Vinted × vaayu

2023

Climate Change Impact Report

Understanding the Avoided Emissions of Second-Hand Shopping on Vinted

Contents

Chapter 1

Introduction

1 Introduction

The retail industry is responsible for 25% of global carbon emissions, with the fashion sector alone responsible for 4%[1]. Circular business models are crucial in mitigating this impact, helping to avoid emissions[2], but until recently, accurate data to quantify their effects at scale was missing.

Vaayu leads the charge in driving circularity adoption by providing unmatched granular data and groundbreaking benchmarks. Partnering with Vinted since 2021, Vaayu has been continuously iterating the data, making the modelling more detailed and improving accuracy, committed to creating high-quality analysis on the impact potential of recommerce business models.

Using the methodology developed in 2021 and used for the first time for the 2021 Vinted Climate Impact Report, Vaayu together with Vinted continued to build the largest-ever dataset on the climate impact of shopping second-hand online and at scale.

In 2023 Vaayu analysed Vinted transactions alongside insights from 94,000 Vinted members using advanced proprietary AI and machine learning technology.

> Vinted's marketplace avoided 678,691 tonnes CO_2e emissions from 1 January 2023 to 31 December 2023, equivalent to approximately 256,207[3] round-trip flights between London and Los Angeles.

Extending the lifespan of clothing and promoting product circulation are vital strategies in reducing the fashion industry's climate impact. This research not only supports Vinted and its members but also serves to better the industry's carbon literacy surrounding the significant climate change potential of second-hand shopping.

1. WeForum, 2022.
2. Avoided emissions are emission reductions that occur outside of a product's life cycle or value chain, but as a result of the use of that product.
3. Computed using Kria, Vaayu's proprietary LCA Impact Modelling Engine and database.

Chapter 2

About

ABOUT VINTED

Vinted was founded in 2008 in Lithuania and in 2019 became the country's first Unicorn. Today Vinted is still headquartered in Vilnius, with offices in Lithuania, Germany and the Netherlands, and over 2,000 employees.

The Vinted Marketplace is Europe's leading international online C2C[4] marketplace dedicated to second-hand fashion, with a growing community of members across Europe and beyond. With a mission to make second-hand the first choice worldwide, Vinted enables people to sell and buy second-hand clothes and lifestyle items from each other, helping give those items a second or even third life.

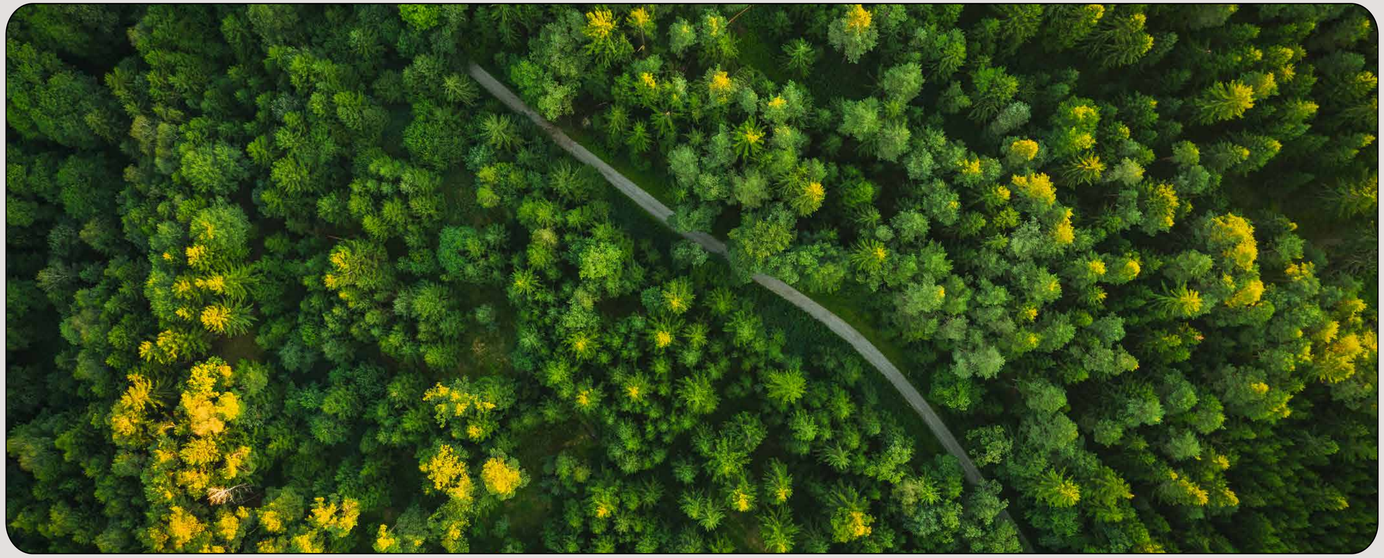
Vinted Go launched in 2022 with a focus on developing products and solutions for more seamless shipping and delivery, connecting more than 200,000 PUDO[5] points across Europe to support the delivery of millions of parcels per year.

4. Consumer-to-consumer (C2C).

5. A location that offers a parcel Pick-Up and Drop-Off (PUDO) service as part of a wider network of these locations.

ABOUT VAAYU

Vaayu is the world's first automated software empowering brands and businesses within the retail industry to track and cut their carbon and environmental impact in real-time.



By leveraging proprietary AI and machine learning technology, Vaayu calculates impacts like emissions, water and waste across product, packaging and logistics using certified life cycle assessment (LCA)[6] methodology to provide granular insights and inform data-driven decision-making.

Named one of TIME's Best Inventions[7] and with more than 100 brand partners, Vaayu has pioneered research into the climate impact potential of circular business models and calculated product footprints at scale for partners including Klarna, New Balance and Redcare Pharmacy.

6. A systematic method for evaluating the environmental impacts of a product or service throughout its entire life cycle, from raw material extraction to disposal.

7. Vaayu is one of TIME's Best Inventions 2022 in the Sustainability category.

Chapter 3

Key Findings

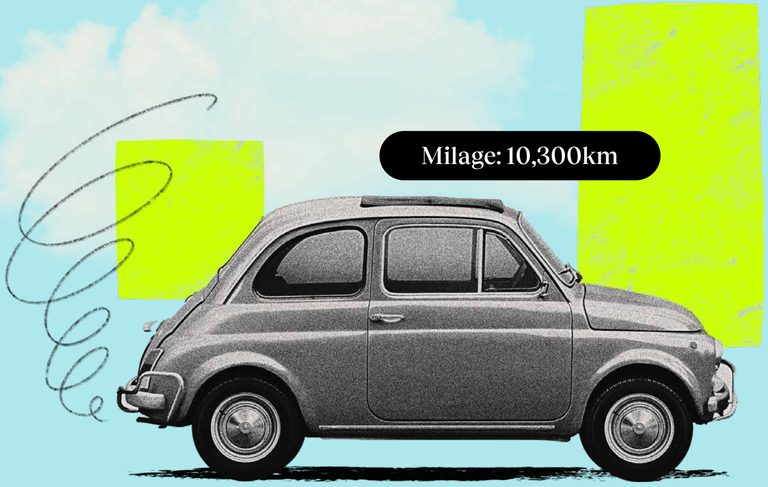
678,691 tonnes CO_2e avoided

by the Vinted Marketplace in total

This is equivalent to:

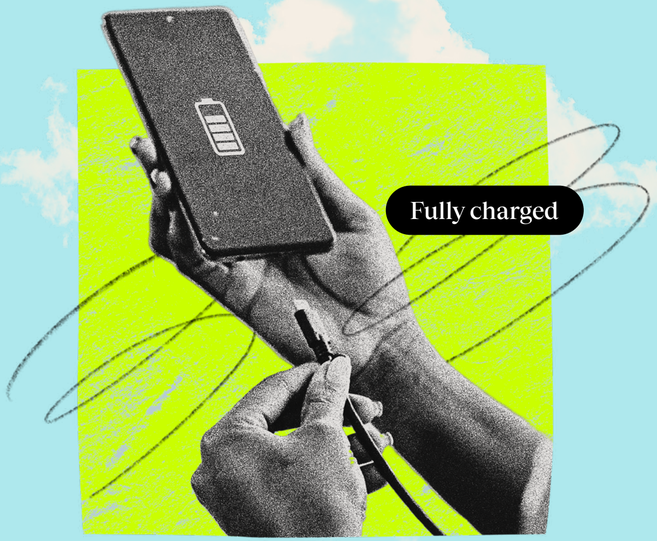
230,106[8]

cars driving for more than one year, based on 10,300 km, the EU annual average



75 billion[9]

smartphones fully charged



256,207[10]

round-trip flights between London and Los Angeles

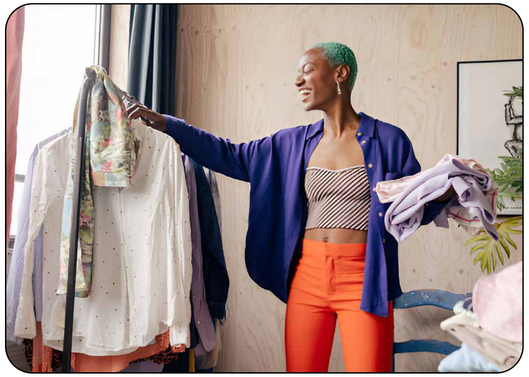
8. EPA.GOV, Greenhouse Gas Equivalencies Calculator. Odyssee-mure.eu, Sectorial Profile - TRANSPORT, Change in Distance Travelled by Car.
9. EPA.GOV, Greenhouse Gas Equivalencies Calculator.
10. Computed using Kria, Vaayu's proprietary LCA Impact Modelling Engine and database.

Avoided Emissions

1.25 kg CO_2e

avoided per second-hand item

compared to buying new



2 in 5

purchases replaced a new item

The Replacement Rate (40%) was calculated to quantify how many first-hand purchases were displaced by the purchase of a second-hand Vinted product instead.

Average emissions avoided per item within product categories:

2.44 kg CO_2e

avoided by men's suits and blazers

2 kg CO_2e

avoided by women's jeans

Created Emissions

1.35 kg CO_2e

were the delivery emissions per item

27,104 tonnes CO_2e

Operational footprint

71 g CO_2e

average packaging emissions per item

Chapter 4

About the Report

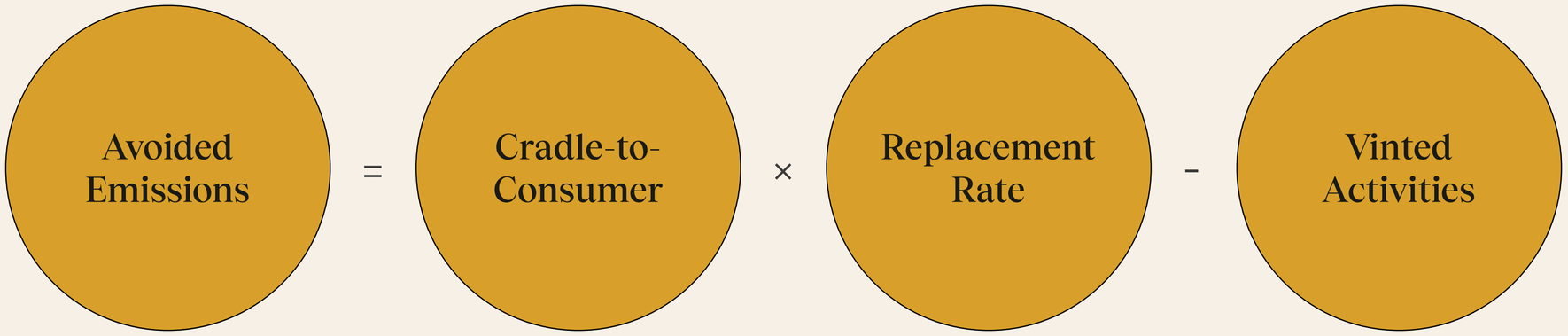
4 About the Report

This report analysed the environmental benefits of buying second-hand clothes on Vinted compared to new items in 2023. It focused on measuring the carbon emissions saved through consumer-to-consumer (C2C) purchases on Vinted and assessing the overall climate impact of the marketplace.

The research aimed to accurately measure emissions savings using a consequential life cycle assessment (LCA) method, which considers the broader system impacts beyond single transactions. This method requires extensive data. Information from 2023 transactions was analysed using Vaayu's technology to track detailed transport emissions.

Building on the largest dataset to reflect the actual shopping habits of over 350,000 Vinted members for the initial 2021 report, Vaayu and Vinted surveyed 94,000 more members in 2023, bringing the total surveyed since 2021 to more than 444,000. This data helped identify how often and why members choose second-hand items over new, enabling a more precise calculation of the emissions avoided.

The use of consequential LCA is crucial within these methodologies, as it captures the broader environmental consequences of a product or service, including indirect effects and avoided emissions.



In line with the World Resource Institute's recommendations on calculating comparative emissions impacts of products.

Chapter 5

Scope & Methodology

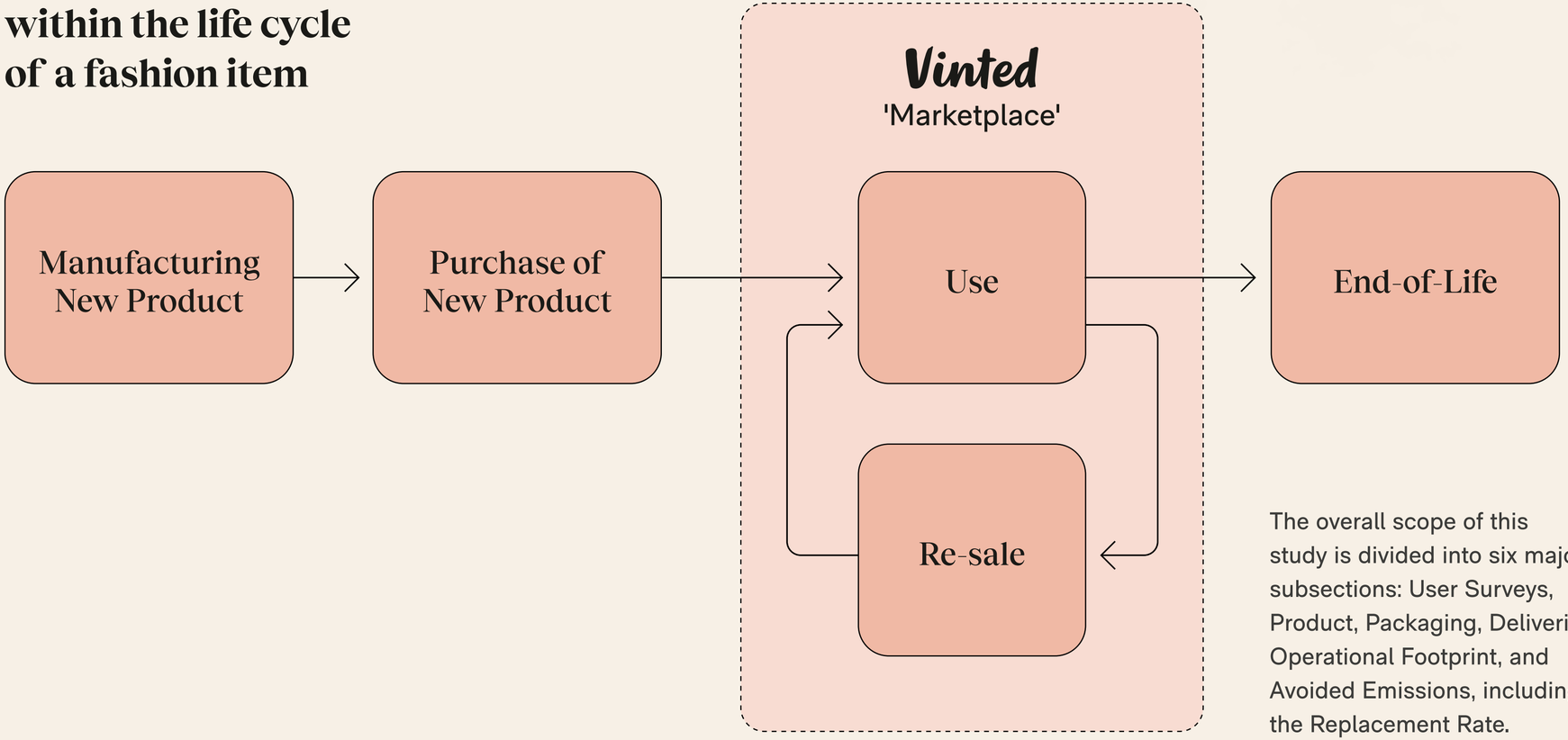
5 Scope & Methodology

5.1 SCOPE

This section provides an overview of the study, explaining its main focus, the limitations set, and the assumptions made. It also highlights the aspects that were not included in the analysis.

The diagram to the right illustrates Vinted's involvement in the life cycle of a typical fashion item. This life cycle typically starts with the item's production, followed by its purchase and use, and eventually culminates in its end-of-life. As Europe's leading international online C2C marketplace dedicated to second-hand fashion, Vinted facilitates the purchase and sale of second-hand fashion items. In most cases, Vinted's role occurs during a product's second life.

Vinted's role within the life cycle of a fashion item



The overall scope of this study is divided into six major subsections: User Surveys, Product, Packaging, Deliveries, Operational Footprint, and Avoided Emissions, including the Replacement Rate.

5.2 METHODOLOGY

Vaayu's methodology approach for this analysis is in line with the World Resource Institute's (WRI) recommendations[11] for calculating comparative product emissions.

Impacts from Production and Distribution (cradle-to-consumer)

- Data from all Vinted transactions in 2023 was computed using Kria[12], Vaayu's proprietary LCA Impact Modelling Engine and database, to estimate the carbon footprint of each fashion product sold on Vinted.
- Products for each category, such as a T-shirt, were matched with their equivalents in Vaayu's model using an average from a representative sample.

Impacts from Avoided Purchases (Replacement Rate)

- A Purchase Survey was sent to buyers to understand the reasons and motivations for shopping second-hand and how consumption habits have evolved since members began utilising Vinted.
- The Replacement Rate was updated again in 2023 to quantify how many first-hand purchases were avoided by purchasing second-hand on Vinted.
- The resulting analysis had over 94,000 member responses in 2023.

Impacts from Vinted Activities

- Data from all Vinted transactions in 2023 was analysed based on a model that combines carriers' live tracking data with accurate route-level data, including information on the fashion products purchased, packaging and delivery.
- Packaging impacts were calculated based on transaction information along with Vaayu's packaging estimation model which predicted the most likely packaging options used to approximate emissions.
- Vinted's Operational Footprint was calculated in line with the Greenhouse Gas (GHG) Protocol Corporate Standard[13], and the carbon emissions from relevant Scopes 1-3 emissions categories[14] were integrated into the analysis[15].

11. Russell, S., Estimating and reporting the comparative emissions impacts of products, World Resources Institute, 2019.
12. See section 7 Glossary for an explanation of this term.
13. GHG Protocol, Corporate Standard, The GHG Protocol Corporate Accounting and Reporting Standard.
14. See section 6.5 Operational Footprint and 7 Glossary for more on Scope 1, 2 and 3 emissions.
15. Emissions from a product's use and end-of-life were excluded from Vinted's Operational Footprint, based on Vinted's assessment of their operational responsibility as a C2C resale platform.

Chapter 6

Approach & Results

6 Approach & Results

6.1 USER SURVEYS

In 2023, the goal was to measure the impact of buying second-hand on Vinted instead of new, using the same methodology developed in 2021. For this, Vaayu conducted Purchase Surveys to gain clearer insights into the behaviour of Vinted buyers and determine the Replacement Rate of Vinted purchases for 2023.

Purchase Surveys

The Purchase Surveys were designed to collect firsthand information to estimate the carbon emissions saved through the sale of second-hand fashion items. Participants provided insights into their self-perceived actions, enabling an approximation of their actual behaviour.

Considering previous findings, which indicated no correlation between the season and the outcomes over two survey iterations, a decision was made to carry out a single iteration of the Purchase Survey in November-December 2023.

As such, in November 2023, 1.2 million Vinted buyers of fashion products and shoes were invited to participate in the survey that examined their experiences over the preceding 12 months. The chosen time frame was designed to ensure that respondents could accurately recall their purchases while also having sufficient time to receive and utilise the items.

In line with the approach adopted in the 2021 Vinted Climate Impact Report, transactions involving products labelled as "New With Tags" were omitted from the calculation of the Replacement Rate.

Heavy sellers[16] were included in the analysis; however, their purchases were assumed not to avoid emissions based on the assumption that heavy sellers may be using the Vinted platform for economic benefit, implying that their transactions would not replace first-hand purchases but would be additional purchases.

The survey analysis covered Belgium, France, Germany, Italy, the Netherlands, Poland, Spain, and the United Kingdom, which collectively accounted for the majority of Vinted transactions in 2023.

16. Heavy sellers were defined, for the purpose of this analysis, as users who had sold 60+ products in the last 90 days. This threshold was based on a qualitative assessment considering the activity of all users, where most users have significantly fewer transactions.

6.2 PRODUCT

In 2023, fashion products constituted 91% of Vinted's transactions. They were analysed to calculate the carbon emissions associated with each product sold.

This assessment included all product life cycle phases except for the use and end-of-life phases, which were not relevant for calculating the benefits from potentially avoided purchases.

To estimate the emissions avoided by purchasing second-hand on Vinted instead of new, it was crucial to calculate a fashion product's accurate 'baseline' carbon footprint, considering its entire life cycle. Kria, Vaayu's proprietary LCA Impact Modelling Engine and database, was used to calculate product climate impact from cradle-to-consumer of fashion items commonly sold on Vinted, excluding the use and end-of-life phases. This approach accurately mapped 67% of Vinted's total transactions in 2023.

For the remaining 33% of transactions on Vinted, primarily footwear and accessories, a weighted average over the processed transactions was used in the product life cycle impact calculations. The average impact of included products was used to estimate the carbon footprint of excluded items to evaluate the marketplace's total impact. The excluded items, that is, items without an exact match in Vaayu's Kria database, which had a higher production impact and a 45-50% Replacement Rate, likely resulted in an understatement of Vinted's avoided emissions for 33% of its products.

Average avoided cradle-to-consumer impact per item (CO_2e kg)

Women's Blazers	2.44 kg CO_2e
Men's Suits & Blazers	2.44 kg CO_2e
Women's Trousers	2.41 kg CO_2e
Men's Trousers	2.41 kg CO_2e
Men's Pullovers & Sweaters	2.33 kg CO_2e
Women's Pullovers & Sweaters	2.19 kg CO_2e
Men's Trousers & Jeans	2.00 kg CO_2e
Women's Jeans	2.00 kg CO_2e
Women's Dresses	1.50 kg CO_2e
Men's Outerwear	1.37 kg CO_2e
Women's Coats & Jackets	1.37 kg CO_2e
Women's Sportswear	1.24 kg CO_2e
Women's Jumpsuits	1.09 kg CO_2e
Women's Shorts & Capris	0.92 kg CO_2e
Men's Sportswear	0.92 kg CO_2e
Women's Skirts	0.86 kg CO_2e
Men's Underwear	0.46 kg CO_2e
Men's Tops & T-Shirts	0.45 kg CO_2e
Men's Swimwear	0.39 kg CO_2e
Women's Swimwear	0.39 kg CO_2e
Men's Shorts & Capri Pants	0.32 kg CO_2e
Women's Tops & T-Shirts	0.29 kg CO_2e

For further product results, see section 6.6 Avoided Emissions, Avoided Emissions Results.

6.3 PACKAGING

Material types and weights were evaluated to assess the carbon footprint of the packaging materials used in the sale of fashion products on Vinted. Vaayu's purpose-built transaction API provided detailed transaction metadata for the year 2023, which included shipment volumes and product categories to estimate the impact of packaging.

In 2021 and 2022, a Seller Survey was conducted to study the packaging types used by sellers on Vinted. This survey helped identify the different kinds and quantities of packaging materials used, specifically in the clothing category. The findings were then applied to estimate the packaging used for other product categories. The 2023 estimation of packaging used was done on the basis of the 2021 and 2022 Seller Survey.

For the calculations, two types of packaging were estimated: primary packaging materials, including materials used to ship the product, such as cardboard boxes made from plastic and kraft paper, as well as secondary packaging materials, such as bubble wrap and packing tape. Within the packaging estimation model, the LCA methodology was applied to each of the individual packaging components to determine the carbon emissions generated by each.

The environmental impact of both new (virgin) and reused packaging was analysed. To determine the ratio of new to reused packaging, findings from the 2022 Sales Survey were utilised, where sellers were asked about their packaging choices.

Packaging Results

71 grams CO_2e

Average packaging emissions per item

87 grams CO_2e

Average packaging emissions per delivery[17]

17. Average packaging emissions per item and delivery differ due to the variable of having more than one item per delivery.

6.4 DELIVERIES

To accurately capture the emissions produced by Vinted's deliveries, Vaayu's API was used for data collection. In 2023, the analysis extended to even more Vinted transactions. Each Vinted delivery was calculated in real-time using granular live tracking data.

The delivery system boundary for a second-hand shipment included the entire journey of a package from the seller's home to the buyer's home. Additionally, the electricity usage of Vinted's own lockers was incorporated into the calculation of the overall delivery impact. Carrier warehouse operations were omitted due to the absence of reliable data. Returns due to inaccurate item descriptions had a minimal impact on emissions from deliveries because, although Vinted does have a returns policy for second-hand items 'Significantly Not As Described', as a C2C marketplace its returns are lesser than other online shops. For deliveries made outside of Vinted's system, the emissions of an average home delivery were used as a proxy.

The journey of a package from start to finish was split into three parts:

1 First Leg Transport

First Leg Transport was the trip from the seller's home to a Pick-Up and Drop-off point (PUDO)

In 2022, 350,000 Vinted members who had recently completed transactions on Vinted were surveyed to understand their delivery and transport habits for online and in-store purchases made outside of Vinted. The insights obtained were pivotal in developing the first-mile and last-mile distribution analysis.

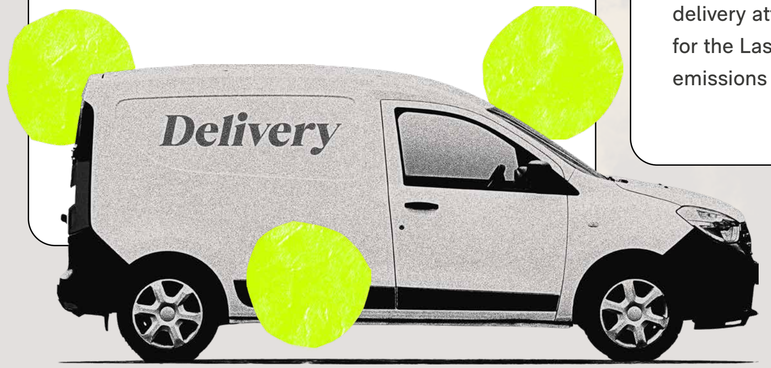
In 2023, around 72% of Vinted's transactions involved collections from PUDO, with members frequently merging these trips with other activities. An extensive analysis compared home delivery services with PUDO collections, utilising Vaayu's delivery estimation model alongside Vinted's primary data. This analysis accounted for all related emissions, spanning from logistics operations to members' travel from the point of sale to the point of collection. The comparison leveraged both Vinted's detailed parameters, such as package destinations and the availability of PUDO locations, to provide a holistic view of the environmental impact.

2 Mid Legs Transport

Mid Legs Transport covered all the routes between the first and last parts of the journey.

The Mid Legs transportation was the same whether the package was delivered to a PUDO or a member's home. It included all the transport after the First Leg and up to the Last Leg. The model used the geodesic distances[18] between the two points. Country-specific circuity factors were used to convert the geodesic distance to the actual road distance travelled.

Transport modes for Mid Legs were derived from live tracking data collected in 2023.



3 Last Leg Transport

Last Leg Transport was the final part of the trip, either from a PUDO to the buyer's home or directly from a distribution centre to the buyer's home.

Survey data was used to refine the shipment methods for online orders and to calculate the emissions from last-mile deliveries using PUDO. The insights from the survey were also leveraged to enhance the model for calculating the delivery emissions for new items.

Additionally, the model accounted for the Bounce Rate[19], referring to instances where home deliveries were not successfully completed on the first attempt. Such situations necessitated a second delivery attempt, thus repeating the transportation for the Last Leg and consequently increasing the emissions associated with the delivery.

18. See section 7 Glossary for an explanation of this term.
19. See section 7 Glossary for an explanation of this term.

Delivery Results

1.35 kg CO_2e

were the delivery emissions per item

Between the previous analysis conducted for the 2021 report, and the one for this report, an increase in created emissions per delivery can be observed. This increase is driven by an update in Vaayu's model for calculating parcel volume, made in 2023. As Vinted progresses in the journey to measure its impact, it aims to become more and more accurate with each analysis, and this update is a step in that direction.

Average Impact per Delivery	2023
First Leg Impact	0.18 kg CO_2e
Mid-Legs Impact	1.25 kg CO_2e
End Leg Impact	0.20 kg CO_2e
Average Impact per Delivery	1.63 kg CO_2e
Average Impact per Item	1.35 kg CO_2e

6.5 OPERATIONAL FOOTPRINT

In 2023, the Operational Footprint detailed Vinted's greenhouse gas (GHG) emissions from its operations and business activities. Following the GHG Protocol Corporate Accounting and Reporting Standard, Vaayu calculated emissions from direct activities and indirect emissions from energy use and supply chain actions.

The assessment encompassed emissions from deliveries and packaging for all transactions, including non-fashion items and products labelled "New With Tags." Vinted's GHG emissions were categorised into Scopes 1-3:

Scope 1:

Emissions from stationary combustion and fuel combustion in company vehicles.

Scope 2:

Emissions from electricity and heating in Vinted's offices, warehouses, verification hubs, data centres.

Scope 3:

Emissions from purchased goods and services, capital goods, lockers, energy not covered by Scope 1 or 2, upstream transportation, upstream leased assets, waste, business travel, employee commuting, packaging, digital platform use and deliveries related to the platform.

The organisational boundary for the report was set using the operational control approach, including all operations under Vinted's control or its subsidiaries.

Scope 1 emissions were quantified using Vinted primary data on fuel consumption. Scope 2 emissions were calculated and tracked using market-based and location-based methods, in line with the GHG Protocol Scope 2 technical guidance[20].

Market-based emission factors refer to emissions from electricity providers that companies have specifically chosen (such as providers of 'green' or renewable electricity). In contrast, location-based emission factors reflect the average emission intensities of energy grids where the consumption occurs.

For the emissions from categories in Scope 3 — including purchased goods and services, capital goods and other energy-related activities like office electronics, business travel, employee commute, waste generated in operations, cloud and hosting services, and upstream leased assets — activity-based GHG emissions calculation methodology was applied. Using emission factors from DEFRA UK[21], material waste emissions and business travel and employee commuting emissions (based on transport fuel type) were calculated.

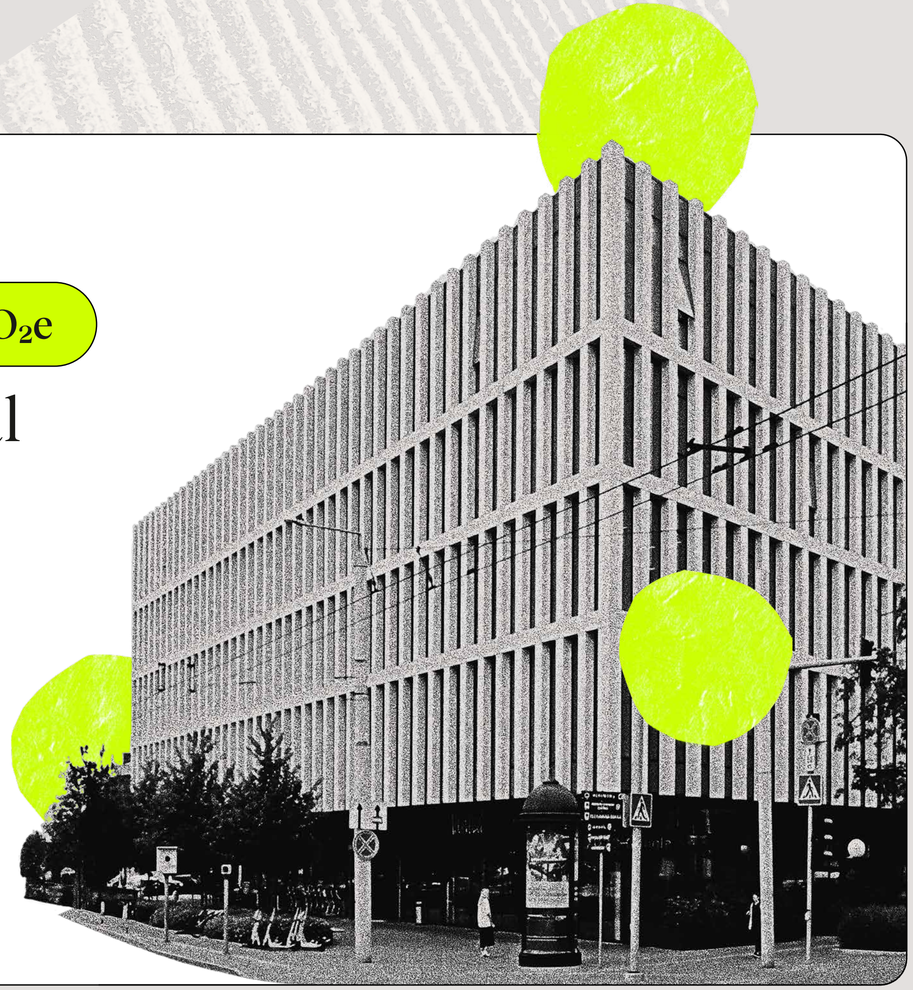
20. See GHG Protocol, Scope 2 Guidance. Where applicable, if the process or supplier-specific emission factors were available, carbon emissions from purchased electricity were reported using location-based as well as market-based emission factors. In cases where market-based factors were unavailable, only location-based emission factors were utilised to report carbon emissions.
21. Calculated using GOV.UK, Greenhouse Gas Reporting: Conversion Factors 2020.

Operations Results

27,104 tonnes CO_2e

Operational footprint

An increase in emissions year-on-year driven by the opening of new offices, warehouses and data centers.



Full GHG Emissions 2023[22]

GHG Scope	GHG Category	2023 CO_2e (tonnes)
Scope 1	Stationary Combustion	141.74
	Mobile Combustion	0.76
Scope 2 Market-based	Purchased Electricity	738.73
Scope 2 Location-based	Purchased Electricity	1,999.24
Scope 2 Location-based	Purchased Heating	120.36
Scope 3	3.1 Purchased Goods and Services	11,920.91
	3.2 Capital Goods	3,490.49
	3.3 Fuel and Energy-Related Activities not reported in Scope 1 and 2	608.45
	3.4 Upstream Transportation and Distribution	2,514.20
	3.5 Waste generated in Operations	483.35
	3.6 Business Travel	3,459.53
	3.7 Employee Commute	456.07
	3.8 Upstream Leased Assets	7.15
	3.9 Downstream Transportation and Distribution	765,526.00
	Secondary Packaging	41,361.85
	3.11 Product Use (Digital Platform Use)	3,162.84

22. The table displays full GHG emissions for Vinted 2023 calculated in alignment with the GHG Protocol. The operational footprint used for the calculation of avoided emissions includes Scope 1, Scope 2 and Scope 3 (excl. Downstream Transportation and Packaging which are accounted for separately).

6.6 AVOIDED EMISSIONS

In calculating Vinted's 2023 impact, avoided emissions refer to the proportion of carbon emissions that were avoided (or "saved") due to Vinted's members purchasing second-hand products on Vinted instead of buying new elsewhere.

The avoided emissions of a second-hand product depend on the following factors:

1. Avoided manufacturing:

Emissions generated from the production of a brand new equivalent product (cradle-to-consumer), including the emissions associated with its transportation and delivery to the first owner, which are "avoided" through the second-hand purchase.

2. Replacement Rate

Probability that the second-hand purchase on Vinted actually replaced the purchase of a new one elsewhere (Replacement Rate).

3. Created emissions

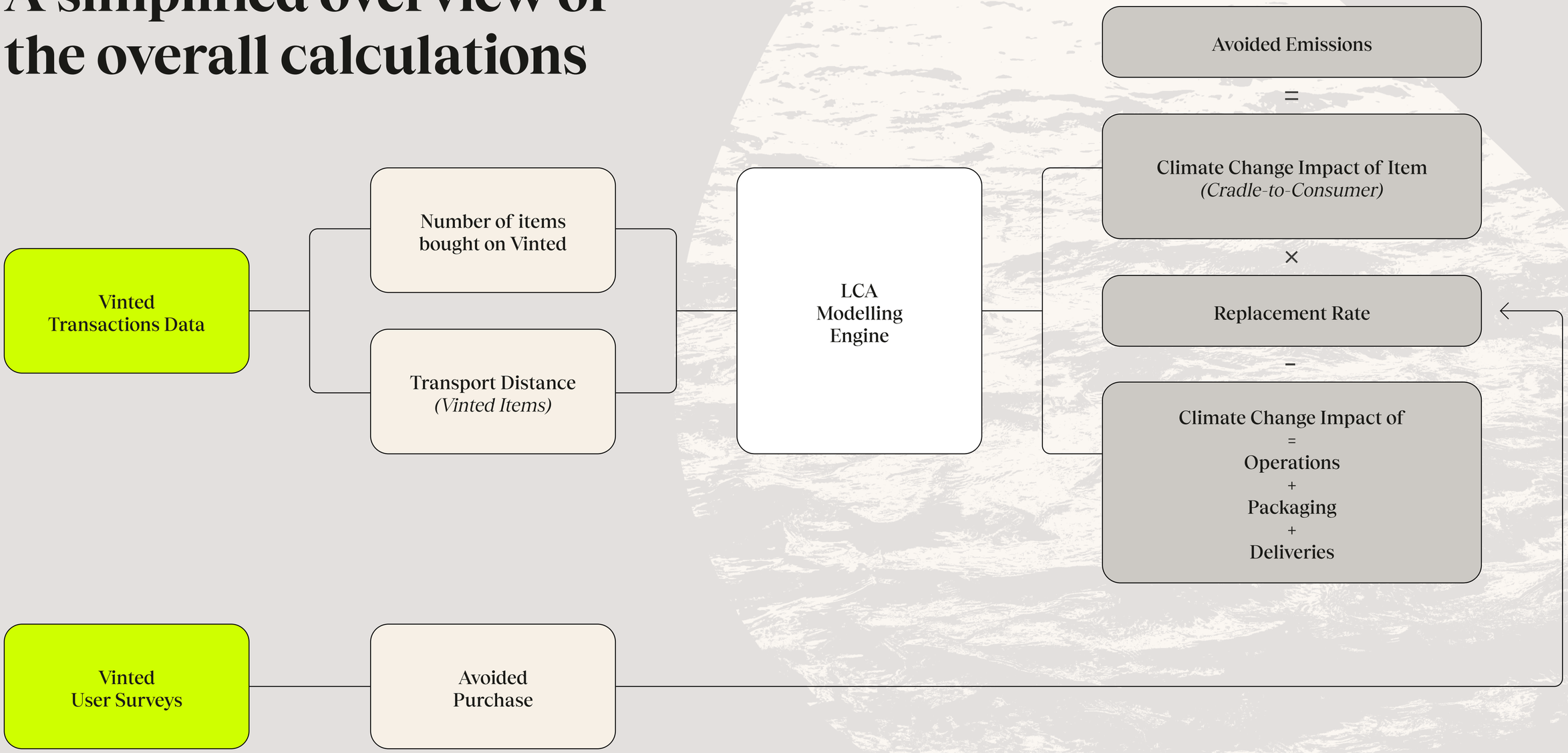
Emissions from deliveries, packaging and operations that are created (Vinted Activities).

Following the methodology used in 2021, the 2023 calculations focused solely on second-hand transactions, excluding "New With Tags" products. For these products, any associated emissions remain attributed to the initial seller (in this case, the Vinted seller), rather than being considered saved or avoided through the secondary purchase.

A consequential LCA method was applied. The assessment covered raw material extraction to the delivery of the first user, along with the operational impact of Vinted's operations, packaging, and deliveries. Emissions from product use and end-of-life were omitted, as the comparative analysis assumed equivalent impacts from using both new and second-hand products, thus neutralising each other.

The research shows that some, but not all, purchases of a new item are replaced by buying something second-hand. This idea is measured by the Replacement Rate, which helps determine whether second-hand items replace new ones. Considering the Replacement Rate and the emissions from Vinted's own activities was essential for accurately assessing the climate advantage of choosing second-hand products over new ones.

A simplified overview of the overall calculations



Replacement Rate

The Avoided Purchase Rate[23] was used to determine the Replacement Rate across various product categories, estimating the proportion of members who opted against buying new products.

The Avoided Purchase Rate was determined using feedback from 94,000 Vinted purchasers. They were asked the following question: "If you had not found this product on Vinted, would you have bought this, or a similar product, brand new?"

The formula to derive this metric from the given responses is outlined below:

To calculate the numerator for a specific product category, the aim was to consider responses indicating an avoided purchase of a new product, ensuring these were not merely additional acquisitions.

In a stand-alone question, buyers were also asked about the main reason for purchasing a product on Vinted instead of brand new. Those who answered “I was just browsing Vinted and I liked this product” were classified under impulse buyers. Their purchases were considered not to displace a first-hand purchase and, as such, were excluded from the calculation of the Avoided Purchase Rate.

Avoided Purchase Rate = Replacement Purchases / Total

The **Replacement Purchases** are the number of purchases that have been classified as displacing the purchase of a new product.

The **total** is the number of surveyed buyers.

The calculation was performed as follows:

Replacement Rate = 100% ‘Yes’ responses − Impulse purchases + 50% ‘Maybe’ responses

The weighted average of the Replacement Rate across product categories was derived from Vinted transactions. This average closely matched the ranges found in the existing literature. However, Vaayu's methodology was designed to offer more granular detail, so it differs from others and limits direct like-for-like comparisons.

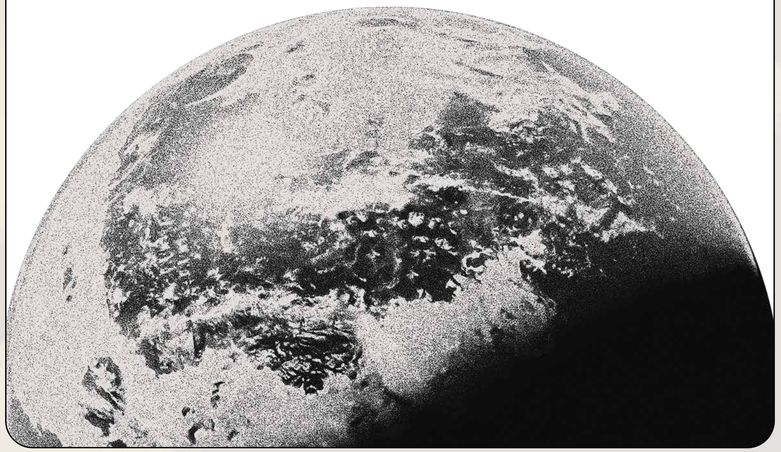
Vaayu’s analysis revealed that the Vinted Marketplace had a Replacement Rate of 40% in 2023, indicating that 40 out of every 100 Vinted buyers purchased second-hand items that replaced new purchases.

23. This rate factor quantifies whether a product is an additional purchase or if it replaces the purchase of a new, first-hand product. It does this by posing a question to the user and then using the responses to calculate the rate. Avoided Purchase Rate = the number of survey responses avoiding the purchase of a new item without it being an additional purchase divided by the total number of responses to the question.

Avoided Emissions Results

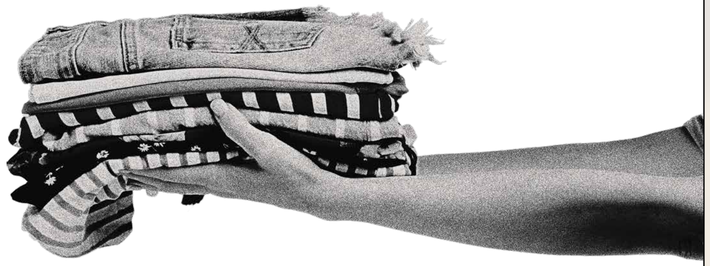
678,691 tonnes CO_2e

avoided by the Vinted Marketplace in total



1,25 kg CO_2e

avoided per second-hand item



2 in 5

purchases replaced a new item

The Replacement Rate (40%) was calculated to quantify how many first-hand purchases were displaced by the purchase of a second-hand Vinted product instead.

Average avoided emissions per item

Women's Blazers	2.44 kg CO_2e
Men's Suits & Blazers	2.44 kg CO_2e
Women's Trousers	2.41 kg CO_2e
Men's Trousers	2.41 kg CO_2e
Men's Pullovers & Sweaters	2.33 kg CO_2e
Women's Pullovers & Sweaters	2.19 kg CO_2e
Men's Trousers & Jeans	2.00 kg CO_2e
Women's Jeans	2.00 kg CO_2e
Women's Dresses	1.50 kg CO_2e
Men's Outerwear	1.37 kg CO_2e
Women's Coats & Jackets	1.37 kg CO_2e
Women's Sportswear	1.24 kg CO_2e
Jumpsuits	1.09 kg CO_2e
Men's Sportswear	0.92 kg CO_2e
Women's Skirts	0.86 kg CO_2e
Men's Tops & T-Shirts	0.45 kg CO_2e
Women's Swimwear	0.39 kg CO_2e
Women's Shorts & Capri Pants	0.32 kg CO_2e
Women's Tops & T-Shirts	0.29 kg CO_2e

Chapter 7

Glossary

7 Glossary

Application programming interface or API

A way for two or more computer programs to communicate with each other.

Avoided emissions

Avoided emissions are emission reductions that occur outside of a product's life cycle or value chain, but as a result of the use of that product.

Bounce Rate

Bounce Rate or failed delivery attempt is when a delivery to the recipient was unsuccessful during the first delivery attempt.

Cradle-to-consumer

Cradle-to-consumer refers to the carbon impact of a product from the moment it's produced to the moment it is delivered to the customer.

C2C or consumer -to-consumer

Business transactions that occur directly between individual consumers, in this case, facilitated through the Vinted Marketplace.

Circuity factors

A circuity factor is a multiplier to coordinate-calculated, or straight-line, distances to approximate actual travel distances. Because travel distances cannot be shorter than straight-line ones, the circuity factor should be 1 or greater. It is found as a ratio of actual travel distance to calculated distance.

Estimation models

Vaayu's proprietary LCA models for calculating the impact of packaging (packaging estimation model) and delivery (delivery estimation model).

Geodesic distance

Geodesic distance refers to the shortest distance between two points on a curved surface, such as the Earth's surface, measured along the surface rather than through the interior.

GHG or GHG emissions

The greenhouse gas emissions responsible for global warming, primarily carbon dioxide but also including other gases in smaller quantities.

Greenhouse Gas Protocol or GHG Protocol

The GHG Protocol is a widely used international accounting tool for measuring, managing, and reporting greenhouse gas emissions.

Kria

Vaayu's proprietary LCA Impact Modelling Engine and database. The largest database and impact engine dedicated to the retail industry. Created, updated and improved daily by Vaayu to ensure calculations are as accurate and granular as possible.

Life Cycle Assessment or LCA

A systematic method for evaluating the environmental impacts of a product or service throughout its entire life cycle, from raw material extraction to disposal.

PUDO

A location, often a local shop or retail outlet, that offers a parcel Pick-Up and Drop-Off service as part of a wider network of these locations.

Purchase Survey

The survey sent to Vinted buyers for Vaayu to collect the necessary purchase data for this analysis. There were multiple iterations to collect data from 2021-2023.

Replacement Rate

A ratio determining the substitutability of pre-owned products with new ones, in order to calculate the benefits of reuse.

Scope 1, 2, and 3 Emissions

Scope 1 emissions are direct emissions from owned or controlled sources, Scope 2 emissions are indirect emissions from the generation of purchased electricity, heating, and cooling, and Scope 3 emissions are all other indirect emissions that occur in a company's value chain.

Seller Survey

The survey sent to Vinted sellers for Vaayu to collect the necessary selling data for analysis. This survey was done in 2021 and the resulting data was used for calculations for the 2022 report and as a proxy for the 2023 report.

System Boundary

The interface between a product system and the environment system or other product systems.

Transport Leg

A portion of the delivery journey of a Vinted parcel, split into First, Mid and Last for this analysis.


Vinted × vaayu
vaayu.tech
vinted.com