in previous years, it was not done for FY2022 either to avoid a methodology change. It is therefore noted that the RFI for these emissions is unknown.

Analysis

The total emissions from Kid were 155 824 tons of CO₂e, with the majority (98%) of the emissions belonging to scope 3. Emissions have decreased by 7% compared to 2021 and by 14% since the base year 2020. The emission intensity has decreased for all of Kid's KPIs. The biggest decrease is seen for energy usage per area which has decreased by 60% respectively 58% since 2021 and 2020.

Scope 1 & 2

Kid have decreased their emissions in scope 1 and 2 emissions by 19% since the base year 2020. This decrease is largely due to the decrease in emissions from electricity. This is largely due to the increase in green energy.

Purchased Goods and Services

Across all categories, purchased goods and services, including both production and packaging material, had the largest overall impact (95% of total emissions). Emissions have decreased by 14% since 2020 despite an increase in the number of purchased products.

For tier 1 there is a decrease of 7% from the base year even though the number of products has increased by over 40%. Since KID does not collect any primary data, it cannot be concluded from these calculations if the emissions from the suppliers have been reduced or not. What can be seen is the categorisation within tier 1 has changed from 2020 to 2022. In 2020 around 70% of all products were categorised as complex products with a high tier 1 value, whilst this number has decreased to about 50% in 2020. This shift from more complex products to simpler products in the tier 1 categorisation is the main reason for the decrease in tier 1.

The material weight between the years is very similar. Even though, the emissions from tier 2-4 have decreased by 16%. This is a result of shifting materials to materials with less emission impact, such as recycled materials or the substitution of materials with high emission intensity to another material. This could probably also be explained by the shift from more complex products to simpler products that also have influenced tier 1 since simpler products often consist of materials with less emission intensity.

Emissions in this category should be the main focus for taking action to reduce Kids' overall climate impact. Actions with a large impact on the total emissions from purchased materials could be:

- Replacing materials with more sustainable choices, such as recycled polyester, organic cotton, or recycled wool
 - Conventional cotton is responsible for 42% and polyester is responsible for 24% of Tier 2-4 emissions.
- Increasing the amount of recycled material in packaging.
 - 95% of the emissions come from conventional plastic and paper.
- Actively working with suppliers to help reduce climate impact, as well as actively choosing suppliers with a low climate impact.

Transportation and distribution

The second-largest category is transport and distribution (2% of total emissions). Emissions have decreased by 52% since 2021 and 25% since the base year. This reduction is largely due to a big decrease in air freight and sea freight. Kid's biggest sea freight supplier has since last year transitioned to biofuel which has lowered their emissions by 50%.

Business travel

Emissions from business travel have increased by 91% since last year and 60% since the base year. This is primarily driven by emissions from flight travel that have increased from 91 tons of CO₂e in 2021 to 131 tons of CO₂e in 2022. This increase in travel is likely due to the removal of covid restrictions. Emissions from company-operated cars have decreased slightly.

Future improvements and next steps

Improved data quality will both improve emission calculations and make it possible to identify relevant climate-reducing actions. Kid could also collect data from their tier 1 suppliers to move away from the average emission factor of apparel and gain actual data. This would also make it easier for Kid to choose suppliers with a lower impact and collaborate closer with suppliers to support them with climate initiatives, such as increasing their share of renewable energy.

Following STICA reporting, Kid has defined a target for emission reduction. Other possible next steps are establishing regular contact with tier 1 suppliers to support them in reducing their impact, or product-specific calculations that can be communicated to consumers to support them in making sustainable choices.