MerchUP®

2023

Carbon Footprint Report

Prepared by: Plan Be Eco

Reporting period: 1 January - 31 December 2023

Abstract

This report was prepared on the basis of the GHG Protocol in scope 1,2,3 for the MerchUp company for the accounting period 01/01/2023 - 31/12/2023.

Total carbon footprint

The company's total carbon footprint for the period 01/01/2023 - 31/12/2023 is 1,125 tonnes of CO_2e.

1,125 t CO_2e

Range	Mg CO_2e
Range 1	5
Range 2	1
Range 3	1,119

Table 1. Distribution of the organisation's carbon dioxide equivalent emissions into Scope 1, 2 and 3.

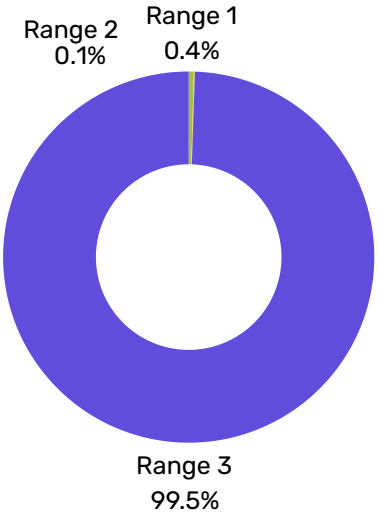


Figure 1: Distribution of Scope 1, 2 and 3 Shares in an Organization's Carbon Footprint

Greenhouse gases [GHG - greenhouse gases] are gases in the Earth's atmosphere that cause the greenhouse effect - they contribute directly to climate change by increasing the Earth's average temperature. The most common anthropogenic greenhouse gases in the atmosphere are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

Contents

Introduction

Basic information

1.1 MerchUp, operating in a dynamic business environment, made a conscious decision to examine its environmental footprint by closely monitoring and reporting its greenhouse gas emissions. This report provides an in-depth analysis of the company's carbon footprint across three dimensions.

This report was prepared based on a review of internal and external documentation and interviews with employees in accordance with best reporting practices. The company ensures that it has provided the best possible quality data so that emissions can be calculated as accurately as possible.

1.2 **MerchUp**

MerchUp specializes in the production of personalized clothing and accessories, providing solutions for personalizing corporate products for almost a decade.

1.3 **Plan Be Eco**

A comprehensive tool for companies to calculate and report their carbon footprint throughout their supply chain according to European Commission standards. Plan Be Eco supports the process of achieving climate neutrality, not only by calculating the carbon footprint, but also by automatically establishing reduction plans and offset strategies.

1.4 **Reporting scope**

This report covers greenhouse gas emissions produced
from January 1, 2023 to December 31, 2023.
It includes emissions produced by stationary and mobile sources (car fleet), fugitive emissions resulting from the use of air conditioning, and from the purchase of electricity and heat from a distributor.

1.5 The report

- Calculation and interpretation of carbon footprint, which will enable locating the sources of the largest emissions
- Preparing reduction recommendations for implementation here and now to start the path to climate neutrality
- Demonstration of the company's commitment to environmental protection and corporate social responsibility
- Increasing the attractiveness of the company as an employer, employer branding benefits

1.6 Organizational boundaries considered for this reporting period

The organizational boundaries have been defined in accordance with the principles contained in the GHG Protocol and the ISO 14064-1:2006 guidelines. The GHG Protocol provides for two different strategies for consolidating greenhouse gas emissions: a capital-based approach and a control approach (financial or operational).

1.7 Organizational business units excluded from inventory

N/A

Theoretical introduction

Familiarize yourself with the report terminology

2.1 Carbon Footprint

Carbon footprint is the total amount of greenhouse gases emitted as a result of a company's direct and indirect activities. Usually expressed in kilograms or tonnes of CO2 equivalent (kg or t CO2 e)[2] [2]

2.2 Greenhouse gases (GHG)

GHG are gases in the Earth's atmosphere that cause the greenhouse effect - they contribute directly to climate change by increasing the Earth's average temperature. The most common anthropogenic greenhouse gases in the atmosphere are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (NO_2). The largest anthropogenic producers of greenhouse gases are the energy, agriculture, and industry sectors.

2.3 Greenhouse gas emissions range

The report was prepared in accordance with the GHG Protocol guidelines. It takes into account direct emissions covered by scope 1, and indirect emissions covered by scope 2 and 3.

Scope 1

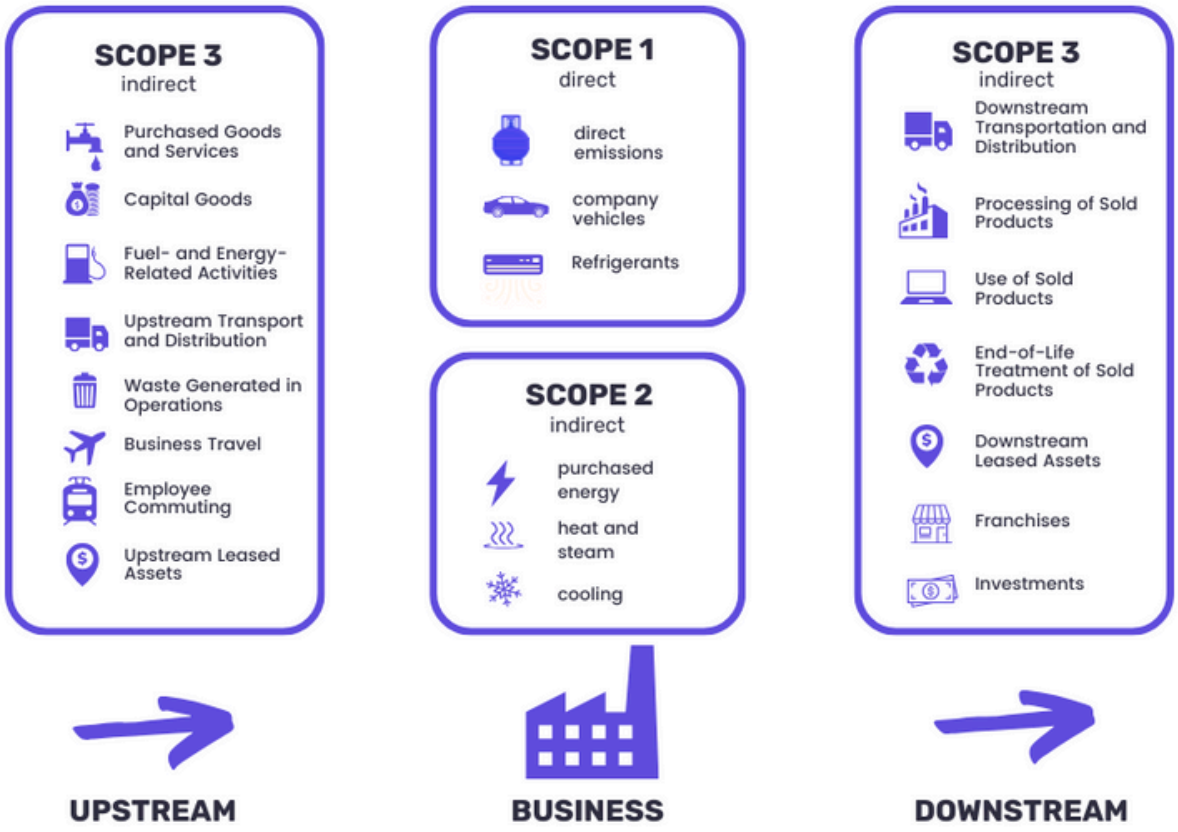
From sources controlled or owned by the organisation (own transport - company car; emissions related to fuel combustion in boilers, furnaces, etc.)

Scope 2

Greenhouse gas emissions resulting from the generation of purchased or acquired electricity, heating, cooling and steam used by the organisation.

Scope 3

These are all indirect emissions, across a company's entire value chain. 15 different categories divided into 2 groups - upstream (cradle to gate) and downstream (cradle to grave).



2.4 Photo: Net Zero

Net-zero has become a dominant guideline for governments, regions, organizations and corporations. To achieve Net Zero status, a company must first reduce its emissions (e.g. by setting Science-Based Targets) and then compensate (offset) the emissions that cannot be reduced.

2.5 Standard GHG Protocol

This report was prepared based on ISO14064-1:2019 Part 1 and the GHG Protocol, which are international standards for reporting greenhouse gas emissions.

2.6 Emission compensation

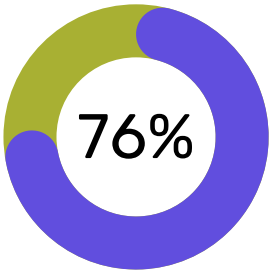
Impossible-to-reduce emissions can stand in the way of improving a company's impact on the planet. The answer to this challenge is greenhouse gas emissions offsets, made using recognized offset credits.

Why is it so important?

Climate change is no longer a story of the future. Its effects and consequences are visible on every continent of our Planet. The main cause of climate change is the burning of fossil fuels by humans. They emit greenhouse gases into the atmosphere. The consequences of climate change have begun to appear in the form of extreme weather events, water and food shortages, fires and heavy floods.

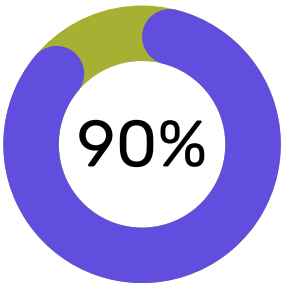
1,2°C This is how much the Earth's temperature has increased since the industrial revolution. The critical limit is 1.5°C, beyond which the effects of climate change may be irreversible.

In order to systematize ESG reporting (the impact of business on the environment, social issues and corporate governance), the EC approved the introduction of the CSRD directive. In 2024, the number of companies subject to the CSRD directive in the European Union will increase by about 35% compared to the previous year and is estimated to concern up to 50,000.



companies plan to restructure teams to better align ESG goals with business strategy

1400 that is how many companies are covered by the obligation in Poland reporting in accordance with CSRD, which is approximately 40% more than in 2023.



organizations will increase their ESG investments in the next 3 years

The European Commission has recommended a 90% reduction in greenhouse gas emissions by 2040, based on 1990. This recommendation is in line with the recommendations of the European Science Advisory Board on Climate Change (ESABCC) and the EU's commitments under the Paris Agreement.

Business plays a key role in the global effort to combat climate change.

Methodology

Basics of carbon footprint calculation methodology.

3.1 There are several globally recognized methodologies and standards for calculating carbon footprints. The MerchUp report was prepared by Plan Be Eco based on the GHG Protocol, company-collected data, and emission indicators:

- Greenhouse gas reporting: conversion factors 2019. DEFRA
- The National Centre for Emissions Management (KOBiZE)
- EPA
- EXIOBASE
- BEIS
- A Carbon Footprint for UK Clothing and Opportunities for Savings
- Toyoshima's
- Circular Ecology
- Tauron

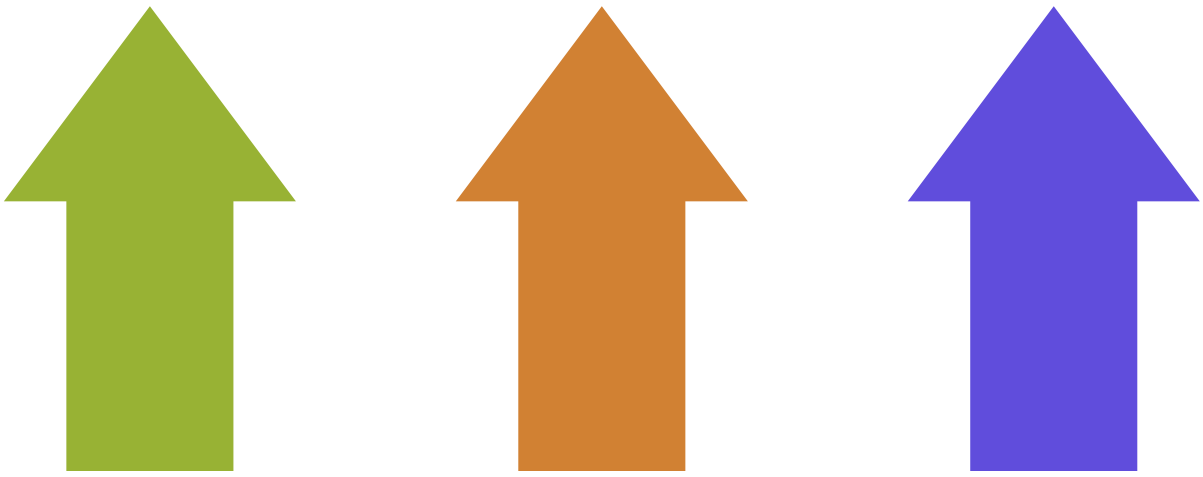
3.2 Electricity was calculated using the market based method, which involves directly collecting data on greenhouse gas emissions emitted per unit of energy from the producer.

Reporting scope

Know the boundaries within which GHG emissions calculations were made.

4.1 GHG emission sources included in the report

- **Scope 1 - direct emissions from mobile, stationary and fugitive sources**
- **Scope 2 - indirect emissions from purchased electricity and heat**
- **Scope 3 - Indirect Emissions from the Supply Chain**



SCOPE 1

direct emissions

SCOPE 2

indirect emissions

SCOPE 3

indirect emissions

Joanna Maraszek

Chief Sustainability Officer, Co-Founder

PLAN BE ECO

A carbon footprint is the best way to measure the impact we have on the environment - whether it's a product, a company, or simply our lives.

Today, by calculating this carbon footprint, we are able to diagnose where our largest sources of emissions are and manage them. And in fact, in the face of the climate catastrophe we are experiencing today, every reduction of greenhouse gases in the atmosphere is crucial.

That is why it is so important for businesses, governments, local governments and simply people to take actions to reduce the carbon footprint.

And how do you start? Calculate.

Carbon Footprint Results

The carbon footprint achieved by MerchUp in 2023.

Total carbon footprint

The company's total carbon footprint for the period 01/01/2023 - 31/12/2023 is 1,125 tons CO_2e.

390 t CO_2e

Range	Mg CO_2e
Scope 1	5
Range 2	1
Range 3	384

Table 1. Distribution of the organisation's carbon dioxide equivalent emissions into Scope 1, 2 and 3.

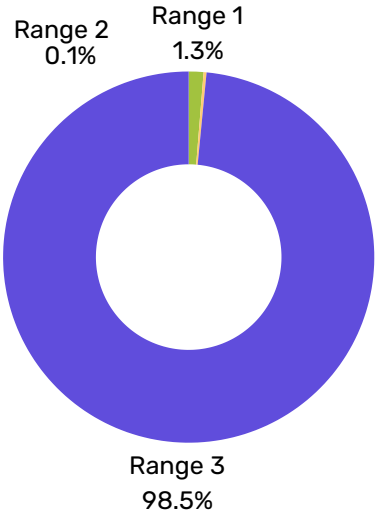


Figure 1: Distribution of Scope 1, 2 and 3 Shares in an Organization's Carbon Footprint

More than 99% of the company's emissions are in scope 3. A significant contributor to emissions is purchased goods and services, which account for 30% of total reported emissions.

GHG emission sources included in carbon footprint calculations - breakdown by reporting categories

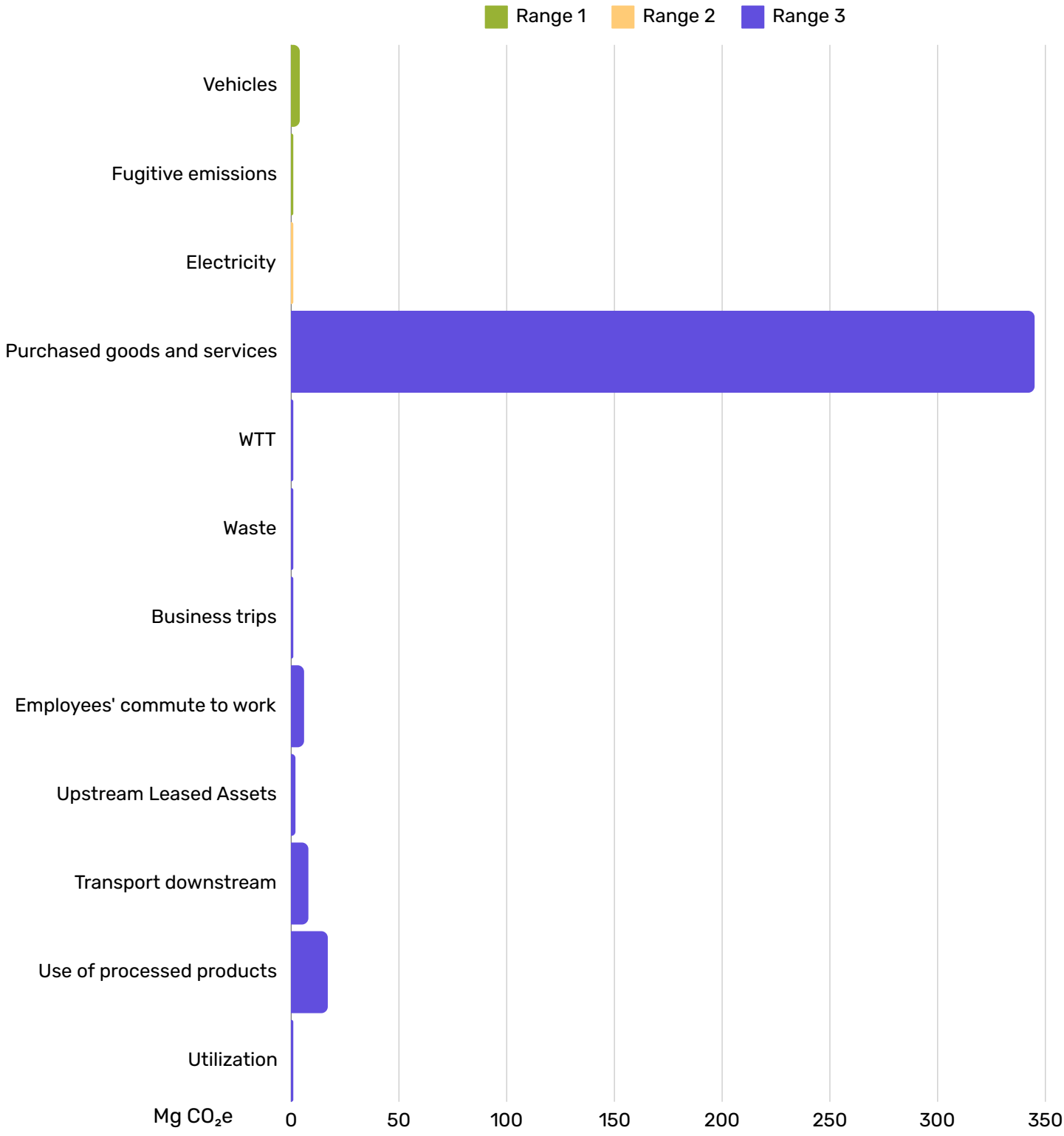
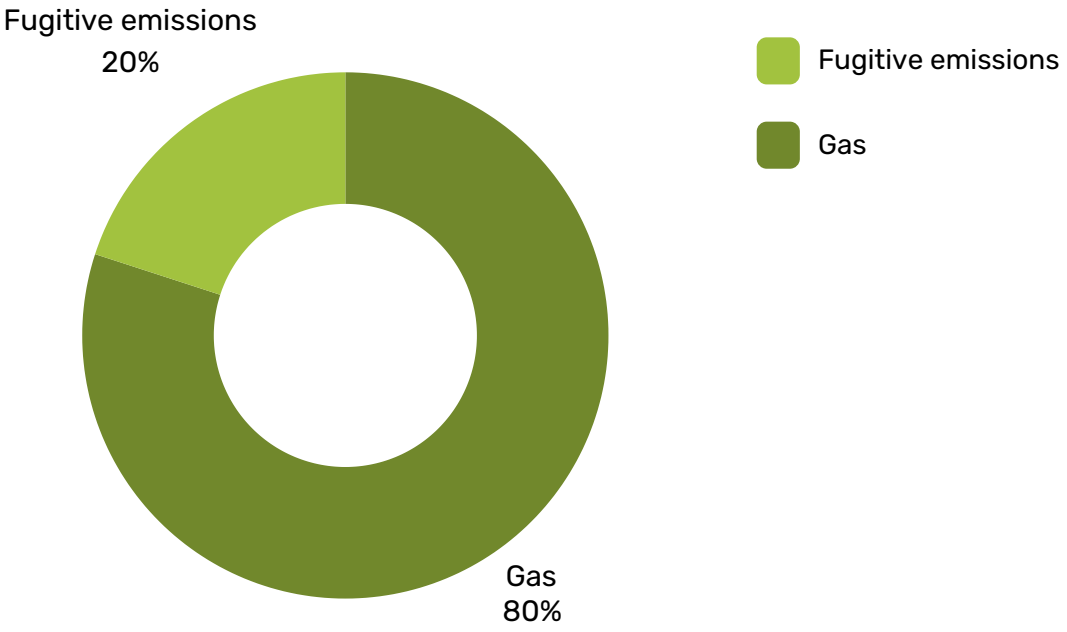


Figure 2: Division of greenhouse gas emission categories

5.1 Scope 1

Direct emissions resulting from fuel combustion in properties, vehicles belonging to the organization. We will also find fugitive emissions here - resulting from leaks from air conditioning installations.

5 Mg CO_2e



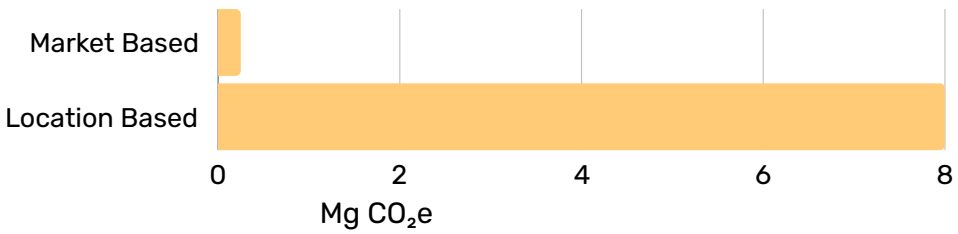
Scope 1 emissions are dominated by vehicle emissions, accounting for 80% of all Scope 1 emissions.

5.2 Scope 2

Indirect emissions resulting from the purchase of electricity and heat from suppliers.

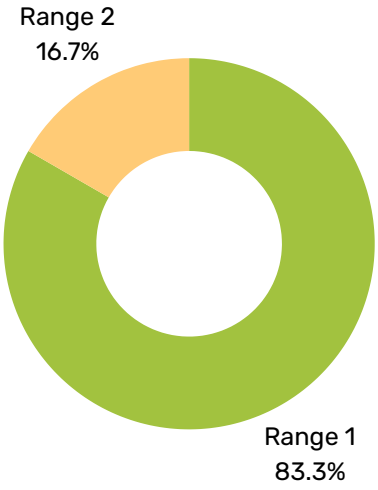
1 Mg CO_2e

5.2.1 Comparing market-based to location-based energy



Emissions resulting from electricity were calculated using the Marked-based method - based on data from the supplier (Engie).

5.2.3 Scope 1-2 Summary



In Scope 1-2, almost 67% of emissions are from fuels resulting from vehicle use.

6 Mg CO_2e
For the entire organization

0.24 Mg CO_2e
For 1 employee

5.2.4 Data Summary

Range	Category	Subcategory	Mg CO2e
Range 1			5
	Vehicles		4
		Gas	4
	Fugitive emissions		1
		Refrigerant R32	1
Range 2			1
	Electricity		<0.5
		Market Based (Engie)	<0.5
		Location Based	8
	Warm		1

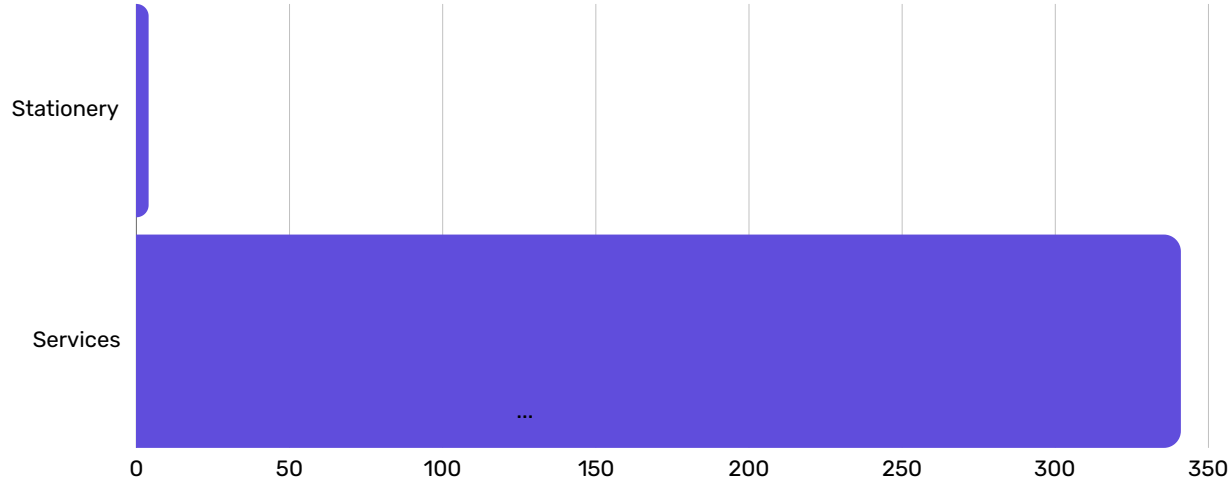
Range 3

Emissions from the supply chain, upstream and downstream.

98,8%

Emissions in purchased goods and services are Services

5.3.1 Purchased goods and services

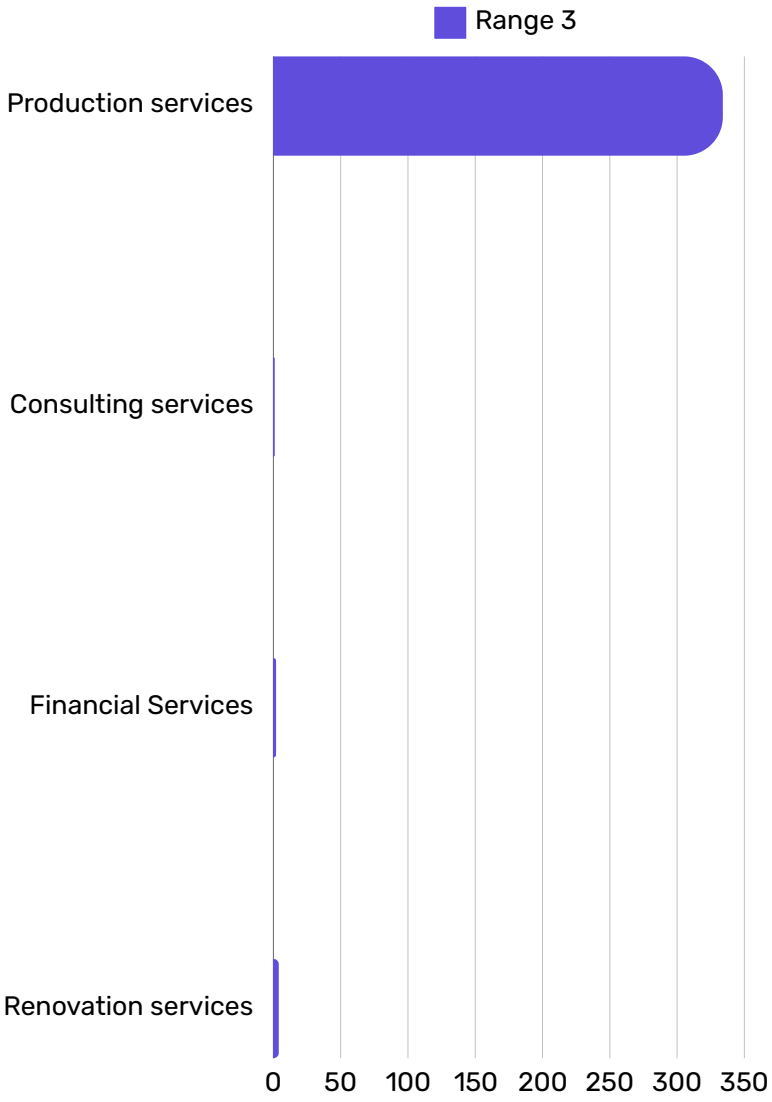


Purchased goods and services	Mg CO2e
Stationery	4
Services	341

345 Mg CO2

Purchased goods and services

Services



Services	Mg CO2e
Production services	334
Consulting services	1
Financial Services	2
Renovation services	4

The largest share in the “Purchased goods and services” category is made up of production services, which are a key element of MerchUp’s business.

5.3.2 WTT

Emissions from fuel production not covered by scope 1 and 2.

1 Mg CO_2e

WTT

Energy carrier	Mg CO2e
Gas	1
Electricity	<0.5

5.3.4 Waste

Waste resulting from the company's operations. Waste was counted using the average data method based on the mass and volume of fractions.

1 Mg CO_2e

Waste

Means of transport	Mg CO2e
Mixed waste	1
Paper	<0.5

5.3.5 Business trips

Business trips were counted using the spent-based method based on the cost of the service.

1 Mg CO_2e

Business trips

Means of transport	Mg CO2e
Hotels and restaurants	1
Transport	<0.5

5.3.6 Employees' commute to work

MerchUp employees answered the questions independently. Sample n=20.

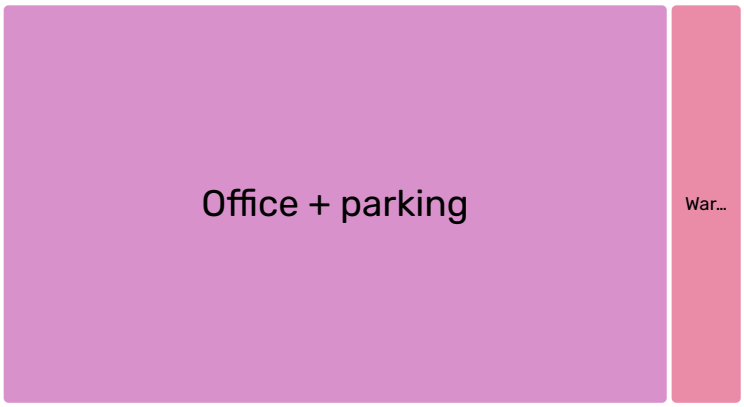
8 Mg CO_2e

Employee commutes

5.3.6 Upstream Leased Assets

These are rented office space and warehouses for the company's business needs.

2 Mg CO_2e
Upstream Leased Assets



Means of transport	Mg CO2e
Office + parking	2
Warehouses	<0.5

5.3.7 Transport downstream

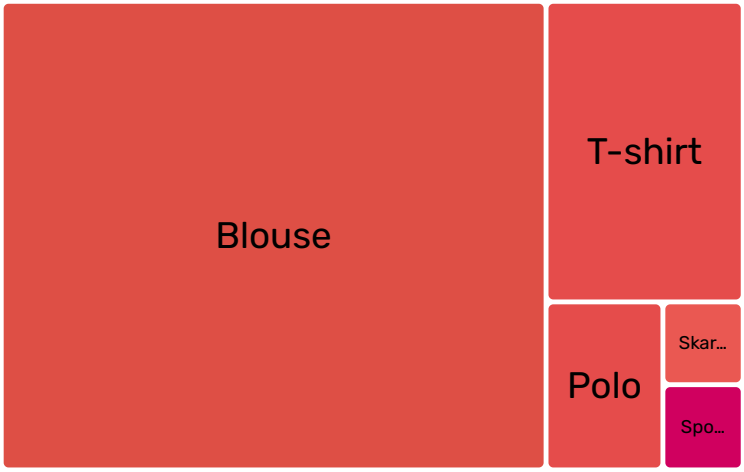
Transportation was calculated using the supplier-specific method based on carbon footprint data directly from the transportation company.

8 Mg CO_2e
Transport downstream

5.3.8 Use of sold products

Emissions resulting from the use of products sold by MerchUp have been calculated based on washing of garments.

17 Mg CO_2e
Product use



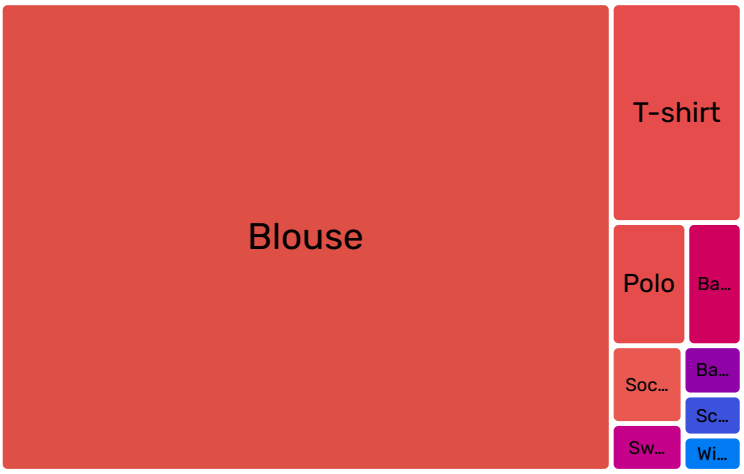
Product use (washing)	Mg CO2e
Blouse	13
Polo	1
Socks	<0.5
Sweatpants	<0.5
T-shirt	3

5.3.9 Disposal of sold products

Emissions resulting from the disposal of products sold by MerchUp have been calculated based on the weight of the garment.

1 Mg CO_2e

Product disposal



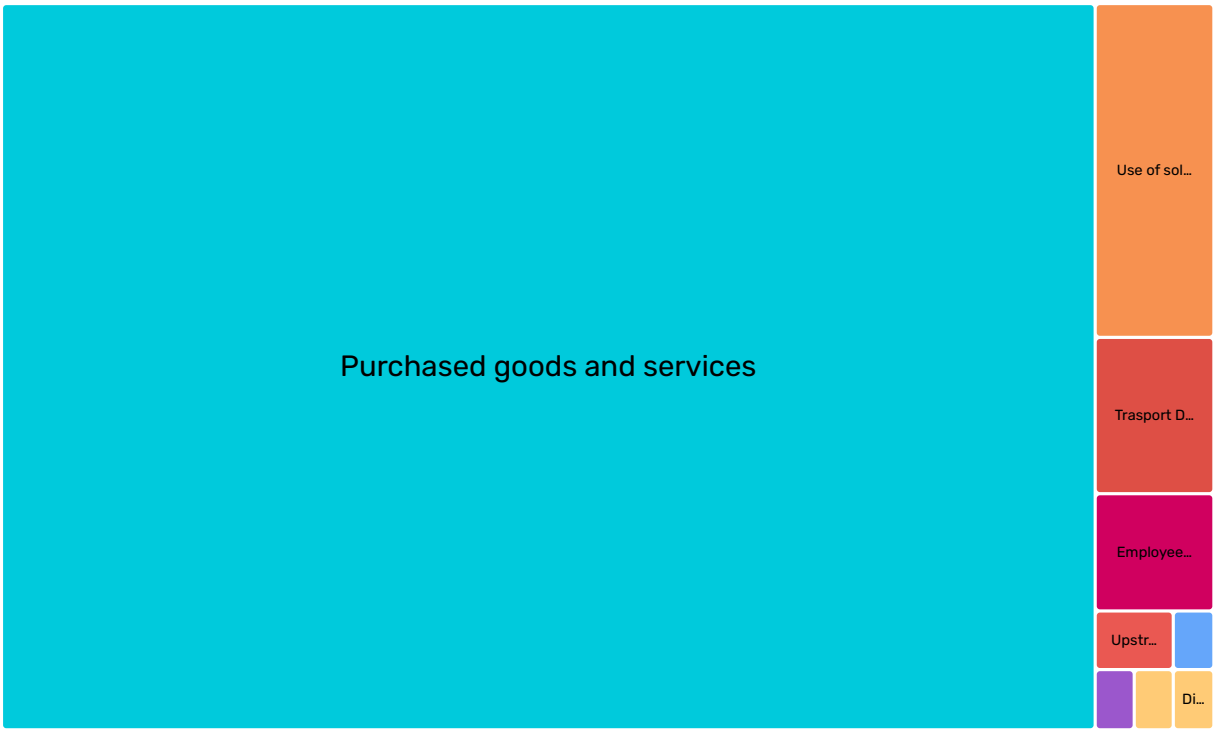
Product disposal	kg CO2e
Blouse	606
T-shirt	60
Polo	20
Socks	12
Bags	11
Bags	4
Sweatpants	8
Baseball caps	6
Winter hats	4
Scarves	5

5.3.10 Data Summary

Range	Category	Subcategory	Mg CO2e
Range 3			384
	1. Purchased goods and services		345
		Services	341
		Stationery	4
	2.WTT		1
		Gas	1
		Electricity	<0.5
	3.Waste		1
		Mixed up	1
		Paper	<0.5
	4. Business trips		1
		Hotels + restaurants	1
		Transport	<0.5
	5. Employees' commute to work		6
	6. Upsteam Assets for Lease		2
		Office + parking	2
		Warehouses	<0.5
	7. Transport downstream		8

Range	Category	Subcategory	Mg CO2e
	5. Use of sold products		17
		Blouse	13
		Polo	1
		Socks	<0.5
		Sweatpants	<0.5
		T-shirt	3
	5. Disposal of sold products		1
		Blouse	0,606
		T-shirt	0,060
		Polo	0,020
		Socks	0,012
		Bags	0,011
		Bags	0,004
		Sweatpants	0,008
		Baseball caps	0,006
		Winter hats	0,004
		Scarves	0,005

5.3.11 Scope 3 Summary



The largest share in the category “Purchased Goods and Services” is production services, which are a key part of MerchUp’s business. The largest share in scope 3 is the disposal of sold products. These emissions account for over 65% of all emissions in this scope.

5.4 Indicators:

Emissions for the entire organization in 3 ranges

390 Mg CO_2e

For the entire organization

15.59 Mg CO_2e

For 1 employee

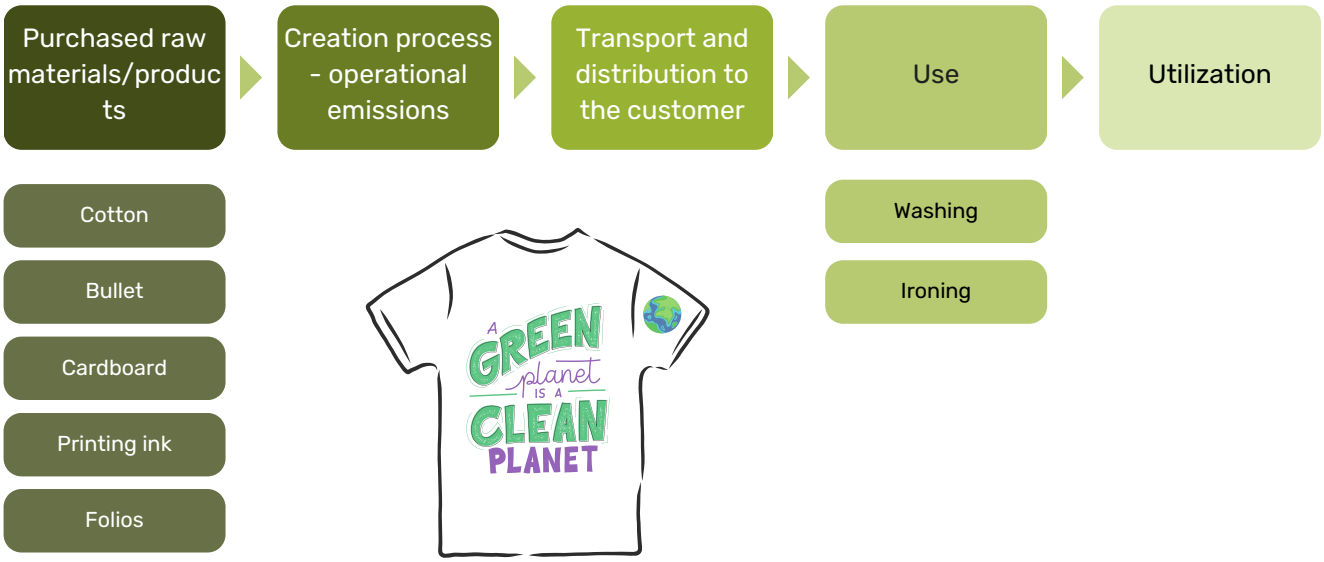
Product Carbon Footprint

6.1 Product Carbon Footprint

A product's carbon footprint focuses specifically on what emissions a product has associated with its production, use, and disposal. A product's carbon footprint is typically expressed, as is the case for companies, as carbon dioxide equivalents (CO2e) and measures the amount of greenhouse gas emissions released during the full life cycle of a product, including raw material extraction, production, distribution, consumer use, and final disposal or recycling.

A product's carbon footprint provides insight into a product's environmental impact and helps identify opportunities for improvement and sustainable design. Knowing this will help you choose the right energy sources to use during production, materials, transportation methods, and recycling or waste management practices.

6.2 Example of a product emission scheme



6.3 Carbon Footprint of MerchUp Products

To calculate the product's carbon footprint, the company selected two of its flagship products: a cotton T-shirt with a print in size M and a printed sweatshirt made of a cotton/polyester mix in size M. Product emissions were calculated in accordance with the GHG Protocol's product carbon footprint guidelines.

6.4 Carbon Footprint of a T-shirt

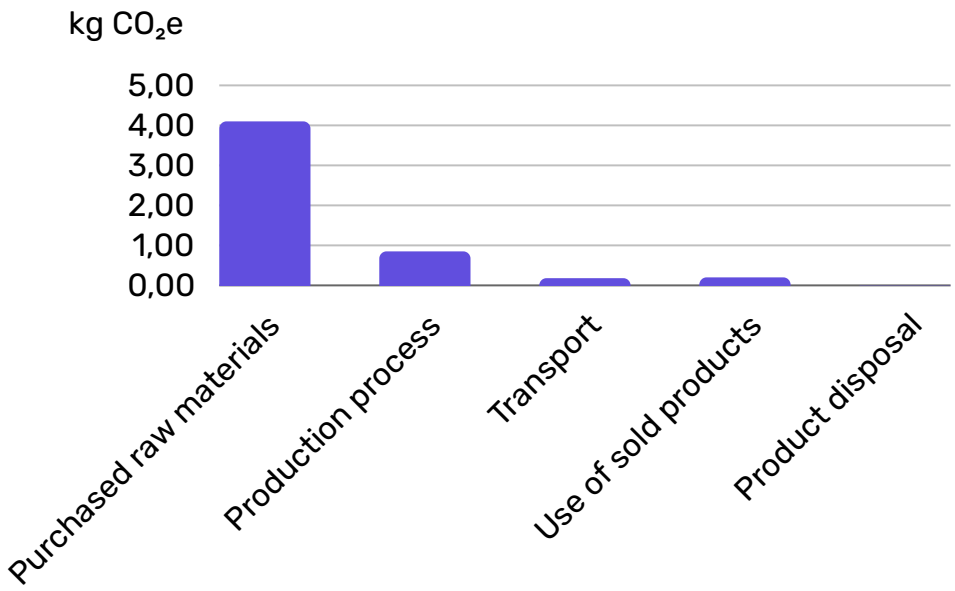
6.4.1 Delivery to Paczkomat® device

A printed cotton T-shirt was selected for the calculations. The entire production process is carried out by an external company.

The purchased raw materials include emissions related to the fabric from which the product was sewn. The production process results from the activities of an external service provider (sewing, printing, packaging). Transport to the customer was calculated based on a report prepared by the InPost carrier. The usage scenario takes into account washing, and disposal is related to the process of disposal of textile products.

5,33 kg CO_2e
Carbon footprint of a T-shirt delivered to Paczkomat®

Category	kg CO_2e
Purchased raw materials	4,0960
Production process	0,8504
Transport	0,4880
Use of sold products	0,1956
Product disposal	0,0036
Addition	**5,33**



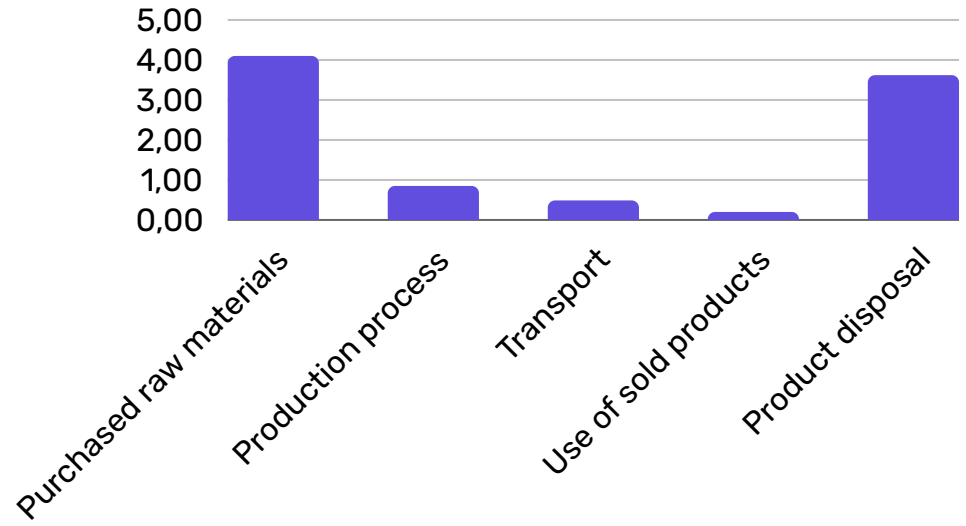
6.4.2 T-shirt package to door

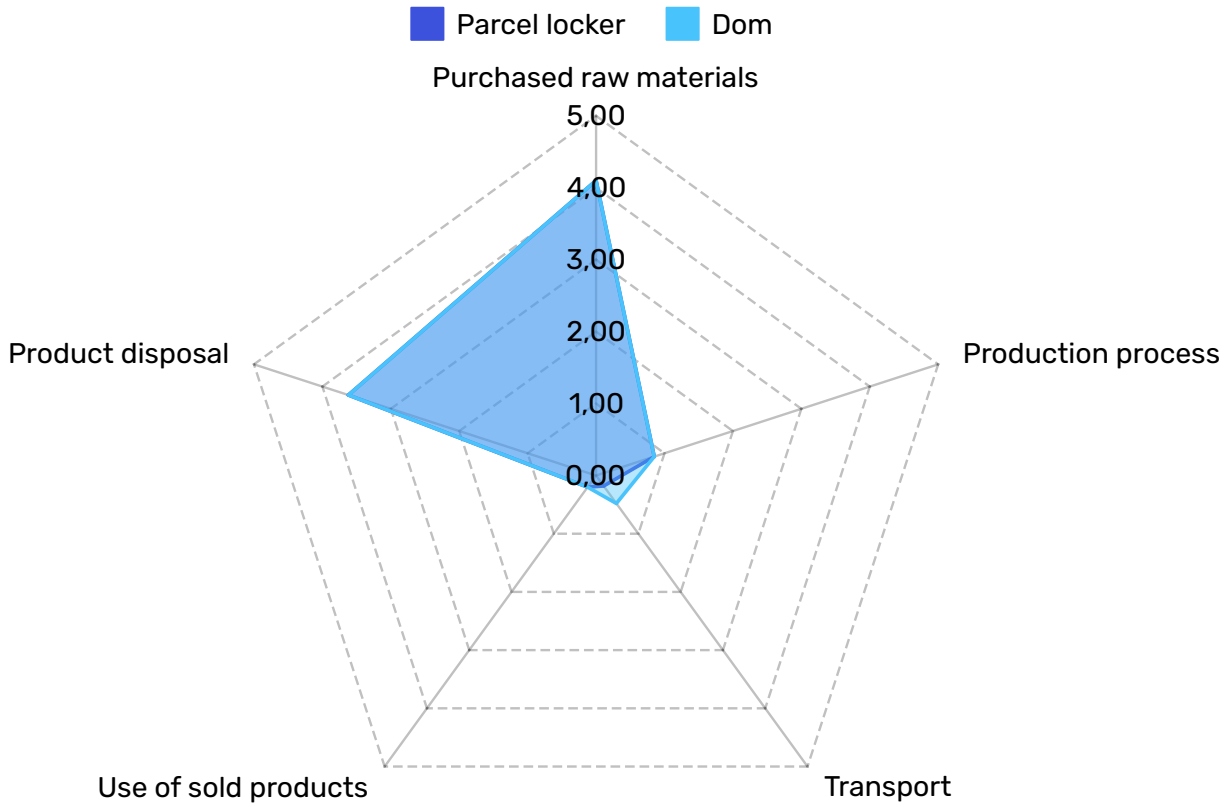
The calculations differ from the first variant in the carbon footprint associated with the last mile. The results below will show the difference between a parcel in a parcel locker and one delivered to your hands.

Transporting the product to the customer's home increases the carbon footprint of the counted T-shirt by 3%.

5,6336 kg CO_2e
Carbon Footprint of a Home-Delivered T-Shirt

Category	kg CO_2e
Purchased raw materials	4,0960
Production process	0,8504
Transport	0,4880
Use of sold products	0,1956
Product disposal	0,0036
Addition	**5,6336**





6.5 Carbon Footprint of a Sweatshirt

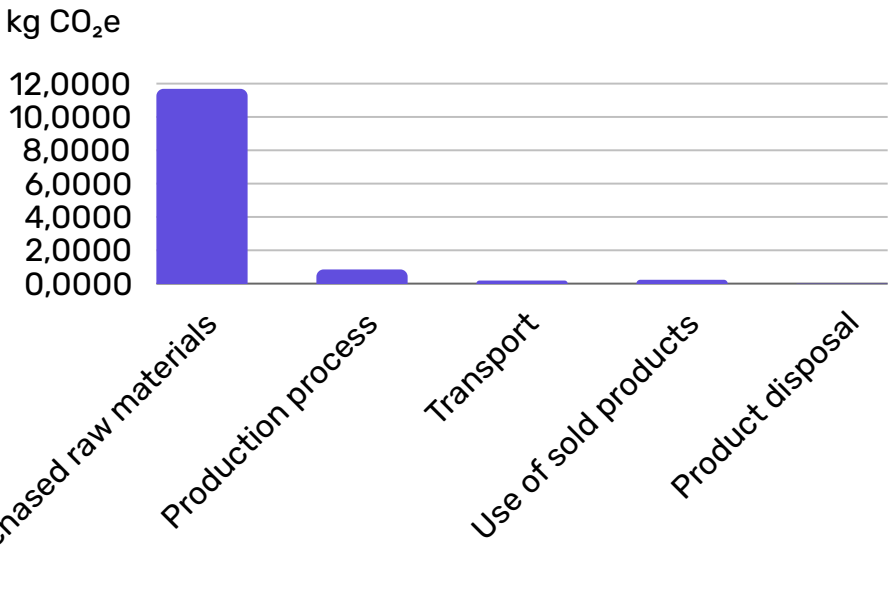
6.5.1 Delivering the sweatshirt to the Paczkomat® device

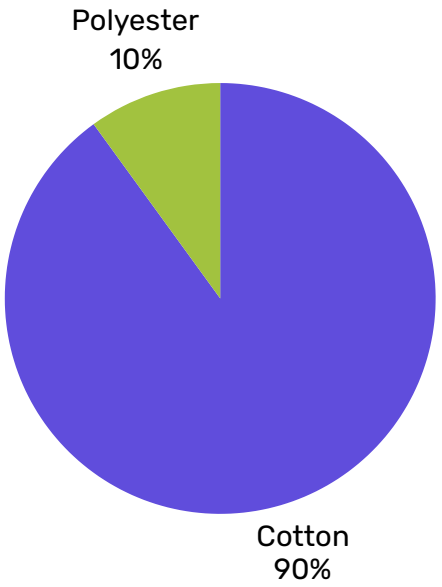
A sweatshirt made of a cotton and polyester blend (90% cotton, 10% polyester) with a print was selected for the calculations. An external company is responsible for the production process (sewing, printing and packaging).

12,9616 kg CO_2e

Carbon footprint of a sweatshirt delivered to Paczkomat®

The purchased raw materials include emissions related to the fabric (cotton and polyester mix) from which the product was sewn. Production process emissions result from the activities of an external service provider. Transport to the customer was calculated based on a report prepared by the InPost carrier. The usage scenario takes into account washing, and disposal is related to the process of disposal of textile products.





Category	kg CO_2e
Purchased raw materials	11,6865
Production process	0,8504
Transport	0,1840
Use of sold products	0,2301
Product disposal	0,0106
Addition	**12,9616**

6.5.2 Package with a sweatshirt for home

The carbon footprint of a sweatshirt delivered directly to the customer is 23.8950 kg CO_2e

13,2656 kg CO_2e

Carbon footprint of a sweatshirt delivered to your door

Reduction recommendations

7.1 Obtaining carbon footprint data from sewing rooms, factories and other suppliers.

Due to the lack of available data, the carbon footprint of the production process - the execution of the final product was calculated using the financial method (spend-based). This method allowed for the capture of the entire scope of the company's 3 emissions, while in subsequent years we recommend obtaining more precise data on the emissions of subcontracting companies.

If you are not willing to share your data, we recommend considering another subcontractor.

7.2 Origin of semi-finished products

We recommend that you make sure that subcontractors (suppliers, sewing factories) offer semi-finished products from the most sustainable sources possible. It is worth verifying whether the cotton is certified by the Polish Cotton Chamber or Oeko-Tex Standard, similarly whether the offered printing technologies (ink, sublimation powder, thermotransfer foil, threads in the case of computer embroidery) also meet safety standards and come from local suppliers. We recommend that you make sure that the packaging service can be replaced with more ecological methods such as cardboard and tapes without plastic, paper fillings, or even recycled packaging.

7.3 Product disposal

The specificity of the clothing industry means very little impact on the final recipient and how they use and dispose of clothes. In the case of so-called corporate clothing, i.e. signed with the company logo, we recommend persuading clients to use patterns and types of clothing that will serve the final recipient for years.

Offsets

According to the Carbon Offset Research and Education Program, high-quality carbon offset credits must be tied to greenhouse gas reductions or removals that are:

- Additional - i.e. they show reductions above the base scenario
- Undervalued - i.e. calculated conservatively
- Durable - i.e. their effect lasts over time
- Not reported by another entity
- Does not cause significant social or environmental damage

This can be achieved by ensuring that emissions come from projects that have been independently audited against leading external certification standards such as ISO 14064 or others.

Projects should also contribute to the implementation of the UN Sustainable Development Goals Agenda.

8.1 Types of carbon offset projects

- Forestry and nature conservation (recommended)
- Renewable energy
- Social projects

8.2 Project certification

All carbon reduction projects should be approved by recognized external organizations such as:

- The Gold Standard
- Worse

8.3 How to purchase offset units?

Directly: Carbon credits can be traded directly from project developers such as:

- GSS CERT

Indirectly: Carbon credits can be purchased through brokers,
such as:

- You turn
- Carbonfund

Summary

This report was prepared on the basis of the GHG Protocol in scope 1,2,3 for the MerchUp company for the accounting period 01/01/2023 - 31/12/2023.

MerchUp's total greenhouse gas emissions across its entire value chain amount to 1,125 tonnes of CO_2e equivalent.

The report was prepared by:

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